



Planning Under
Co-operative Mandates

Māori Outcome Evaluation: A Kaupapa Māori Outcomes and Indicators Framework and Methodology

Richard Jefferies and Nathan Kennedy

PUCM Māori Report 1

30 June 2009



IGCI
University of Waikato



PUCM Māori Report 1

Māori Outcome Evaluation: A Kaupapa Māori Outcomes and Indicators Framework and Methodology

Published 30 June 2009 by
The International Global Change Institute (IGCI)
The University of Waikato
Private Bag 3105
Hamilton
New Zealand

ISBN 978-0-9582624-1-5

© Use of information from this report should acknowledge the authors
(R. Jefferies and N. Kennedy) PUCM Māori Report 1
IGCI, The University of Waikato (Hamilton), and
KCSM Consultancy Solutions Ltd (Opotiki) New
Zealand

Author correspondence:
Richard Jefferies KSCM
Solutions Ltd
P. O. Box 64
Opotiki
New Zealand
Ph: +64 07- 315 7080

e-mail: richard@kcsmsolutions.com
nkennedy@ngāatiwhanaungā.māori.nz



A FRST-funded Research Program
on the Quality of Environmental
and Community Planning and
Governance in New Zealand

Mihi

Tënei au, ko te hōkai nei o taku tapuwae
Ko te hōkai nuku, ko te hōkai rangi
Ko te hōkai a tō tātou tupuna, a Tāne-nui-a-Rangi
I pikitia ai, ki te Rangi-tū-hāhā, ki te Tihi-o-manono, I rokohina atu ra, ko Io-Matua-kore
anake,
I riro iho ai ngā kete o te Wanangā.
Ko te kete Tūāuri, te kete Tūātea, te kete Aronui.
Ka tiritiria, ka poupoua, ki a Papatūānuku,
Ka puta te ira tangata, ki te whei ao, ki te ao marama.

Tihei mauri ora!

Ngā mihi ki ngā atua e tiaki nei i a tātou katoa. Ki a Ranginui e tu nei, ki a Papatūānuku e takoto nei. Ko Papatūānuku te whaea o tātou te tangata, te putake hoki o ngā whiriwhiringā korero i roto i ngā pepa nei.

Ngā mihi hoki ki a rātou mā kua huri ki tua o te ārai. Ko rātou hoki i poipoi, i ngāki, i tiaki hoki i te whenua, i mau hoki ki te mana o te whenua i nohoia e rātou. Heoi ano, ko rātou ki a rātou, ko tātou te hungā ora ki a tātou.

Kei te mihi atu mātou ki a koutou i āwhina mai nei i a mātou i roto i ngā rangāhau, ngā kohikohi, ngā tātari i ngā take kei roto i ēnei pepa. Ahakoa ko wai te tangata nāna te pepa nei i tito, ko te tūmanako mā te whakatakoto me te whakapāho o ēnei pūrongo kōrero ka kōkiritia ēnei kaupapa. Hei aha, hei painga mo te whenua, hei painga hoki mo te tangata - otirā ngā uri o Papatūānuku – i roto i ngā nekenekhangā o tēnei ao hurihuri. Hei whakamāramatanga hoki ki te tangata e kimi nei i te mātauranga o te Ao Māori e pā ana ki te manaaki me te tiaki i te whenua.

Ko tōna mutungā, kia whai mana tonu ngā kaupapa Māori i roto i ngā tikanga a te Ao Pākehā.

Nā mātou iti nei,
nā,
Richard Jefferies and Nathan Kennedy

Table of Contents

Mihi.....	i
Table of Contents	ii
List of Figures	v
List of Tables	v
List of Abbreviations	vi
Preface.....	vii
Acknowledgements.....	ix
Executive Summary.....	x
1. He Tīmatanga – Introduction	1
1.1 Towards a Kaupapa Māori Framework	2
1.2 Antecedents.....	3
1.3 Outcomes of Council Planning	5
1.4 What are Outcomes and Indicators?	6
1.4.1 Assessing Outcomes of Environmental Planning.....	6
1.5 Summary.....	7
2. Kaitiakitanga – A Māori Planning Perspective	9
2.1 Māori Environmentalism	9
2.2 Mana	10
2.3 Whakapapa and Whanaungatanga	10
2.4 Tapu	12
2.5 Utu	12
2.6 Taonga	12
2.7 Kaitiakitanga.....	13
2.8 Summary.....	14
3. Te Ao Ture – The Statutory Environment	16
3.1 International Developments	16
3.2 Māori in Environmental Resource Management	17
3.2.1 RMA Statutory Planning Documents	19
3.2.2 The Statutory Relevance of Environmental Outcomes and Indicators.....	20
3.3 Summary.....	20
4. He Tirohanga Kaupapa – Theories, Models, and Frameworks	22
4.1 Theories	22
4.1.1 Plan Evaluation Theory	22
4.1.2 Kaupapa Māori Research and Theory	23
4.2 Environmental Outcome Evaluation Models.....	24
4.2.1 Pressure State Response Framework	24
4.2.2 Alternative Western Approaches	26
4.2.3 Māori Models.....	27
4.3 Summary.....	32
5. Tikanga Rangahau - Research Approach.....	33
5.1 Participation by Māori	34

5.1.1	Māori Researchers	34
5.1.2	Māori Peer Review Groups.....	35
5.1.3	Participation by Iwi.....	35
5.1.4	Māori in Trials.....	35
5.2	Participation by Councils.....	36
5.2.1	Council Participation in Trials	37
5.3	Literature Reviews.....	38
5.3.1	Indigenous Outcomes and Indicators Literature Review	38
5.3.2	Kaupapa Māori Literature Review	40
5.4	Summary.....	41
6.	Te Waihanga Kaupapa – The Kaupapa Māori Framework	42
6.1	Theoretical Models – Atua, Wa, and Tikanga	42
6.1.1	Ngā Atua.....	43
6.1.2	Ngā Wa	44
6.1.3	Ngā Tikanga.....	46
6.1.4	Selection of the Ngā Tikanga Model	47
6.2	Outcomes and Indicators	47
6.2.1	Hua - Outcomes	48
6.2.2	Tohu - Indicators.....	48
6.2.3	Distinguishing between Outcomes and Indicators.....	50
6.3	Ngā Kete – The Baskets.....	51
6.3.1	Kete 1: Mana and Mana Whenua	53
6.3.2	Kete 2: Mauri and the Mauri of Waterways	55
6.3.3	Kete 3: Tapu and Wāhi Tapu	57
6.4	Summary.....	60
7.	Te Whakakī i te Kete - Methodology: Filling the Kete	61
7.1	The kete.....	61
7.1.1	About the Worksheet	62
7.1.2	About the Supplementary Documents	67
7.2	Anticipated Uses for the Framework	68
7.2.1	Single Outcome Evaluation Using the Framework	68
7.2.2	Purpose Specific Uses.....	71
7.2.3	Evaluation of Change-Over-time.....	72
7.3	Interpreting Worksheet Data.....	72
7.3.1	Technical Solutions – Data Processing and Querying.....	73
7.3.2	GIS: Processing and Presenting Information	75
7.3.3	Reporting	75
7.4	Summary.....	79
8.	Ngā Mahi ā Iwi, ā Kaunihera–Trialling the Kete with Iwi and Councils....	80
8.1	The Trialling Process	80
8.1.1	The Trial Groups.....	81
8.1.2	Questions Asked of Trialling Groups	82
8.2	Trial Results	82
8.2.1	Suitability of the Outcomes	83
8.2.2	Effectiveness of the Indicators.....	83
8.3	Review of Framework and Methodology	88
8.3.1	Some Significant Findings.....	89
8.4	Summary.....	90

9.	Hei Whakamutunga: Toward Utu – The Restoration of Balance	92
9.1	Take – Utu - Ea.....	92
9.2	The Kaupapa Māori Research Approach.....	93
9.2.1	Literature Review	93
9.2.2	Participatory and Iterative Research	94
9.2.3	Kete Trials by Iwi and Councils	94
9.3	The Kaupapa Māori Framework.....	94
9.3.1	Kete Structure	95
9.3.2	Outcomes and Indicators	95
9.3.3	Restoring Balance	96
9.4	Future Research	96
9.4.1	Additional Trials of Current Kete.....	96
9.4.2	New Kete to Develop and Trial	97
9.4.3	Aggregation and Comparison of Iwi and Council Information.....	97
9.5	Facilitating Uptake.....	98
9.5.1	PUCM Practice Development Programme	98
9.5.2	A National Hui.....	100
9.6	Recommendations.....	101
9.6.1	Central Government.....	101
9.6.2	Local Government	102
9.6.3	Iwi / Hapū	104
	References Cited	104

List of Figures

0.1	Māori Report 1 in context of the PUCM Research Programme on planning and governance under the RMA (1991) and LGA (2002)	viii
1.1	Some findings from PUCM Phase 1 relating to Māori interests	4
1.2	Initial schematic representation of the Māori outcomes and indicators development process presented to the wider PUCM team	7
4.1	Schematic representation of the OECD Pressure State Response (PSR) model	25
4.2	The Driver Pressure State Impact Response (DPSIR) framework, a variant of the OECD PSR model	25
4.3	Project-Based Framework, proposed by the World Bank as a framework for environmental improvement of project evaluation	27
4.4	The Partnership - 2 Cultures Development Model proposed by the Māori Advisory group to MfE Indicators Programme	28
4.5	Tri-axial Māori Development Framework	30
4.6	Te Ngahuru outcomes model	31
5.1	Main components in PUCM Kaupapa Māori Research Approach to developing Environmental Outcomes and Indicators	33
6.1	An Atua-based environmental vision and associated framework	44
6.2	Illustration of the method by which Māori have long located due south	49
6.3	Schematic diagram of PUCM Kaupapa Maori Framework for Environmental Outcomes and Indicators	59
7.1	Extraction of mātauranga from early survey plans into GIS	77
7.2	The use of GIS to represent multiple spatial datasets	78

List of Tables

6.1	Kaupapa Māori outcomes and indicators kete	52
7.1	Mana Whenua Kete: Outcome and its Indices and Indicators	62
7.2	Mauri Kete: Outcome and its Indices and Indicators	63
7.3	Wāhi Tapu: Outcome and its Indices and Indicators	63
7.4	An example of a measure response box from the wāhi tapu worksheet	65

List of Abbreviations

AER	Anticipated Environmental Result
ARC	Auckland Regional Council DIA Department of Internal Affairs DP District Plan
DPSIR	Driver Pressure State Impact Response framework
EBOP	Environment Bay of Plenty
EDS	Environmental Defence Society
EW	Environment Waikato
FESLM	Framework for the Evaluation of Sustainable Land Management
FRST-PGSF	Foundation for Research Science and Technology - Public Good Science Fund
GIS	Geographic Information Systems
HGF	Hauraki Gulf Forum
HPA	Historic Places Act
IGCI	International Global Change Institute (University of Waikato) ISD Indicators of Sustainable Development – a UN Work Programme KPI Key Performance Indicator
LGA	Local Government Act
LGNZ	Local Government New Zealand
LGOIMA	Local Government Official Information and Meetings Act
LTCCP	Long Term Council Community Plan
Māori EPI	Māori Environmental Performance Indicators MARCO Monitoring and Reporting on Community Outcomes MCH Ministry of Culture and Heritage
MfE	Ministry for the Environment MOE Māori Outcome Evaluation MPDC Matamata-Piako District Council MSD Ministry of Social Development
OECD	Organisation for Economic Co-operation and Development
PCE	Parliamentary Commissioner for the Environment
PSR	Pressure State Response
PUCM	Planning Under Cooperative Mandates (FRST-funded programme) RMA Resource Management Act
RP	Regional Plan
RPS	Regional Policy Statement
TCDC	Thames Coromandel District Council
TCPA	Town and Country Planning Act TEK Traditional ecological knowledge TLA Territorial Local Authority
TPK	Te Puni Kokiri - The Ministry of Māori Development UNCED UN Conference on Environment and Development UNCSO United Nations Commission on Sustainable Development
WINFO	Waikato Information Forum

Preface

The development of a Kaupapa Māori environmental outcomes and indicators framework and methodology has taken place within the wider research programme on Planning Under a Cooperative Mandate (PUCM). PUCM is led by the International Global Change Institute (IGCI), a self-funding research institute within Te Whare Wānangā o Waikato – The Waikato of University, in association with several research partners.

PUCM is a FRST-funded programme of research that has since mid-1995 been sequentially examining the quality of policies and plans (Phase 1), plan implementation (Phase 2), and environmental outcomes (Phase 3) under the 1991 Resource Management Act (RMA) and more recently the 2002 Local Government Act (LGA). An important component of this planning and governance research has been consideration of the interests of Māori as Government's Treaty partner.

Following the Phase 1 analysis of RMA plan quality, Richard Jefferies of Ngāti Tukorehe and researchers from his firm, KCSM Consultancy Solutions Ltd of Opotiki (formerly Kōkōmuka Solutions Ltd), were brought onto the PUCM programme in 2002 to lead the Māori component of the research. KCSM staff initially assisted with interpretation of findings relating to plan implementation and Māori. Nathan Kennedy, an environmental officer for Ngāti Whanaunga iwi and experience with working in local government, was employed at the beginning of PUCM Phase 3 to undertake research on Māori environmental outcomes.

The PUCM team has published a series of working papers and reports as a means of making public its research findings, and in an effort to influence change in response to observed issues with plan quality and implementation, and environmental outcomes. These documents are downloadable at the PUCM website <http://www.waikato.ac.nz/igci/pucm>. To this end, this report presents the intent, findings, and outputs of the Māori research objective of PUCM Phase 3, which focuses on developing and testing a kaupapa Māori environmental outcomes and indicators framework and methodology.

Located in grey in Figure 0.1, next page, is the Phase 3 Māori RMA Objective with its published and proposed outputs identified in the lower rows of boxes; the one shaded grey being this report.

Neil Ericksen
PUCM Programme Leader
IGCI Associate
International Global Change Institute (IGCI)
The University of Waikato
Hamilton

31 March 2009

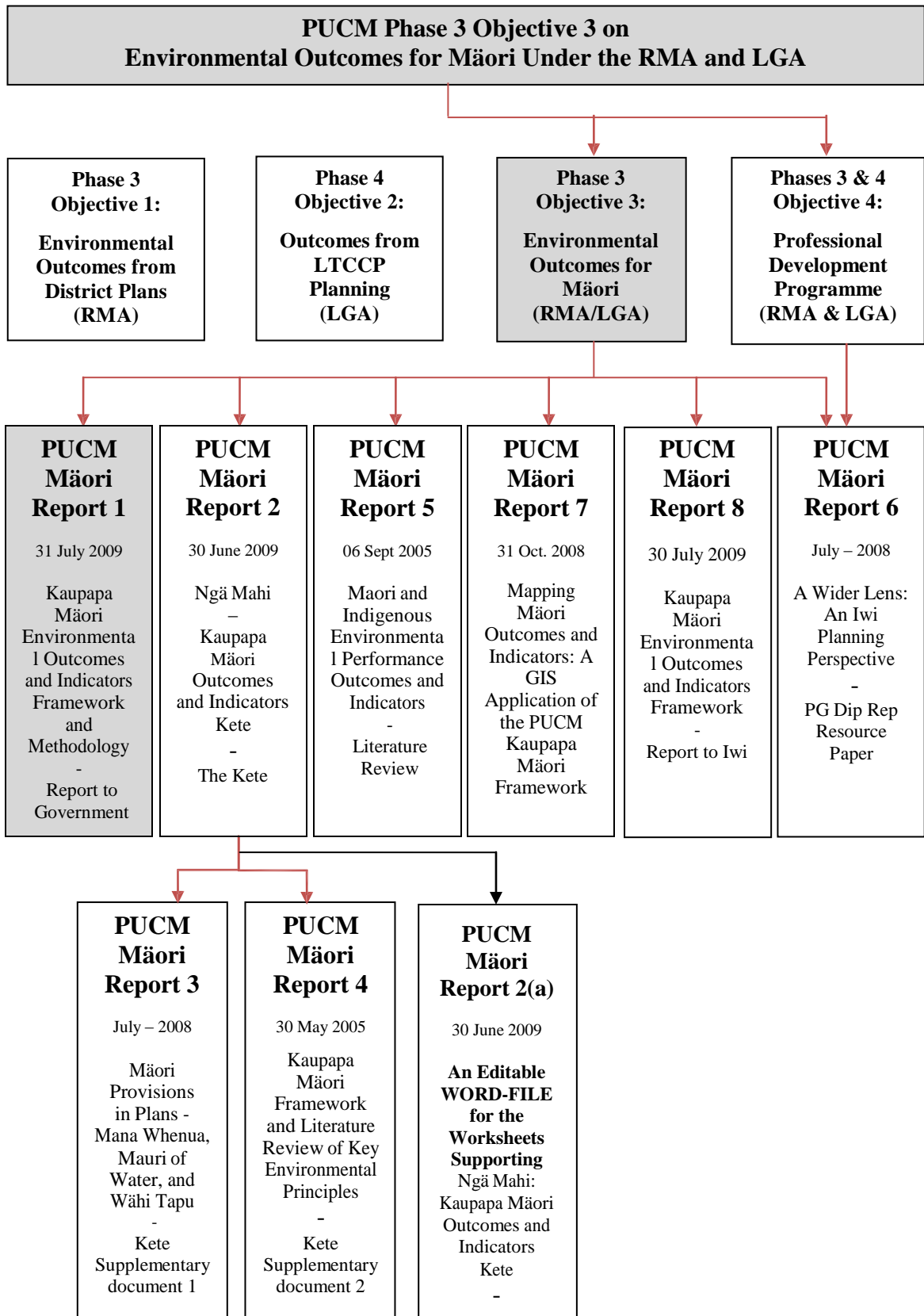


Figure 0.1. Māori Report 1 in context of the PUCM Research Programme on Planning Under Co-operative Mandates RMA (1991) and LGA (2002)

Acknowledgements

The current 6-year PUCM Research Programme (Phases 3 and 4) is funded by FRST-PGSF under contract number UOWX0308 with the University of Waikato, and subcontracts to Planning Consultants Ltd (Auckland), KCSM Consultancy Solutions Ltd (Opotiki), Lawrence Cross Chapman and Co. Ltd (Planning and Resource Management Consultants, Thames), and Lincoln University.

Special thanks are due to the many peer reviewers in two tangata whenua working groups who, over the last 7 years, contributed to the Māori component of the PUCM Research Programme. The “Māori experts group” was comprised mostly of Māori working within councils and Crown agencies. The “Practitioners group” was comprised of iwi environmental officers. The following peer reviewers have participated in these two groups at different times:

Hori Parata, David Taipari, Tikitu Tutua-Nathan, Nassah Steed, Antoin Coffin, Reg Profit, Garth Harmsworth, Todd Taiepa, Waaka Vercoe, Beverley Hughes, Vaughan Payne, Rhonda Cooper, Barney Thomas, Nick Tupara, Saul Roberts, and Te Warena Taua.

We also give special thanks to the staff of our partner iwi, Ngāti Awa and Ngāti Maru, for assistance and guidance with both developing and trialling our kaupapa Māori environmental outcomes and indicators framework and the kete of outcomes and indicators.

We thank staff of Matamata-Piako District Council and Environment Bay of Plenty and members of the tribal representatives on the Mana Whenua forum of Matamata-Piako District Council for their assistance with trials and feedback.

We wish to acknowledge members of the wider PUCM team who have contributed valuable advice throughout the research period, including: Jan Crawford, Maxine Day, Neil Ericksen, Tom Fookes, Peter Kouwenhoven, Lucy Laurian, Ali Memon, and Greg Mason. Also thanks to Katarina Simons, IGCI PhD candidate, for insightful conversations. Thanks to Greg Mason for commenting on the first draft of this report and Marian Holdaway who helped with typing it.

Special thanks to Neil Ericksen who, as leader of the PUCM Research Programme, supported our desire to develop a kaupapa Māori research approach and then encouraged us throughout the research endeavour. We are especially grateful for him having reviewed, commented on, and edited various drafts of the report.

Finally, we acknowledge our friend and colleague Sarah Chapman. Sarah was an integral member of the PUCM team since its beginning. She passed away tragically before this work was completed, and she is greatly missed. Our condolences go to her family.

*Ngā mihi nui ki a koe e Sarah
Mo tōu tautoko, mo tōu awhi, mo tōu whakakori
Moe mai i roto i ngā ringaringa o Te Atua.*

Executive Summary

Main Output

Territorial local authorities (i.e. regional and district councils) are by law required to provide for Māori values and interests, and to undertake plan evaluation and environmental monitoring, to ensure that the provisions they have in place for these purposes are effective. Councils have not, however, had methods available that would enable them to meet these statutory obligations. This gap is filled by the framework and methods that we have developed and trialled over the past 5 years. The development and use of our *Kaupapa Māori Environmental Outcomes and Indicators Framework and Methodology* is the focus of this report.

Background

The research on which our framework and methodology is based forms part of an on-going FRST-funded research programme called Planning Under Co-operative Mandates (PUCM). It has sought to determine the quality and effectiveness of statutory plans under New Zealand's 1991 *Resource Management Act* (RMA) and more recent 2002 *Local Government Act* (LGA).

Phase 1 (1995-1997) of the research developed and tested a method for evaluating the quality of regional policy statements, regional plans, and district plans and applied it to publicly notified plans as of early 1997. Phase 2 (1998-2002) developed and tested methods for evaluating plan implementation through the resource consents processes of six district councils chosen for their range of plan quality and capacity to plan (i.e., pairs of high, medium, and low quality plans and capacity). Phase 3 (2003-2009) has developed methods for evaluating environmental outcomes from district plans, including outcomes for Māori. At the same time, Phase 4 has developed methods for assessing community outcomes and long-term council community plans under the new LGA (2002).

An important component of each phase of the on-going research has been consideration of the interests of Māori as Government's Treaty partner. In essence, this research showed councils performing relatively poorly in relation to their obligations to Māori. Not until Phase 3, however, has the PUCM Research Programme focused on Māori interests using a kaupapa Māori research approach to evaluating environmental outcomes for Māori.

The PUCM Māori Research Project

This report focuses on PUCM Objective 3 – Environmental Outcomes for Māori. (See Figure 0.1 in the Preface for PUCM objectives.) In the report we explain: the intentions of our research objective; the journey undertaken on our winding path toward achieving the objective; the results and products (framework, methods and tools) of the research; and our recommendations for improving the current planning system with regard to Māori environmental outcomes from the RMA and LGA.

Our primary research questions were:

- What are the underpinning concepts, principles and understandings upon which Māori interpret and make decisions about the environment?

- How can these principles (kaupapa) and values (tikanga) be used for developing and testing a kaupapa Maori environmental outcomes and indicators framework and methodology?

Our task was to develop the means by which councils and iwi could assess the environmental outcomes for Māori as part of a wider investigation into whether council planning documents and their implementation were resulting in positive environmental results (Chapter 1).

The challenge for us was great as we were seeking to address the fact that a Māori planning perspective had been absent from the field of planning since enactment of the first *Town Planning Act* in 1926. In early Phase 3 meetings we Māori researchers impressed on our colleagues that in order to investigate planning outcomes from a Māori perspective it would be necessary to identify what a Māori planning paradigm looked like. We would have to develop a framework of Māori planning approaches and perspectives as an underpinning to the research ahead (Chapter 3).

Based on our collective experience and the findings in prior PUCM reports, we set out to develop a kaupapa Māori framework which would in turn guide the development of a series of environmental outcomes and indicators. The intention was that this would provide a suite of tools with which tangata whenua (Māori with ancestral association with particular lands) could assess the extent to which environmental outcomes sought have been achieved. It would also enable the performance of statutory organisations and iwi organisations to be assessed against their environmental responsibilities.

Kaupapa Māori Research Approach

The term kaupapa Māori refers to investigations undertaken according to a Māori world view, and based on Māori principles of understanding (Smith, 1997; Pihama, 2001). A kaupapa Māori approach positions Māori perspectives and values as normal, rather than peripheral or “other” (Chapter 4).

Kaupapa Māori research requires the adoption of a participatory approach (Chapter 5). Participatory research is based in, and driven by, the community to which it relates – in this case Māori. Toward this end, tangata whenua have been actively involved in the research process; their guidance being sought in terms of its design, development, compilation, research synthesis, and the assessment of results. This was achieved via the establishment of two working groups, which met periodically to review progress and give direction to the PUCM Māori research team. The first was a “Māori experts” group consisting of people with substantial experience working within relevany (mainly) Crown agencies and councils. The second group consisted of experienced Māori environmental practitioners, largely those working within or for iwi (Māori tribes).

As a starting point, we undertook two literature reviews (Chapter 5). The first considered writing on tikanga Māori – particularly as this relates to environmental resource management. The second review considered Māori and other indigenous peoples’ environmental outcomes and indicators (See Figure 0.1 in the Preface). The review findings are in two reports downloadable from the PUCM website (www.waikato.ac.nz/igci/pucm).

Outcomes in this context are (as the word suggests) expressions of desired outcomes – in our case environmental outcomes. These are considered to be a recent development arising out of government policy analysis, and this has been described as a shift in focus away from process and towards results; from how policies and programmes work to whether

they work (Bennett, 2001). Consideration of outcomes and their measurement has expanded through programmes in such areas as health, education, and environmental management (Chapter 5).

Traditional indigenous indicators are means by which people understand and interpret their environments, including environmental change (Chapter 6). These include, for example, alignment indicators, where one event in nature coincides with, and therefore gives warning of, another. Place-names are another form of indicator - they encapsulate that which is important to those naming reflecting the values and priorities of the time. In addition to recording important historic events, names include descriptions of physical characteristics of a place, and serve to locate and describe sought-after environmental resources, such as plant and animal resources, or to warn of environmental hazards.

Framework for Kaupapa Māori Environmental Outcomes and Indicators

Three options or models – Ngā Atua (the gods), Te Wā (time across history), and Ngā Tikanga (customs) – were evaluated as a potential basis for the Kaupapa Māori framework. The tikanga-based model was ultimately chosen because it allows for a close examination of key terms and concepts already in wide use in the domain of environmental management - according to tikanga that are widely recognised and adhered to by Maori - and because it is likely to be the least complex model for both councils and iwi to follow (Chapter 6).

In order to make the development of detailed outcomes and indicators manageable and in line with work underway in the other PUCM objectives, we concentrated on three issues within the wider framework. For the kaupapa Mana, we focused on mana whenua (literally authority over the land) as the overarching tikanga within which iwi – council relationships should be considered. For the kaupapa Mauri, we focused on the tikanga mauri of waterways, and in relation to the kaupapa of tapu, we focussed on wāhi tapu (significant or sacred Māori sites).

Therefore, outcomes relating to water were to be considered under the overarching tikanga of mauri (the essence or life principle of any material living or otherwise). Wāhi tapu was retained as being the appropriate tikanga within which environmental outcomes relating to places of significance to Māori should be considered. Thus, the final structure of the framework recognised the key kaupapa (foundation or primary principles) of mana, mauri, and tapu, to which the three tikanga (mana whenua, mauri of water, and wāhi tapu) respectively relate (Chapter 6).

It was determined that each tikanga in turn have a single outcome associated with it, intended to express a universal ideal in relation to that particular tikanga. The physical components of the framework are three kete (based on the three tikanga) containing: a worksheet and associated advice notes; and two supplementary documents - the tikanga Māori literature review and best examples of Māori provisions within plans. As well, User Guidelines were prepared for staff in councils and iwi wanting to use the kete. (See Figure 0.1 in the Preface.)

Outcomes in the statutory/policy evaluation context are expressions of a desired result or condition. The outcomes we finally arrived at were: Mana whenua is appropriately respected; Mauri of all waterways are in optimum health; and Wāhi tapu are protected. While it is recognised that there are numerous other outcomes that might be sought in relation to these tikanga – it was considered that these others would likely be consistent with, and of a lower order than, those we adopted (Chapter 6).

This discrete package of outcomes provides the basis for the first batch of tools developed within the kaupapa Māori framework.

Methodology for Kaupapa Māori Environmental Outcomes and Indicators

We have used the kete (basket) metaphor as containing the methods with which the framework is applied by users, such as staff in councils and iwi. Together, the methods constitute a methodology (Chapter 7).

Our kaupapa Māori environmental outcomes and indicators methodology includes three levels of investigation. In descending order they are indices, indicators, and measures. Indices are high level enquiries that function to group multiple, but related indicators. An indicator in turn has multiple measures. The term “measures” refers to the underlying questions being asked, in order to provide the information required to inform the indicator.

For our purposes, indicators are intended to be simple measures for indicating environmental condition, or changes in the condition of the environment. They therefore seek to answer a question, such as: “Whether council staff consult with tangata whenua in relation to consents where tikanga is likely to be affected” or “the extent to which tangata whenua are consulted in relation to applications for coastal permits” or “Whether (or what proportion of) wāhi tapu within the district have been modified or destroyed within a particular period.”

Central to the kete or methodology, are worksheets, each one related to a particular kaupapa and its associated tikanga. For the three tikanga within our kaupapa Māori framework (mana whenua, mauri of water, and wāhi tapu), several indices are used. These relate generally to: territorial local authorities (councils); relevant Crown agencies; Māori; the wider public; and physical condition. There are, however, important supplementary documents and guiding notes that support use of the worksheets.

Trialling the Framework and Methodology

Having arrived at a draft set of kaupapa Māori environmental outcomes and indicators, we needed to test or trial them in iwi in 2007 and council organisations (Chapter 8). We started with two iwi and ran several workshops with environmental officers from Ngāti Maru of Hauraki and Ngāti Awa of Whakatane. Recommendations and comments from these workshops were considered by the research team and changes and additions made to the indicators prior to the final draft documents being returned to the iwi for further trialling. This involved iwi staff with environmental management experience completing the indicator series (Wāhi Tapu, Mauri of Water, and Mana Whenua).

The iwi participants confirmed the effectiveness of the three Kaupapa Māori environmental outcomes and indicators kete (baskets) as instruments for evaluating environmental outcomes from a Māori perspective, and for assessing the various influences on these by councils, the Crown, iwi and other parties.

Given this outcome, the framework and methodology was then trialled in two councils: Matamata-Piako District Council (MPDC) and Environment Bay of Plenty (EBOP) in 2008-2009. Having gained positive results from these trials, including how councils might use the framework, we modified the kete to accommodate any outstanding issues that had been raised in the overall trialling process.

Ideally, we would have engaged at least two local and two regional councils (from within the areas or rohe of our two iwi) having substantially different circumstances (e.g., high and low capacity councils or city versus rural), in order to test the effectiveness of our

framework and methodology across a range of situations. This was not, however, possible within available timeframes and resources (1.0 effective full-time staff per year).

Future Research and Uptake

Our analysis of the trial results in two councils and two iwi organisations brought us to the conclusion that there is much work that needs to be done by all parties in order to progress Māori environmental aspirations and come close to the statutory promises made to Māori by the Crown. We believe our Kaupapa Māori environmental outcomes and indicators framework and methodology provides a solid foundation for the further development of a suite of outcomes and indicators – an undertaking that will require considerable financial support.

The Government has provided a good policy framework in the RMA and LGA requiring councils to deal with Māori in environmental and community well-being planning, but implementation has been impaired by lack of appropriate tools, as well as commitment and capacity in key central and local organisations. The statutory load on councils and iwi is high and significant capacity-building is needed.

Government needs to better resource its agencies so as to build better capacity for ensuring that the provisions for Māori within the RMA and LGA are given meaningful effect. MfE (Ministry for the Environment) took an early lead in national environmental indicator development, including a specific Māori indicators programme, but this was abandoned before completion, and no organisation has since taken up this important work (Chapter 9).

From our research experience, we offer the following recommendations to central and local government for actions that would enhance not only the uptake of kaupapa Māori environmental outcomes and indicators, but also relationships between Māori and local government in general.

Recommendations

Central Government

Recommendation #1: That central government resumes its programme of Māori indicator development that was started in the late 1990s as part of its wider indicator programme and then abandoned. Existing work on Māori outcomes and indicators should be drawn upon, including the PUCM Kaupapa Māori framework and methodology, and other work undertaken by some councils and other research institutes, and input from Māori who are leading in the field of Māori indicators should be sought with a view to establishing a credible series of Māori indicators.

Recommendation #2: That central government, through departments, including; Ministry for the Environment (MfE), Department of Internal Affairs (DIA), Ministry of Social Development (MSD), Ministry of Culture and Heritage (MCH), and Te Puni Kokiri (TPK), resource Māori via the establishment of Māori units where these do not already exist. These units would take responsibility for co-ordinating inter-agency efforts toward Māori well-being, including Māori indicator development. They should undertake to ensure that indicators and other mechanisms once developed are adopted and used, in order to address the current lack of knowledge as to whether Māori outcomes, and accordingly Māori well-being, are being achieved.

Local Government

Recommendation #1: That measures be taken to integrate the fragmented efforts that have occurred to date toward the development of Māori outcomes and indicators. Measures should foster co-operation between Māori, councils, Local Government New Zealand (LGNZ), TPK, and MfE aimed at bringing together any relevant Māori outcomes and indicators work that has been done by these organisations with the PUCM Kaupapa Māori framework and methodology.

Recommendation #2: That Local Government New Zealand (LGNZ) establish a Māori unit in its organisation in Wellington to liaise with Te Puni Kokiri, Māori and councils, in order to assist councils with the development of Māori indicators and also with the development and evaluation of Māori policy, including: consultation with Māori; provision for greater participation in decision-making; and provision for employment of Māori staff, these being specific obligations under empowering legislation - *Local Government Act* (2002) and *Resource Management Act* (1991).

Iwi / Hapū

Recommendation #1: That iwi seek to establish a pan-tribal kaitiaki working group, with a view to greater co-operation between hapū and iwi in relation to environmental management and participation in local government processes. Such a group would bring together experienced practitioners, in order for these to develop resources to assist hapū and iwi. It would also act as a forum for channelling resources and lessons learnt from positive experiences, and mentoring hapū and iwi seeking to establish their own environment units. This would require funding to operate – and this should be sought from both central and local government.

Recommendation #2: That hapū and iwi – to the extent they are able – pressure their local authorities to complete the development of Māori outcomes and indicators, and that they expect that Territorial Local Authorities resource tangata whenua to participate in this development. We further recommend that hapū and iwi use the PUCM Kaupapa Māori Framework and Methodology on several levels: to evaluate whether the overarching outcomes relating to important environmental tikanga are being achieved; to evaluate the plans and performance of their local authorities; and as a base-line against which to assess the quality and credibility of any Māori outcomes and indicators proposed by their local and regional councils.

He Timatanga

Introduction

Indigenous peoples throughout the world, including Māori in Aotearoa, struggle to find a ‘space’ within the hegemony of the majority – and colonising – culture to express, acknowledge, and expand their own knowledge, values and beliefs. This holds true for knowledge domains that are widely espoused as environmental management, resource management, and sustainable management.

The first *Town and Country Planning Act* (TCPA) was enacted in 1953, although planning as a discipline had existed for some decades prior to that date. However, the main intended impact of the TCPA for Māori was that it prevented them building on land that remained in Māori title, thereby forcing tāngata whenua (people of the land) to migrate away from ancestral lands, mainly into the cities. Thus, the TCPA (1953) had a massive negative impact on Māori society. Māori values and rights were entirely absent within New Zealand planning and environmental management regimes until the late 1970s, when the Act was amended in 1977. This ushered in the first provisions to recognise Māori values in planning legislation.

Despite the last 30 years of recognition of Māori values in New Zealand planning legislation, it is still the widely held view of Māori that they and their local and regional council decision-makers are talking past each other when it comes to tikanga Māori. What is more, in spite of improved legislative provisions, they have largely failed to provide meaningful or consistent outcomes for tangata whenua.

The intention of our Māori research project has been to clarify and define key Māori environmental concepts so that stakeholders (including relevant council staff) will have a terms of reference against which they can begin to compare desired environmental outcomes from different perspectives and be better placed to integrate Māori environmental outcomes into the planning process.

To this end, we aimed at providing a kaupapa Māori environmental framework and methods for councils and iwi to use when monitoring the state of the environment and evaluating local government plans, so as to better achieve the promises made to Māori in contemporary planning and environmental management legislation for recognition of kaupapa and tikanga (guiding principles and values).

In this report we outline the steps taken to develop our Kaupapa Māori framework and its primary application method, this being a series of Māori-specific environmental outcomes with associated indicators as a mechanism for evaluating outcomes. Evaluating the environmental outcomes of council plans and their implementation in a manner that is consistent with tikanga Māori is important for meeting Government’s legislative commitment to Māori. Despite the statutory requirement under the *Resource*

Management Act (RMA, 1991) that plan outcome evaluations in general be undertaken by councils, this has almost universally not been done. The limited evaluation that has been undertaken has failed to incorporate Māori perspectives. And there has to date been minimal work on Māori environmental outcomes and indicators that has been undertaken within a framework constructed upon Māori principles and values (kaupapa and tikanga). The *Kaupapa Māori Environmental Outcomes and Indicators Framework and Methodology* we have developed within Planning Under Co-operative Mandates (PUCM) Research Programme has sought to address this deficiency.

PUCM's Māori Outcome Evaluation (MOE) methodology helps to fill a void in outcomes and indicators reporting, by linking: kaupapa (foundation principles); associated environmentally important tikanga (fundamental rules governing Māori relationships with the natural environment); and Māori aspirations (in the form of outcomes), to environmental indicators. It thereby provides the means by which councils can interpret the effectiveness of RMA environmental management with Māori values as its foundation.

The RMA (1991) has many provisions referring to Māori interests and participation in district planning. It also requires that councils “monitor the efficiency and effectiveness of policies, rules and other methods in [their] policy statements or [their] plan.” Prior to our MOE methodology, councils did not have the means for these evaluations with regard to Māori interests. It provides for the first time recognition of a Māori world view perspective in local government planning as sought by Māori, hapū and iwi. Where our tools are used by councils and tangata whenua, the likelihood is that improved engagement between these key stakeholders will develop.

1.1 Towards a Kaupapa Māori Framework

Given the absence of information regarding Māori participation under the RMA, we sought to develop methods with which tangata whenua and councils alike might usefully assess both council performance and environmental quality from a Māori perspective. Building on earlier research under PUCM Phases 1 and 2 prior to 2003, we decided, in consultation with our Māori peer review teams, that the development of Māori outcomes and indicators would provide an effective means by which council plans and environmental results for Māori could be assessed.

In order to ensure adherence to kaupapa Māori principles (foundation Māori values underlying research into Māori subjects) it was deemed necessary to develop a kaupapa Māori framework and methodology which would guide the development process, resulting structure, and the content of final outcomes and indicators. This turned out to be a long and winding road along which the research team had to travel, and several times both the framework and the outcomes and indicators methodology within it were changed in response to suggestions by our peer reviewers and partner iwi.

The framework and methodology adopts key kaupapa (principles) and associated tikanga (customs and values) significant in terms of environmental resource management. High level outcomes are defined for each tikanga and a series of indicators and practical methods for measuring these are combined in order to assist users to evaluate whether outcomes are being achieved.

Thus, in Chapter 2 we provide a Māori planning perspective (kaitiakitanga), including key definitions important to our work.

In Chapter 3, we describe the statutory history and the current legal environment to which Māori are subject. This is important for several reasons. The statutory environment determines the manner and extent to which Māori values and rights relating to environmental management are provided for. Statutory provisions specifically require councils to develop and assess outcomes and indicators. And many of the Māori indicators we have collated measure the extent to which Māori legislative provisions are providing results for Māori.

In Chapter 4 we report on theoretical models relating to Māori research and planning, and the outcomes and indicators that have been investigated and/or applied by others, as a basis for developing our own kaupapa Māori research approach in Chapter 5.

Our kaupapa and tikanga framework and methodology for encompassing a series of outcomes and indicators are presented in Chapters 6 and 7, respectively. The framework and methodology was trialled first in iwi and then councils and the process and results of the trials are explained in Chapter 8.

Finally, in Chapter 9 we encapsulate the main elements of the report and indicate opportunities for further research. We conclude with recommendations to central and local government and hapū and iwi for actions aimed at enhancing the uptake of Kaupapa Māori outcomes and indicators.

1.2 Antecedents

The PUCM Research Programme brings together a collaborative team of researchers and practitioners in an on-going evaluation of planning and governance under the *Resource Management Act, 1991 (RMA)* and more recently *Local Government Act, 2002 (LGA)*. The focus of the research has been on statutory plans under the RMA, including the quality of plans and their implementation, and the effectiveness of environmental outcomes from the plans. The PUCM team is comprised of both University researchers and higher degree students and practising planning professionals, as well as Māori experienced in environmental resource management and related tikanga. The research is co-ordinated through the International Global Change Institute (IGCI) at The University of Waikato.

Phase 1 (1995-1997) of the PUCM research focused on evaluating the quality of RMA statutory planning documents, including 16 notified regional policy statements and 34 district and combined plans from the 58 that had been publicly notified by March 1997. Plan quality was assessed using four main criteria: 1) quality of the fact base used in the plan; 2) clarity of issues discussed in the plan; 3) internal consistency of the plan; and 4) provisions for monitoring. Some findings related to Māori interests are highlighted in Figure 1.1. The research also considered organisational factors that influence plan-making. It found that most regional and district councils had produced only fair to poor plans, due largely to limited capabilities (Ericksen, et al., 2001).

Phase 2 (1998-2002) of the PUCM Research Programme set out to examine how the quality of plans may affect the quality with which they are implemented by using resource consents as indicators of implementation. Six councils were chosen for their range of plan quality and capacity to plan. Consents were assessed by a council's use of techniques to manage the effects of three topics: storm water, urban amenity, and extent of iwi consultation. The content of consents was linked back to relevant policies in the

district plans. The methodology developed for consents and the research was based on the following premise: the more techniques used in resource consents that can be linked to policies in the plan, the higher the quality of implementation. The results for storm water and urban amenity revealed a significant gap between environmentally friendly methods in plans and conventional techniques in resource consents.

Plan Quality -

• *Low scores were found for how well plans address the role of Māori in land use and resource management, but the reasons for this are considerably different compared to, for example, natural hazards.*

Organisational capacity -

• *Just over half of councils understood the mandate with respect to the Treaty of Waitangi and Māori interests philosophically, but failed to follow through due to lack of political commitment and capacity.*

Institutional Arrangements -

• *Statistical evidence shows that attempts to co-ordinate with Māori early in the planning process had a positive influence on how well plans advanced their interests. However, case studies revealed that although many gains have accrued to Māori from the coordination and consultation provisions of the Act, there was still considerable disenchantment when, for example, good faith efforts were under-cut by more powerful stakeholder groups.*

Mandate Design -

• *Poor mandate design has impeded progress in recognition of Māori values and resources in plans. For example, nearly 50% of plan-makers in district councils did not understand the provisions in the RMA in respect of Māori issues these being ss 6(e), 7 (a) and 8. The provisions give councils considerable discretion in how they should recognise and provide for Māori interests in their plans.*

• *The failure by central government to clarify relationships between the Crown, Māori, and local government, largely as a consequence of unfinished business from the 1989 Local Government reforms, has considerably weakened implementation of provisions in the RMA in respect of Māori interests. (Ericksen, Crawford, Berke and Dixon, 2001)*

Figure 1.1. Some findings from the PUCM Phase 1 research relating to Māori interests.

For Māori interests, however, the six councils selected for study did not have enough evidence of iwi consultation in resource consents to provide a valid random sample of 30 consents per council. Indeed, there were very few iwi consultations across the councils surveyed, which was in itself was a significant finding. As a result, the team decided to focus on the processes by which councils consulted iwi and hapū over resource consents in an attempt to find out why this was occurring.

The researchers concluded that while the RMA relied on active participation by Māori in the planning process, there was little capability-building (i.e., commitment and capacity) for assisting Māori and councils in improving plans. For example, while an average of three people at each hapū/iwi reviewed consents, on average, just over one of the three was actually paid for their service. This indicates that the capacity of hapū and iwi to deal

with resource consent applications was variable, but generally low (Bachurst, Jefferies and Ericksen, 2004). The consequences of this were aggravated by the lack of clarity in the role of councils as agents of the Crown. In general, few councils undertook capacity-building and few had clear lines of communication with Māori. Regarding findings in relation to Māori the research team reported:

Issues of concern to tangata whenua appear to be poorly dealt with through the iwi consultation process, despite rhetorical commitment to the Treaty of Waitangi within district plans. In the vast majority of consents (94%), no evidence of iwi consultation could be found. Disturbing results are also emerging from the council interviews and iwi surveys regarding the different perceptions iwi and councils have regarding participation in consultation. It seems that the two parties are talking past each other (Bachurst, Day, Crawford, Ericksen, Berke, Laurian, Dixon and Chapman, 2002).

1.3 Outcomes of Council Planning

Section 35 of the RMA requires councils to monitor and report on environmental outcomes and also on the efficiency and effectiveness of their policies, rules and other methods at no more than 5-yearly intervals. This obligation includes the requirement that councils monitor and report on the effectiveness of their plan's Māori provisions. The Ministry for the Environment (MfE) has, however, reported that plan effectiveness evaluation is rarely carried out by territorial authorities (Ministry for the Environment, 2005) and our research has confirmed that this is certainly the case in terms of evaluation of Māori provisions in plans. This should be of no surprise since in spite of this mandatory requirement there were no methods for doing so, until PUCM recently published methods.

An in-depth investigation into factors influencing plan evaluation has been undertaken and reported by other members of the PUCM team and it is not intended to substantially replicate that discussion here. The following extract concisely describes this issue:

Plan monitoring and evaluation may be the forgotten step in planning activity because planners may be less interested in evaluating past interventions than in writing new plans. It is also more politically rewarding for elected officials, to launch a new plan or programme than to evaluate past actions. Political constraints and organizational culture can also hinder plan evaluation. Evaluating planning outcomes increases accountability, but may also reveal failures, errors or inadequacies or embarrass government officials, and thus represents a political risk for high-level decision-makers. Institutions have little incentive to disclose unsuccessful results, and therefore to conduct thorough evaluations of their actions (Laurian, Crawford, Day, Kouwenhoven, Mason, Ericksen and Beattie, 2008).

The PUCM plan evaluation research is discussed further in Section 4.1.1 - Plan Evaluation Theory - and how it relates to Kaupapa Māori research theory.

The Kaupapa Maori research project in Phase 3 of the PUCM Research Programme (2003-2009) sought to provide a suite of tools to assist both tangata whenua and council planners to assess the effectiveness and appropriateness of Māori provisions in plans. It offers an additional approach for evaluating plan provisions and environmental outcomes from a Māori perspective, sitting alongside the PUCM plan outcome evaluation (POE)

methodology developed for other topics in district plans (See downloadable reports www.waikato.ac.nz/igci/pucm).

1.4 What are Outcomes and Indicators?

–Outcomes|| in the modern statutory context are statements of (in terms of our area of interest) environmental results sought by a community. The statement of outcomes and their measurement appears to have developed out of government policy analysis. This has been described as a shift in focus away from process and onto results, or, from how policies and programmes work to whether they work (Bennett, 2001). Consideration of outcomes and their measurement has expanded through evaluation programmes in areas such as health, education, and environmental management.

Māori have long used indicators, referred to as *tohu*, to understand and interpret the natural environment. Examples of these *tohu* include alignment or coincidence indicators, where one event coincides with, and can therefore be used to, anticipate another; or placenames, which function to describe a place or area, including its environmental resources.

‘Indicators’ as used in modern policy evaluation-- including planning and environmental management-- are simple methods for measuring progress toward (or away from) policy or environmental outcomes, and the change in relation to these over time. Indicators also measure or ‘indicate’ environmental changes, thereby providing environmental managers easy-to-interpret signposts for environmental change. It has been suggested (MARCO, 2005) that indicators should ‘SMART’ that is:

- Specific (closely related to the theme or outcome it will measure),
- Measurable (data are available),
- Achievable (it is possible to reach targets that have been set based on the indicator),
- Relevant (to those who will use them), and
- Time bound (trends).

1.4.1 Assessing Outcomes of Environmental Planning

For our current research we needed to develop a new and more robust approach to assessing the environmental results of statutory planning documents from a Māori perspective. We therefore first sought to determine, through a comprehensive literature review (Kennedy and Jefferies, 2005b), what research into council outcomes and indicators for Māori was being undertaken and found little in this regard.

Given this and earlier findings, such as questionable quality of plans as these relate to Māori, variable implementation of plans, and almost universal failure to monitor the results of plan Māori provisions, we set out to investigate environmental outcomes resulting from RMA planning documents and their implementation, and to do so from a Māori perspective.

In approaching this research we identified the following objectives:

- determine whether the environmental outcomes sought by council planning documents are being achieved on the ground, and if so is this outcome due to the influence of the plan or to other factors;

- determine to what extent RMA statutory plans contribute to the achievement of Anticipated Environmental Results (AERs) for Māori;
- develop a methodology for use by councils and Māori when assessing the achievement of AER for Māori;
- assess and explain the differences between Māori and Council positions regarding the achievement of AER; and
- ascertain how to improve AER achievement for Māori.

In 2004, the authors presented the schematic diagram outlined in Figure 1.2 to the PUCM team, in order to illustrate our proposed kaupapa Māori approach to the development of a outcomes and indicators framework. The diagram acknowledges the different perspectives that the PUCM kaupapa Māori framework might accommodate, recognising that mātauranga Māori/Māori knowledge includes some elements that are shared with overlapping areas of the blue outlined knowledge circles in Figure 1.2.

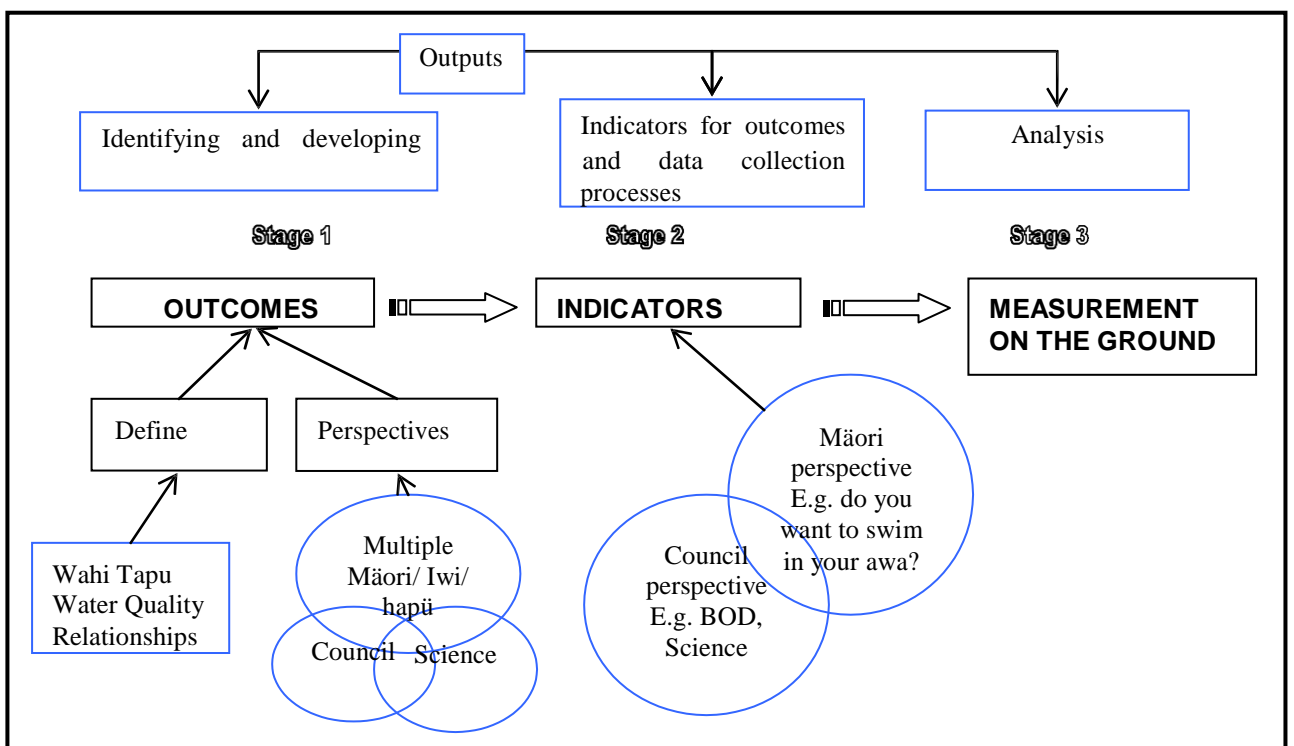


Figure 1.2. Initial schematic representation of Māori Outcomes and Indicators development process, presented to the wider PUCM team in 2004.

The outcome and indicator development process is aligned with three research output stages. The process allows for the input of Māori, hapū and iwi into identifying and explaining the environmental outcomes that they would like to see in district plans compared with what is at present in them.

1.5 Summary

PUCM Phase 3 Objective 3 (the Māori objective) is a substantial kaupapa Māori programme of research that has run over 5 years and brought together the expertise of a large number of Māori academics and environmental practitioners. It has been undertaken within, and informed by, the long-running PUCM Research Programme. This programme sought to evaluate the quality of statutory environmental planning documents under the

RMA 1991 (and more recently the LGA 2002), and to determine the extent to which their implementation has resulted in positive environmental outcomes.

Findings of the wider PUCM research were disappointing in terms of Māori aspirations. After 12 years of environmental management under the RMA (1991), Māori widely considered that they and their councils were largely talking past each other, that Māori were excluded from participation in planning processes, and that council planning decisions were almost always void of any consideration of Māori values and aspirations. This view has now been supported by our recent research findings.

For example, while PUCM Phase 2 (1998–2002) sought to evaluate Māori participation in the resource consents process as a proxy for the treatment of Māori values within the implementation of statutory plans, a near complete lack of Māori participation within the consents processes of councils investigated meant a statistically valid sample could not be obtained, the research approach for the Māori component of the PUCM research took a different path by focusing on kaupapa Māori principles.

Phase 3 (2003–2009) aimed at assessing environmental outcomes for Māori from statutory plans. It was, however, found that there were neither robust nor Māori-specific methods available for undertaking such an investigation. There had therefore been virtually no information gathered regarding environmental results of planning from a Māori perspective.

It was for this reason that we set out to develop a culturally appropriate kaupapa Māori outcomes and indicators framework and methodology. We anticipated that this would empower Māori to undertake analyses themselves, and to provide councils with culturally acceptable methods for evaluating their own planning documents and the state of their environments in a manner that is consistent with tikanga Māori. A Māori planning perspective is the focus of the next chapter.

Kaitiakitanga

A Māori Planning Perspective

To better appreciate our research intentions, it is important to draw attention to key ideas, entities, and values that underpin a Māori world view. Thus, in this chapter we begin by introducing Māori environmentalism and then go on to highlight the importance of mana, whanaungatanga, tapu, utu and toanga for environmental planning from a Māori perspective.

2.1 Māori Environmentalism

Māori have been the managers of the natural environment in Aotearoa for over 1,000 years while Western environmental management arrangements are a recent development. Before going further in this report it is necessary to provide a Māori perspective of the natural environment. We say ‘a’ Māori perspective in recognition that there are variations between the traditions of different iwi, just as there are various Pakeha perspectives.

Indigenous peoples worldwide, and Māori in Aotearoa, have finally been recognised at the highest level for the unique role they can play in contemporary environmental resource management. For example, Principle 22 of the UN Conference on Environment and Development’s (UNCED) Rio Declaration proclaims that:

Indigenous people and their communities and other local communities have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognise and duly support their identity, culture and interests and enable their effective participation in the achievement of sustainable development.

Māori consider themselves to be genealogically related to all aspects of the natural world through their descent from Ranginui – the sky father - and Papatūānuku – the earth mother. It is through Ranginui and Papatūānuku, from the children of whom all parts of the natural world descend, that Māori believe they have a familiar relationship with their environment and all its component parts. This understanding is fundamental in shaping Māori management and use of the natural environment and its resources.

The relationships between Ranginui, Papatūānuku and their descendants also establish precedents for dynamics of the relationships between the different lines of descent. This establishes the basis by which humans may use the natural resources around us. The prevailing belief that all parts of the natural world are genealogically related, brings with it a strongly felt duty of care toward those other parts of the natural world that are considered to be our kin. The use-right is therefore subject to strict obligations of wise use and guardianship – kaitiakitanga.

There are manifestations within Te Reo Māori – the Māori language - of the intrinsic relationship between tangata whenua (people of the land) and the rest of the natural world. The word whenua refers to land, but also to the birthing placenta, and the bond between people and their ancestral lands is recognised and maintained by the tikanga (custom) of burying the placenta within ancestral land. A similar relationship is reflected by the common use of the word iwi meaning bones, which are also interred within papatūānuku, and also being the name for the tribal unit, and the word hapū meaning both pregnant and (loosely) sub-tribe, or clan.

Before proceeding to discuss contemporary planning in Aotearoa, we briefly consider several key tikanga (values and customs) that are important in terms of Māori environmentalism. We think that this will assist the reader in understanding the philosophical foundations of our kaupapa Māori outcomes and indicators framework that is the subject of this report.

2.2 Mana

Mana is widely described as authority, power and prestige. It is ultimately derived from the gods. Mana is (along with tapu) a central principle underlying and ordering Māori society and also the place of Māori within their physical and spiritual world. Characteristics of mana include charisma, and the ability or power to perform certain acts or deeds (Marsden, 1977). A crucial component of mana is the ethic that it came not from the accumulation of material goods for personal gain, but from one's contribution to the community.

Mana is recognised as being of several primary categories; these being mana ātua, mana tupuna, and mana tangata. Mana whenua and tangata whenua are similar concepts, the tangata whenua holding mana whenua within their rohe (area). As indicated below, the terms tangata whenua and manawhenua are sometimes used interchangeably. According to McCully and Mutu (2003):

Mana whenua is the mana that the gods planted within Papa-tua-nuku (Mother Earth) to give her the power to produce the bounties of nature. A person or tribe who 'possesses' land is said to hold or be the mana whenua of the area and hence has the power and authority to produce a livelihood for the family and the tribe from this land and its natural resources.

Mana whenua is the tikanga considered most relevant in terms of council / iwi relationships and therefore participation of tangata whenua under the RMA (1991) and LGA (2002). It is, therefore, a tikanga selected for one of the first batch of indicators. Mana whenua is discussed further in Chapter 6 in relation to its inclusion in our PUCM kaupapa Māori framework.

2.3 Whakapapa and Whanaungatanga

Whakapapa and whanaungatanga are closely linked terms. Whanaungatanga refers to the various rights, obligations, and dynamics that operate between relatives. It stresses the primacy of kinship bonds in determining action and the importance of whakapapa in establishing rights and status.

Whakapapa is a fundamental concept that helps provide links between gods, ancestors, people, places, and ideas. The genealogy of all things is provided in whakapapa. It is

the basis for hapū allegiance, for establishing that all Māori are related, and for demonstrating the connection of Māori to elements of the universe (Waitangi Tribunal, 1997). Chief Māori Land Court Judge Joe Williams provides this appropriately universal description of the institution of whakapapa: “*The glue that holds the Māori world together is whakapapa or genealogy identifying the nature of relationships between all things*” (Williams, 1998).

There are numerous entrenched reminders in Māori society of our whakapapa links to nature, which serve to prescribe human behaviour in relation to the natural world. For example, the centre growth of harakeke (flax), is metaphorically likened to a human being. When being instructed in how to cultivate harakeke pupils are taught to take only five leaves from the parent plant. These are described as the child, the two parents on either side, and two grandparents outside of those. As renowned weaver Erenora Puketapu-Hetet wrote regarding harvesting harakeke: “*The rito and those [leaves] either side are never cut. Logically, this will ensure the life cycle of the flax plant, but in terms of Māori philosophy it is also acknowledged as a link between the plant and the people*” (Puketapu-Hetet, 1989).

Whanaungatanga - the manner in which everyone is related genealogically - is one of the most fundamental values that holds Māori together as a distinct people. McCully and Mutu (2003) posit that:

Knowledge of how one is related to everyone else within a particular community and to neighbouring hapū is fundamental to the understanding of an individual's identity within Māori society. It also determines how an individual relates to and behaves towards other individuals of that community.

Describing the roles, obligations and responsibilities, and functions of the whānau, Durie (1994) listed the following:

- manaakitanga – the roles of protection and nurturing;
- tohatohatia – the capacity of the whānau and the family to share resources;
- pupuri taonga – the role of guardianship in relation to family/whānau physical and human resources and knowledge;
- whakamana – the ability of the family/whānau to empower members
- whakatakato tikanga – the ability of whānau to plan for future necessities.

In accordance with the earlier discussion regarding the Māori belief that people are genealogically related to all elements of the natural world, Williams (1998) extends the definition of whanaungatanga beyond the whānau, or even hapū, to encompass a recognition of our links to the ātua and natural environment:

Of all of the values of tikanga Māori, whanaungatanga is the most pervasive. It denotes the fact that in traditional Māori thinking relationships are everything between people; between people and the physical world; and between people and the ātua (spiritual entities)

Similarly, the authors of *Māori Custom and Values in New Zealand Law* concluded that a consequence of whanaungatanga is that neat lines cannot be drawn between groups or between kin groups or between humans and the physical world. The whakapapa links between Māori, the land, the sea and other physical features has traditionally been celebrated by Māori people and remains celebrated today (New Zealand Law Commission, 2001).

2.4 Tapu

The laws of tapu are considered by some to play the most influential role in regulating Māori society and its relationship with the natural world (McCully and Mutu, 2003). Tapu is regularly translated as untouchable, sacred, and associated with the gods (Marsden, 1977; Barlow, 1993; Williams, 1998; Durie, 2000; Mead, 2003). In terms of social function Durie (2001) observes that tapu is seen as linked to a code for social conduct based essentially on keeping safe and avoiding risk:

Explanations of tapu as primarily religious in nature appeal to those who seek spiritual answers for societal conduct. The more temporal view holds sway where survival and health maintenance are seen as the main challenges for tribal societies. But common to both views is the acceptance of tapu as [a code] for social conduct and adaptation to the environment.

One particular tikanga relating to tapu is wāhi tapu. Wāhi tapu – loosely translated as sacred and significant sites or places and their protection - is of great importance to Māori, and wāhi tapu are specifically recognised in the RMA (1991). They are considered further in Chapter 6.

2.5 Utu

Translations of utu in the literature include compensation, revenge, reciprocity, the principle of equivalence, balance, recompense and payment.

While utu has popularly become translated as revenge Angela Ballara rejects this definition because there were other words in Māori for revenge. She points instead to ‘utu’ meaning ‘revenge’ or the object of ‘revenge’, and ‘ngaki’ meaning ‘to avenge’ (Ballara, 2003). The maintenance of environmental balance is a critical element in utu. There is widespread agreement that the maintenance of balance was a primary function of utu (Patterson, 1992; Waitangi Tribunal, 1999; Metge, 2001; Ballara, 2003; Mead, 2003).

In the PUCM kaupapa Māori research we have been mindful of the dynamics around utu that seek to maintain an environmental balance and a balance between the aspirations and needs of different groups. The RMA is itself a balancing act, decision-makers being required to weigh competing and entirely different qualities and values. Mead (2003) presents a useful tikanga-based approach to environmental management. He considers utu to be a component in a three stage process, which he describes as take, utu, ea, thus: “*Utu is a response to a take and once the take is admitted the aim is to reach a state of ea, which might be translated as restoring balance and thus maintaining whanaungatanga.*”

Within this model, utu is the response that seeks to restore balance, rather than balance itself. The Waitangi Tribunal in its Muriwhenua Land Report (Waitangi Tribunal, 1997) uses utu to describe both the act to restore the balance and the resulting balance. Thus, Māori see utu as being about ongoing obligations and thereby relationships. Maintenance and enhancement of one’s mana was (and is) of paramount concern in Māori society.

2.6 Taonga

As observed in the Whanganui River and Muriwhenua Fishing reports, “*All resources were ‘taonga’ or something of value, derived from gods*” (Waitangi Tribunal, 1999). The

following excerpt from the Muriwhenua Fishing Report gives a graphic description of what taonga means to Māori, recognizing that taonga (in this case fisheries) incorporates both the physical and intangible elements. This is an important observation, because taonga have most often been considered to be tangible resources, or intangible concepts (as indicated in the citation below), yet this extract reveals the distinction to be artificial:

In the Māori idiom 'taonga' in relation to fisheries equates to a resource, to a source of food, an occupation, a source of goods for gift-exchange, and is a part of the complex relationship between Māori and their ancestral lands and waters. The fisheries taonga contains a vision stretching back into the past, and encompasses 1,000 years of history and legend, incorporates the mythological significance of the gods and taniwha, and of the tipuna and kaitiaki. The taonga endures through fluctuations in the occupation of tribal areas and the possession of resources over periods of time, blending into one, the whole of the land, waters, sky, animals, plants and the cosmos itself, a holistic body encompassing living and non-living elements. This taonga requires particular resource, health and fishing practices and a sense of inherited guardianship of resources. When areas of ancestral land and adjacent fisheries are abused through over-exploitation or pollution the tangata whenua and their values are offended. The affront is felt by present-day kaitiaki (guardians) not just for themselves but for their tipuna in the past.

The Māori 'taonga' in terms of fisheries has a depth and breadth which goes beyond quantitative and material questions of catch volumes and cash incomes. It encompasses a deep sense of conservation and responsibility to the future which colours their thinking, attitude and behaviour towards their fisheries (Waitangi Tribunal, 1988).

Accordingly, taonga are all things treasured by Māori, physical and intangible. Taonga is specifically recognised and provided for in legislation as the RMA Section 6 (Matters of national importance) states that:

...in achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance: (e) The relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga.

The *Local Government Act* (2002), section 77 (Requirements in relation to decisions) includes exactly the same provision.

2.7 Kaitiakitanga

Kaitiakitanga is an extension of kaitiaki, which in turn derives from the base word tiaki. McCully and Mutu (2003) provided the following explanation of kaitiaki:

The word 'kaitiaki' is derived from tiaki, which Williams (1997) translates insufficiently as 'guard, keep, watch for, wait for'. The prefix 'kai' denotes the doer of the action and, according to Williams, should be translated as 'guardian, keeper, someone who watches for or waits for'. Kaitiakitanga is the noun derived from kaitiaki and therefore should be translated as 'guardianship' or something similar.

While kaitiaki are traditional spiritual guardians with responsibility for protecting particular elements, resources or places, kaitiaki are now largely considered to be humans who have assumed these responsibilities. Some commentators have suggested that kaitiakitanga is a modern construct – in effect a term appropriated as a translation of the English concept of guardianship (Jefferies, 2008). Regardless, it has come to be in common use over the last two decades as a reference to the kaitiaki functions and actions of tangata whenua. The Waitangi Tribunal describes this popular contemporary understanding (that tangata whenua hold kaitiaki responsibility), in the following way: “*It [kaitiakitanga] denotes the obligation of stewardship and protection. These days it is most often applied to the obligation of whānau, hapū and iwi to protect the spiritual well-being of the natural resources within their mana*” (Waitangi Tribunal, 1995).

The literature on kaitiakitanga relates primarily to contemporary environmental management, and is therefore concerned entirely with the role of tangata whenua as kaitiaki. Roberts describes the role of kaitiaki as the overriding Māori environmental ethic (Roberts, 1995). The consequences for failure by tangata whenua to fulfil kaitiaki obligations are described by McCully and Mutu (2003) as:

Should they fail to carry out their kaitiakitanga duties adequately, not only will mana be removed, but harm will come to the members of the whānau and hapū. Thus a whānau or a hapū who still hold mana in a particular area take their kaitiaki responsibilities very seriously. The penalties for not doing so can be particularly harsh. Apart from depriving the whānau or hapū of the life-sustaining capacities of the land and sea, failure to carry out kaitiakitanga roles adequately also frequently involves the untimely death of members of the whānau or hapū, a punishment Ngāti Kāhu has had to weather on more than one occasion in the recent past.

Ngāti Whanaunga rangatira Toko Renata describes kaitiakitanga from a Hauraki perspective, in relation to tribal moana (pers.comm., 2008). He speaks in terms of the fundamental value, inherent in the Māori world-view (explained in Chapter 4), as obligations to generations yet to come. Thus, Toko emphasises both rights and obligations, in line with the importance placed on reciprocity and balance within Te Ao Māori (described in the previous section on utu). The conservation ethic is inherent in the obligation to future generations by the prescription that the resource must not be depleted by the current generation. As the Waitangi Tribunal (2001b) reports:

The key is that our relationship with Tikapa Moana is about a balance between rights and obligations. We consider that our obligations as kaitiaki extend, perhaps most importantly, to future generations. This is about passing down our traditions and tikanga with regard to Tikapa, in particular how Tikapa Moana should be treated, and how we can ensure that the generous gifts of Tikapa Moana will continue to be available for those future generations.

2.8 Summary

In Chapter 2, we have briefly presented a Māori environmental perspective. We did so in order to provide readers unfamiliar with a Māori world view with some understanding of those kaupapa that are fundamental to Māori environmental management and, therefore, to the development of Māori environmental outcomes and indicators.

We first provided an outline of a Māori world view as this relates to the natural environment and the place of humans within it. We gave a short description of several

environmentally relevant kaupapa – foundation principles and values that are particularly important in terms of Māori environmental management. The kaupapa described were mana, whakapapa, whanaungatanga, tapu, utu, taonga, and kaitiakitanga. For each of these we provided a definition and translation, and went on to briefly report on important published writing on this subject.

Finally, we discussed the relevance of each kaupapa in terms of environmental resource management, and consequently to our research. It was not intended in this chapter to provide a comprehensive understanding of these kaupapa. Readers are directed through the chapter to a substantial literature review undertaken as part of our research. In that report is provided references to important published material on each of the eight kaupapa described in this chapter, and to numerous other environmentally relevant kaupapa.

Te Ao Ture

The Statutory Environment

In this chapter we describe the statutory environment in which Māori operate. This includes not only contemporary legislation, but consideration of international developments. This includes case law and international agreements, and also the developing jurisprudence in Aotearoa/New Zealand and legislative developments stemming from all of these. We then focus on the RMA (*Resource Management Act*, 1991), this being the primary piece of legislation establishing the environmental resource management regime in Aotearoa. Finally, we focus on statutory plans under the RMA, this being a primary concern of our project, i. e., Māori plan provisions and the extent to which these are given effect.

3.1 International Developments

The struggle of indigenous peoples since colonisation to regain a place within their country's planning regimes for their values and perspectives relating to their natural environments is well documented (Barsh, 1986; Davis, 1993; United Nations, 2003). Until recent decades, indigenous rights to participation in environmental resource management were almost unknown. However, since the 1970s gradual, but cumulatively significant, advances have been made in the recognition of indigenous rights.

A changing international political environment has been conducive to improving recognition of indigenous issues. The 1979 Lusaka Declaration of the Commonwealth on Racism and Racial Prejudice included recognition that "*the effects of colonialism or racism in the past may make desirable special provisions for the social and economic enhancement of indigenous populations*" Commonwealth Heads of Government, 1979). More recently, the convention on Biodiversity at Article 7 requires sovereign states to:

(j) Subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices (United Nations, 1992).

In the same year the *Rio Declaration on Environment and Development* and the resulting Agenda 21 directives (United Nations Conference on Environment and Development, 1992a) called for greater participation in environmental management by indigenous peoples. Principle 22 of *The Rio Declaration* proclaims that:

Indigenous people and their communities and other local communities have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognise and duly support their identity, culture and interests and enable their effective participation in the achievement of sustainable development.

During this same period, a series of legal cases have upheld indigenous rights. These include landmark rulings in terms of recognition of native title (such as *Guerin vs. The Queen* (Guerin vs The Queen, 1984) 2 S.C.R. 335 and *Mabo vs. Queensland* (Mabo versus Queensland (No 2), 1992) 175 CLR); aboriginal rights to environmental resources (such as *Sparrow vs. The Queen* (Sparrow vs The Queen, 1990); and indigenous peoples rights to participate in environmental resource management (including the *Boldt decision* (US vs. Washington 2nd., 1978), which established that recognition of indigenous rights to natural resources (in that case fresh water fisheries) is substantially undermined unless the group is also empowered to participate in the management of the environment in which those resources are found (Pinkerton, 1992).

In combination, these events have forced nation states to enact legislation providing for indigenous peoples' relationships with their traditional lands, and also their rights relating to resource management. Examples include our own *Treaty of Waitangi Act* (1975), the *Amerindian Act* in Guyana, and *Canadian Constitution Act* (1982), which all dealt with constitutional protection to pre-existing aboriginal land rights and land claim settlements. However, New Zealand is considered to have led the way in terms of provision for indigenous rights and values in environmental resource management legislation.

Specific interest in indigenous quality of life indicators has resulted from the work of the United Nations Commission on Sustainable Development (CSD). The CSD Work Programme on Indicators of Sustainable Development (ISD) was adopted by the Commission at its third session in April 1995. The CSD work programme includes as one of its key elements the “*development of highly aggregated indicators, involving experts from the areas of economics, the social sciences and the physical sciences and policy makers as well as incorporating non-governmental organization and indigenous views*” (United Nations Division for Sustainable Development, 2001).

At the World Summit on Sustainable Development (26 August - 4 September 2002) the UN Commission on Sustainable Development and the General Assembly on "Information for Decision-making" recorded a list of –decisions|| , including:

4. *At the national level, Governments, taking into account their priorities and respective national circumstances, with the support of the international community, as appropriate, are encouraged to consider to:*
 - (b) *Collect and provide access to relevant information for decision-making for sustainable development, including gender-disaggregated data, incorporating indigenous and traditional knowledge into information bases for decision-making, as appropriate...*

Thus, international agencies and developments have provided impetus for the recognition of Māori values in legislation, and for efforts by the Crown to identify and incorporate Māori outcomes and indicators into their work programmes.

3.2 Māori in Environmental Resource Management

In *Ngāti Maru Iwi Authority Inc v Auckland City Council* Judge Baragwanath granted the iwi leave to appeal previous Environment and High Court decisions to the Court of Appeal, observing that: “*It is unnecessary on a leave application to do more than allude to the evolving international recognition that indigenous issues must now be viewed through a wider lens than that of western culture*” (Ngati Maru Iwi Authority Inc v Auckland City Council, 2002).

In line with such international recognition, the RMA (*Resource Management Act*, 1991), New Zealand's primary legislation responsible for environmental resource management, includes numerous Māori provisions and incorporates Māori customary law through reference to tikanga Māori, including kaitiakitanga, taonga, and tapu.

The earlier *Town and Country Planning Act* (1977) included Māori-specific provisions for the first time, but Māori continued to seldom participate in planning processes, and there were few instances where these were used successfully by Māori. There were, however, a few notable examples, primary among these being the ground-breaking decision brought in the case *Environmental Defence Society vs. Mangonui County Council* (*Environmental Defence Society v Mangonui County Council*, 1989). This decision held that land that was the original home of an iwi remains ancestral land even if it has been alienated from tribal ownership.

This case established the legal precedent acknowledging that mana whenua is wider than present-day ownership. It confirmed that the Karikari Peninsula was the ancestral land of Ngāti Kahu, and recognised that the ongoing relationship with land is a factor to be weighed when making decisions under that RMA.

The RMA (1991) not only inherited the Māori provisions from the TCPA (1977), but also added many new ones. Foremost among these are requirements that those administering the Act in effect must: 1) recognise and provide for, as a matter of national importance, the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu, and other taonga (Section 6e); 2) have particular regard to Kaitiakitanga (Section 7a; and, 3) take into account the principles of the Treaty of Waitangi - Te Tiriti o Waitangi (Section 8).

Te Puni Kokiri (The Ministry of Māori Development) describes Treaty principles as being primarily concerned with the way in which the Crown and Māori behave in their interactions with one another (Te Puni Kokiri, 2001). While there is debate as to exactly what the principles of the Treaty of Waitangi are, the courts and Waitangi Tribunal have confirmed the following: the principle of partnership; the principle of reciprocity; the principle of mutual benefit; the principle of active protection; and the principle of redress. While there is also debate as to whether it is in itself a treaty principle or a duty inherent within other principles, the courts and tribunal have also recognised a duty on the parties to act reasonably, honourably, and in good faith. Examples of such recognition can be found in the case of *Te Runanga o Whare Kauri Rekohu vs. Attorney-General* (*Te Runanga o Whare Kauri Rekohu v Attorney-General* 2 1993) and the *Waitangi Tribunal's Orakei Report* (Waitangi Tribunal, 1987).

There are various other Māori provisions within the RMA which are less often cited. Section 14(3)(c) exempts tangata whenua from the general prohibition against taking natural water or geothermal water in certain circumstances on the basis of tikanga. Local authorities with 'functions, powers, or duties' under the RMA may transfer (Section 33) or delegate (Section 34) these to another 'public authority' including an 'iwi authority,' government department, or other statutory authority. Not until 2009 did a transfer to iwi take place, when Tuwharetoa were transferred authority over the bed of Lake Taupo. Section 39(2)(b) provides for a local or consent authority "to recognise tikanga Māori where appropriate." District and regional councils are required to have regard to relevant planning documents recognised by an iwi authority when preparing or changing a district plan (Section 74(2)(b)(ii)), regional policy statement (Section 61(a)(ii)) or regional plan (Section 66(2)(c)(i)).

There are Māori-specific provisions within more than 30 sections within the Act. There are also Māori values and participation provisions within various other pieces of contemporary environmental and resource management related legislation.

It is clear that the Crown has recognised Māori values and has made substantial provision for Māori participation in the management of New Zealand's natural and environmental resources. This apparent empowerment of an indigenous minority through the inclusion of traditional environmental management principles in legislation sounds entirely positive, but whether that has resulted in meaningful advances for Māori by maintaining integrity in terms of a Māori management approach remains largely untested.

3.2.1 RMA Statutory Planning Documents

The RMA (1991) requires regional councils to make operative a Regional Policy Statement and Regional Plans, and city and district councils to make operative a District Plan. These statutory documents are an important means by which the RMA, including its many Māori provisions, are given effect. While the RMA does not dictate the content of statutory plans, it does require that these adopt a particular structure including: the identification of significant Issues facing the region or district and the formulation of Objectives, Policies, and Methods for addressing these issues. Additionally, councils are required to formulate Anticipated Environmental Results (AERs) or Key Performance Indicators (KPIs) and to undertake regular monitoring and reporting to determine whether these are being achieved.

While content is not mandatory, the Act requires that lower order plans are not inconsistent with higher plans and policies. For example, Section 62.3 requires that a regional policy statement “must not be inconsistent” with any water conservation order and must give effect to a national policy statement or New Zealand Coastal Policy Statement. Section 75(2)(c) requires that a district plan shall not be inconsistent with the regional policy statement or any regional plan in matters of regional significance or for which the regional council has primary responsibility.

Until a recent change to the RMA (2005), lower level plans were not required to be consistent with higher plans, but only “not inconsistent”. The PUCM Phase 1 research found that lower order plans often simply replicated the wording of the Act and high level documents. This was particularly the case in relation to Māori provisions. When evaluating iwi provisions in plans, the PUCM team reported: “*Our analysis has revealed that this strong mandate has not been reflected well in the 28 district plans reviewed, which either largely paraphrase or fail to acknowledge key sections of the RMA*” (Jefferies, Warren, Berke, Chapman, Crawford, Ericksen and Mason, 2002). Moreover, wider PUCM investigations regarding council monitoring found these to be wanting, and that this was certainly the case regarding Māori:

The PUCM team found that overall, monitoring was poorly written into plans, most failing to specify methods that would be used. Kōkōmuka (Consultancy Ltd) found that while some of the 28 plans it reviewed mentioned monitoring and encouraged iwi participation, they did not acknowledge how or with whom they would participate with in the monitoring process (Jefferies et al., 2002).

An important aim of our current research has been to develop methods for evaluating the Māori-specific provisions of statutory plans, as one strand of an overall assessment into the environmental outcomes resulting from council actions. This work is discussed in Chapters 6 and 7.

3.2.2 Statutory Relevance of Environmental Outcomes and Indicators

In line with New Zealand's commitment to sustainable development and conventions, such as the Rio Declaration and Agenda 21, the Ministry for the Environment (MfE) embarked in the late 1990s on a programme to identify and develop environmental indicators (the EPI programme), and has recognised the importance of, and provided for, Māori specific indicators. In relation to Māori participation, the MfE Chief Executive said: –In developing the [environmental indicators] programme the Ministry for the Environment acknowledges Māori as tangata whenua and Treaty partner, and the role Māori play in effective resource management|| (Ministry for the Environment, 1999).

While the RMA (1991) provides a statutory basis for the development of environmental indicators (including Māori indicators), it does not specifically refer to outcomes and indicators. Instead, it requires councils to identify the AERs (Anticipated Environmental Results) of their plan provisions (which are similar to environmental outcomes) and to undertake monitoring to evaluate whether these results have been achieved (which require indicators). Councils are also required to evaluate the effectiveness of their plans, which can only be achieved if indicators are developed for evaluating AERs or outcomes. Indeed, some councils have expressed the measures by which they will monitor in terms of indicators.

Also pertinent to Māori interests, the *Local Government Act* (LGA 2002) requires that councils, in combination with their communities, develop Community Outcomes. The statutory definition of community in the LGA includes environmental, economic, social and cultural well-being. The LGA does not, however, refer to indicators, but does require councils to monitor progress on behalf of the community toward achieving its outcomes. Schedule 10, Part 1 of the LGA requires, amongst other things, local authorities to state measures in their long-term council community plans (LTCCP) to assess progress towards the achievement of community outcomes. Section 92 (1) states: “A local authority must monitor and, not less than once every 3 years, report on the progress made by the community of its district or region in achieving the community outcomes for the district or region.”

However, while there is a statutory rationale for developing outcomes and indicators, councils have been given little assistance by central government in the form of methods for doing so – particularly in relation to Māori. Given statutory requirements for monitoring the effectiveness of environmental outcomes of plans, it is astounding that the requirement should precede the availability of methods to do so. The task of the PUCM Phase 3 team (2003-2009) has been to develop methods for councils to use for meeting these important statutory requirements, including those for Māori interests.

3.3 Summary

In Chapter 3, we began with consideration of the changing international political environment within which Māori and indigenous peoples elsewhere have won legal recognition of their right to participate in environmental resource management.

We went on to recall the advent of Māori provisions in environmental resource management in Aotearoa, culminating in the *Resource Management Act* 1991, and to consider important legal developments that have helped establish (at least in theory) the need for decision-makers to include consideration of Māori values when balancing decisions under the RMA.

In Section 3.2.1, we discussed Māori provisions within plans, reporting that many simply replicate the wording of the RMA and higher level plans or fail to acknowledge these at all. These earlier findings are important given that statutory plans are a major consideration for the outcomes and indicators we have developed.

We then reported on the statutory relevance of environmental outcomes and indicators and the statutory environment in which outcomes and indicators have become popular as a plan and environmental monitoring method. In this regard, we described the Māori indicators programme begun (but never completed) by MfE, and went on to discuss the extent to which both the RMA and LGA provide the statutory basis and rationale for councils to develop outcomes and indicators, including those for Māori.

Prior to environmental applications, outcome and indicator development has been undertaken within various other statutory arenas for several decades including those of health, education, and other social services. For this reason, it is to these areas that we look in our search for theoretical approaches and frameworks for the development and interpretation of environmental outcomes and indicators as methods for evaluating policy and practice outcomes. This is the matter we consider next in Chapter 4.

He Tirohanga Kaupapa

Theories, Models, and Frameworks

In approaching the task of developing a suite of Māori environmental outcomes and indicators, we considered other theoretical models and frameworks that have been used in planning generally and for environmental outcome indicator development specifically, both in New Zealand and internationally. Some of these models and frameworks, and their relevance and applicability to our research objective, are discussed in this chapter.

First, relevant theories are discussed, including those relating to plan evaluation, Māori research, and environmental outcome evaluation. Then, particular attention is paid to those models and frameworks that incorporate a Māori perspective or are considered to be conducive to a Māori approach to outcome evaluation.

4.1 Theories

Various theoretical models relevant to plan environmental outcomes evaluation were reviewed. This included the plan evaluation theories that were central to the wider PUCM Research Programme, and other theoretical models relevant to our Māori research project on outcomes and indicators. We deal with each in turn below

4.1.1 Plan Evaluation Theory

Environmental planning under the RMA in New Zealand is an application of a rational-adaptive planning model (Ericksen, et al., 2003). Under this model, plans contain a cascade of issues, objectives, policies, methods, regulations and anticipated environmental results. They also include the means by which the results or outcomes of a plan can be monitored in order to improve subsequent revisions of the plan and thereby future outcomes. Outcome evaluation is therefore the last step of the process designed to inform future planning activity.

As already noted, PUCM Phase 1 (1995-1997) developed a plan evaluation method to assess the quality of RMA plans, then a method to evaluate plan implementation (Phase 2, 1998-2002). Both methods included the means for evaluating Māori provisions in plans. While the methods developed were new, the context in which they were placed was “plan evaluation theory” and a pragmatic application of collective lessons learnt over many decades of plan-writing and implementation. This approach, which was based on a western world view, was then extended to include developing methods for evaluating the effectiveness of outcomes from plans (Phase 3, 2003-2009). As already said, a key difference with this third phase of research was recognition of the need for a Māori world view when dealing with the Māori component of district plans. While we are ultimately concerned with assessing environmental outcomes for Māori, we are interested in linking these back to plans and their implementation.

The literature on policy, plan, and programme evaluation identifies three types of outcome evaluations: goal or objective-driven evaluation, theory-driven evaluation, and stakeholder-driven evaluation (McCoy and Hargie, 2001; Lunt, Davidson and McKegg, 2003).

Goal or objective-driven evaluation is described as focusing on whether the goals and objectives of the policy or programme are achieved (Baer, 1997; Weiss, 1997). This type of evaluation was considered to dominate evaluation practice (Blalock, 1999; McCoy and Hargie, 2001) and is positivist in that it assumes that well-designed and implemented interventions have clear goals and yield expected outcomes, which can be assessed by external, neutral experts.

Theory-driven evaluation seeks to clarify the relationships between policies or programmes and outcomes (Weiss, 1972; Chen and Rossi, 1980; Chen and Rossi, 1989; Weiss, 1997), and emphasizes the “conceptualization, design, implementation and utility of social intervention programmes,” i.e., both the programme and its outcomes (Rossi and Freeman, 1989). This approach was seen to focus on analytically identifying and modelling programme logic and causal relations between programme outputs and outcomes. It requires that evaluators build on a conceptual framework of the programme and of its intended, unintended, direct, and indirect impacts.

User driven evaluation, sometimes referred to as “responsive” or “constructivist” evaluation (McCoy and Hargie, 2001), is based on stakeholders’ deliberation and understanding of the policy or programme’s goals, functioning and outcomes.

Currently, planners in councils cannot demonstrate the overall impacts of their plans and planning decisions, or show whether plans are successfully yielding their intended outcomes, because methods for evaluating plan outcomes is lacking. The PUCM team therefore provided the theoretical foundation for plan outcome evaluation, developed an innovative, robust, and pragmatic Plan Outcome Evaluation (POE) methodology, and applied it to several topics in three councils (Laurian et al., 2008). In parallel with this work was the Kaupapa Māori research on Māori environmental outcomes.

4.1.2 Kaupapa Māori Research and Theory

There has been a good deal of writing on the subject of Kaupapa Māori research, and on the emergence of a distinct Kaupapa Māori theory over the last decade. Kaupapa Māori has been described as a discourse that has emerged from, and is legitimised by, the Māori community. Māori educationalist, Graham Hingangaroa Smith, describes Kaupapa Māori as "the philosophy and practice of being and acting Māori". He suggests that it assumes the taken-for-granted social, political, historical, intellectual, and cultural legitimacy of Māori people, in that it is an orientation in which "Māori language, culture, knowledge and values are accepted in their own right" (Smith, 1997).

Considering the origins of kaupapa Māori as a research framework, Shayne Walker and other report that it comes from, and was influenced by, several developments, including: a worldwide move by indigenous people to increase their self-determination over land, culture, and language; a greater commitment to the intentions of the Treaty of Waitangi, which meant that there would be greater collaboration between Māori and non-Māori, sharing of research skills, and greater protection of Māori data and participants; and the growth of initiatives which had emerged from the revitalization movement, for example, the introduction of kōhanga reo (Māori language pre-schools) and kura kaupapa schools

where Māori language and tikanga (culture and customs) were taught, as well as the emergence of specific health models for Māori (Walker, Eketone and Gibbs, 2006).

A central element of Kaupapa Māori theory is the positioning of a Māori view as normal rather than other or peripheral. In line with this principle, Pihama and others suggest that: “*The term Kaupapa Māori captures Māori desires to affirm Māori cultural philosophies and practices*” (Pihama, Cram and Walker, 2002). They go further, defining kaupapa Māori research as being by and for Māori. They write that Kaupapa Māori research has been used as both a form of resistance and a methodological strategy, wherein research is conceived, developed, and carried out by Māori, and the end outcome is to benefit Māori.

The term Kaupapa Māori theory is increasingly used to refer to academic investigation undertaken according to a Māori world view, and based on Māori principles of understanding (Smith, 1997; Pihama, 2001; Powick, 2003; Panoho, 2007).

4.2 Environmental Outcome Evaluation Models

In this section on environmental outcome evaluation models, we summarise use of popular models and frameworks and some variants, including their use in New Zealand, in order to situate attempts by others, such as New Zealand’s Ministry for the Environment, at including Māori outcomes and indicators in their models. This provides a basis for us going on to lay out our approach for developing a kaupapa Māori environmental outcomes and indicators framework (Chapter 5). The Māori framework and methodology are presented in Chapters 6 and 7 respectively.

4.2.1 Pressure State Response Framework

The environmental outcome model most widely described within the literature and adopted in New Zealand is the OECDs (Organisation for Economic Co-operation and Development) Pressure State Response (PSR) model (Figure 4.1) and subsequent variants of it such as the Driver Pressure State Impact Response (DPSIR) framework (Figure 4.2).

The OECD (2003) states in *OECD Development Indicators – Development, Measurement, and Use* that for reasons of analytical soundness, an environmental indicator should:

- *be theoretically well founded in technical and scientific terms;*
- *be based on international standards and international consensus about its validity;*
- *lend itself to being linked to economic models, forecasting and information systems.*

This is in line with the OECD’s commitment to “democratic government and the market economy” (OECD, 2003). Such requirements are, however, often inconsistent with indigenous indicators, which often reflect, and are couched in terms of, cultural values. Such values have been widely ignored by the “international “community that is assumed by the OECD to hold authority; and is concerned with economic models.

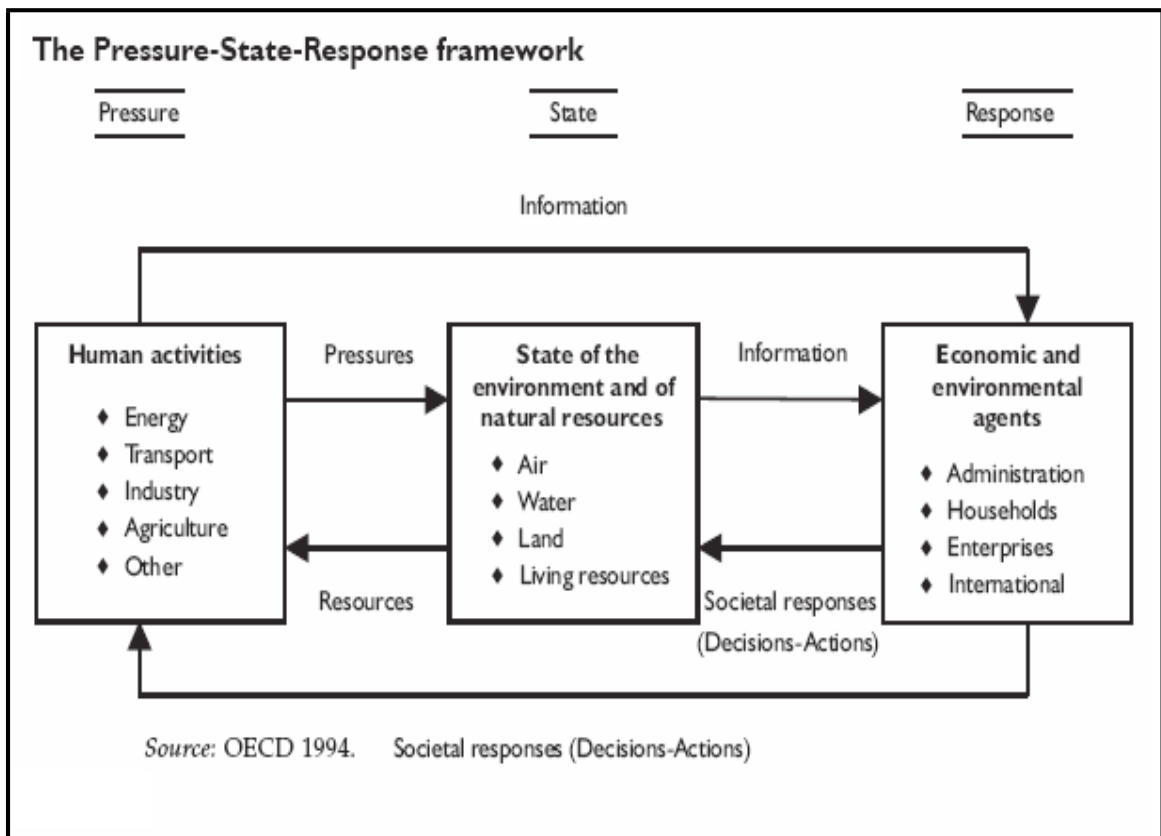


Figure 4.1. Schematic representation of the OECD Pressure State Response (PSR) Model. (Source: OECD, 1994).

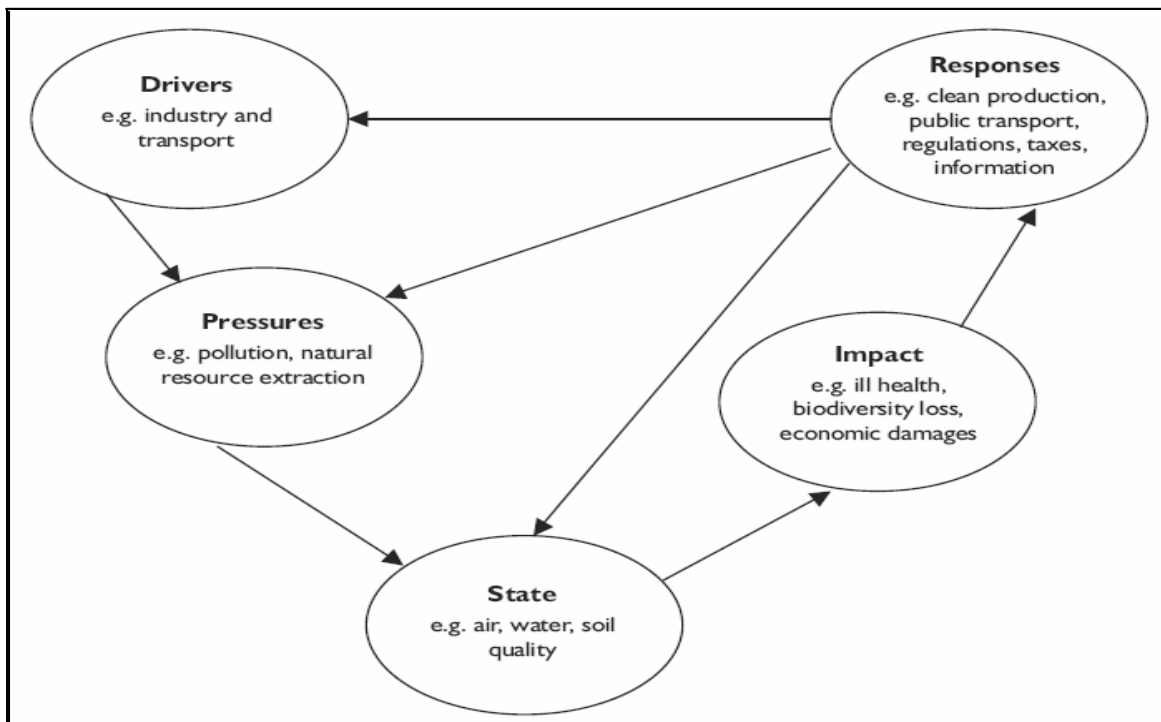


Figure 4.2. The Driver Pressure State Impact Response (DPSIR) framework, a variant of the OECD PSR model. (Source: Hauraki Māori Trust Board, 1999).

The World Bank in its discussion paper *Indicators of Environment and Sustainable Development - Theories and Practical Experience* (Segnestam, 2002), reports that the United Nations Commission on Sustainable Development (UNCSD) used the PSR framework to organize the indicators selected during the international development of indicators for the monitoring of sustainable development, but that the framework turned out to be rarely used by testing countries and was therefore abandoned. Instead, the indicators selected were organized according to Major Areas, Themes and Sub-themes.

This is not, however, supported by a reading of the international indicators literature, where the PSR model is most regularly referred to. In New Zealand, the Pressure State Response model was adopted by MfE (Ministry for the Environment), and it (and its variants) is the most widely used framework used for environmental reporting.

The Manager of Environmental Reporting at MfE, confirmed that they were considering alternative models to PSR for the next round of State of the Nation reporting (Daw, 2008). She said that internationally there were so few parties using alternative approaches that to vary would carry risks in terms of OECD reporting standards requirements. This would seem to support, as we have previously observed, that OECD influence has locked the international community into using the PSR framework, blocking investigation and adoption of alternative models which might better accommodate indigenous values and perspectives.

This perhaps explains why the PSR model has been adopted as a framework for the development of various Māori indicators projects, including the Māori components of the MfE national indicators programme. This has happened despite concerns expressed by a tangata whenua advisory group convened by MfE. That group reported that the Māori component of the indicators programme was an add-on to the general programme and failed to genuinely provide for a Māori perspective: “*There has been an attempt by the Ministry's methodology to 'plug-in' Māori concerns without clear consideration of either the Treaty of Waitangi or the aspirations of methodologies arising from Māori knowledge*” (Ministry for the Environment, 1998).

4.2.2 Alternative Western Approaches

As discussed above, the PSR model has become substantially entrenched as the environmental monitoring and reporting framework in OECD countries. There are, however, some alternatives described in the literature.

The World Bank centres (e.g., Rural Development Sector and Environment Department) advocate use of an environmental assessment model called the international Framework for the Evaluation of Sustainable Land Management (FESLM). It is described as being related to the pressure-state-response framework for environmental reporting, and has been in development since the early 1990s (Dumanski, 2000).

FESLM it is argued, provides a practical framework that connects all aspects of land use under investigation with the interacting conditions of the natural environment, the economy, and socio-cultural and political life (Dumanski, 1991). It is intended to serve as a tool for identifying which systems are sustainable systems and which are not, by producing a checklist of variables and factors. There are five pillars of sustainability in the FESLM frame-work: productivity, security, protection, viability, and acceptability.

Subsequent World Bank literature makes no reference to this framework, but rather refers to several frameworks, other than FESLM. One example is the “Project-based framework” (also referred to in the literature as the Input-Output- Outcome-Impact framework), which is used in the monitoring of the effectiveness of projects whose objective it is to improve the state of the environment (Segnestam, 2002).

Also referred to by the World Bank is an unnamed “framework based on environmental (or sustainable development) themes” indicators selected are organized according to Major Areas, Themes and Sub-themes. It is explained that the principal objective of creating a framework formed by Themes and Sub-themes that conceptualize sustainability, is to support policy makers in their decision-making at a national level (Segnestam, 2002).

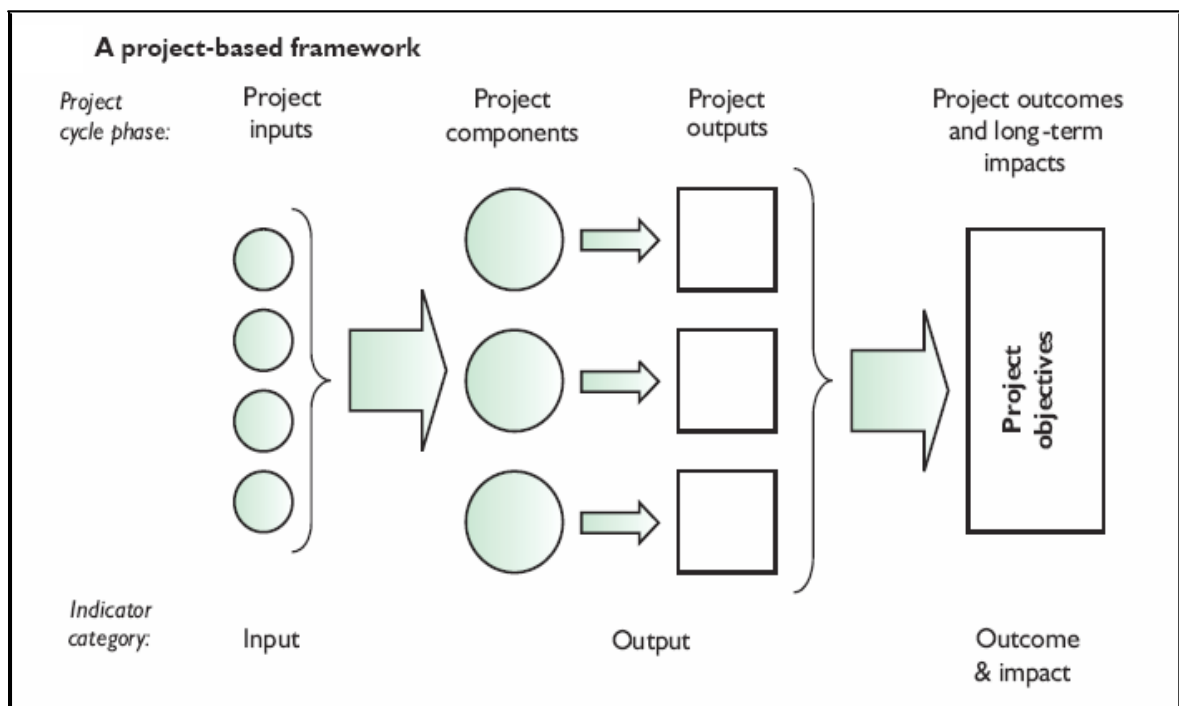


Figure 4.3. Project-Based Framework, proposed by the World Bank as a framework for environmental improvement project evaluation. (Source: Segnestam, 2002)

According to the World Bank report, a feature of all of these frameworks is that they enable the user to determine whether all concerns (impacts and pressures in general or related to specific themes) are being monitored and addressed. No discussion was included of indigenous indicators in these World Bank reports, despite recognition of the need for participation by indigenous peoples, such the following statement in the World Bank’s Environment Strategy: “*identifying local preferences through direct consultation and incorporating indigenous knowledge are particularly important in cases involving indigenous peoples*” (World Bank, 2001).

4.2.3 Māori Models

The Māori advisory group on the MfE Indicators programme proposed a framework within which Māori indicator development might take place within the wider MfE programme. That framework was, however, largely concerned with the relationship between the Māori and Crown partners to assist in the working partnership required for indicator development within the programme. The model proposed was called the

Partnership – 2 Cultures Model, which advocates for the creation of discrete spaces or 'houses' within which the Treaty partners may conduct their affairs and develop their views on any topic; in this case, environmental performance indicators.

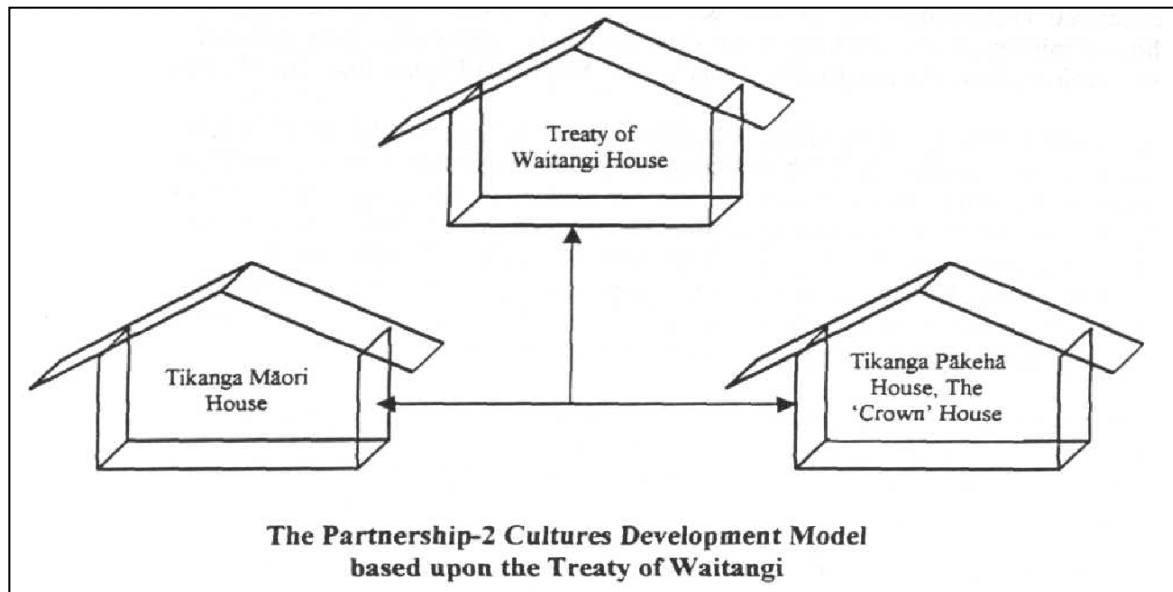


Figure 4.4. The Partnership - 2 Cultures Development Model proposed by Māori Advisory group to MfE Indicators Programme (Source: Ministry for the Environment, 1998).

Within this model, two separate -frameworks|| were proposed; one specifically for Māori use (the mana whenua framework) and the other Māori-Crown environmental monitoring (the integrating framework). The first is described thus:

The 'Mana Whenua' framework orientates a Māori community toward planning for their environment independent of external considerations and concerns. This framework is concerned with the identification of discrete and independent spaces, structures, contexts within which Māori, whether at iwi, hāpu or whānau level, can develop their own agenda for the environment. And that such an agenda will be developed from traditional knowledge but will also be concerned with developing new Māori knowledge by renewing key traditional ideas in a contemporary context.

The second framework was described in the following way:

The 'Integrating' Framework recognises that Māori monitor the environment along with other kinds of groups, such as Crown agencies. The 'Integrating' Framework advocates for an application of the Treaty of Waitangi when Māori communities, having at first developed independently their plan for their environment, encounter external groupings especially those of the Crown.

These two frameworks were said to be based on the definition of “Primary Māori groupings” and “secondary Māori groupings.” Primary Māori groupings have a direct relationship with the subject environment through whakapapa, e.g., tangata whenua, mana whenua. Secondary Māori groupings are those “whose relationship with the environment stems from some other philosophy.” Primary and secondary groupings operate to different degrees in the mana whenua and integrating frameworks, and are not specific to any one framework (Ministry for the Environment, 1998).

Neither of these definitions was developed into what we could term a framework, as it is really a model within which to develop and theoretically locate Māori indicators within the MfE programme.

The Hauraki Māori Trust Board's *Hauraki Customary Indicators Report* refers to a "cultural pressure state response framework", but offers little explanation of how such a model would differ from the PSR model illustrated above in Figure 4.1. In a later environmental plan entitled *Whaiä te Mahere Taiao a Hauraki* (Hauraki Māori Trust Board, 2004), the Board adopted a different approach using Ngā Atua (Māori gods associated with the various domains of the natural world) as a classificatory framework for environmental outcomes. Ngā Atua is discussed further below in relation to our PUCM kaupapa Māori research.

Tri-axial Māori Development Framework

The Tri-axial Māori Development framework was developed as an approach to Māori health outcomes by Mason Durie and others (Durie, Fitzgerald, Kingi, McKinley and Stevenson, 2002). They posit that:

...in addition to articulating Māori views, the methodology of Māori development should be swayed by empirical data. Assumptions made on the basis of opinion alone [they suggest] lack credibility, not because they are necessarily unreasonable or even incorrect, but because they do not satisfy the requirements of reasoned inquiry.

They go on to say that: "Māori development, like *mātauranga Māori*, is centred around Māori values, aspirations, frameworks and holistic interpretations, but differs from *mātauranga Māori* in so far as it leans towards empiricism for validation."

This framework is described as –an appropriate framework within which Māori development [in the context of health] could be analysed and advanced. The processes identified in relation to the process axis were:

- the application of Māori values;
- recognition of Māori aspirations;
- use of Māori-centred analytical frameworks;
- the adoption of an evidence-based approach; and
- holistic interpretations of knowledge through the integration of multiple sectoral and disciplinary insights.

The authors represent these processes along the methods axis in the order listed above, starting with Māori values and culminating in the integration of multiple datasets. The determinants axis explores the factors that influence, or have influenced, Māori development. The most significant being:

- indigeneity and globalisation;
- application of the Treaty of Waitangi;
- political agendas;
- Māori participation in society, education and the economy;
- Māori access to *te ao Māori* (the Māori world);
- Māori societal change;
- demographic factors, and;
- historical factors.

Mason Durie explains these factors in this way:

However, the essential point is that Māori development is influenced by a variety of factors operating together. The analysis of Māori development requires a multi-faceted exploration and an ability to analyse numerous factors against each other. For example, although at first glance the rates of admission to psychiatric facilities are cause enough for concern, when viewed against Māori societal change consequent upon rapid urbanisation, the real concern might be linked more to the changing capacity of whānau (extended families) to care for members at times of crisis or illness and to promote well-being. Similarly, the economic position of Māori may not be a reflection of a dwindling asset base so much as a rapid population increase and a shift in the dependency ratio towards large cohorts of children and youth.

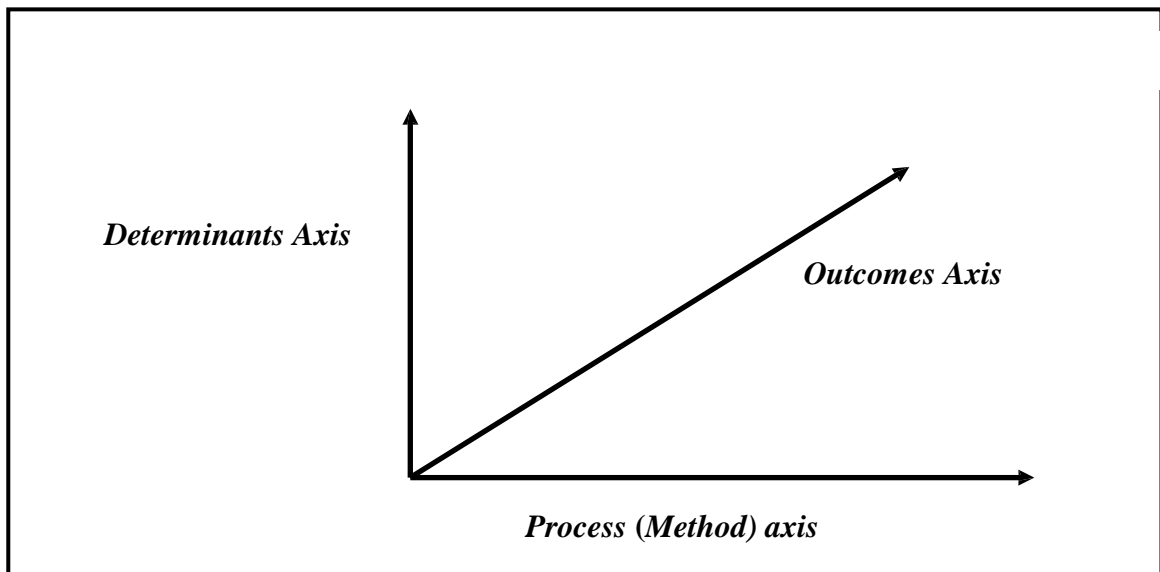


Figure 4.5. Tri-axial Māori Development Framework (Source: Durie, et al., 2002)

The outcomes axis, in Figure 4.5 is related to the results of Māori development – the outcomes that can be anticipated and measured. Durie, et al., (2002) indicate that the key result areas of Māori development can be shown schematically along an outcomes axis, these being: well-being; wealth and a sound economic base; secure cultural identity; environmental integrity; autonomy, tino rangatiratanga.

Describing Environmental Integrity, the developers of this framework write:

Māori world views, like those of other indigenous peoples, subscribe to a close association between people and the environment. In the earliest claims to the Waitangi Tribunal the importance of cultural values for environmental management were frequently discussed and many were subsequently incorporated into the Resource Management Act 1991. In any event an important outcome of Māori development lies in the nature of the connection between Māori people and the environment, manifest as access to heritage sites and a greater sense of involvement with decisions about the environment. Negotiated solutions, rather than blanket prescriptions, are likely to be more enduring (Durie, et al., 2002)

Te Ngāhuru

Also developed by Durie, et al. (2002), Te Ngāhuru is a six-part schema for considering Māori outcomes, incorporating: principles to guide application of outcome measurements; outcome domains, outcome classes; outcome goals; outcome targets; and outcome indicators.

The goals listed are: Positive Māori participation in society as Māori; Positive Māori participation in Māori society; Vibrant Māori communities; Enhanced whānau capacities, Māori autonomy (Tino rangatiratanga); Te Reo Māori in multiple domains; Practise of Māori culture, knowledge and values; Regenerated Māori land base; Guaranteed Māori access to a clean and healthy environment; Resource sustainability and accessibility.

Specific outcomes are also identified within the document, including: Well-being, Wealth and a sound economic base, Secure cultural identity, Environmental integrity and Autonomy, and tino rangatiratanga.

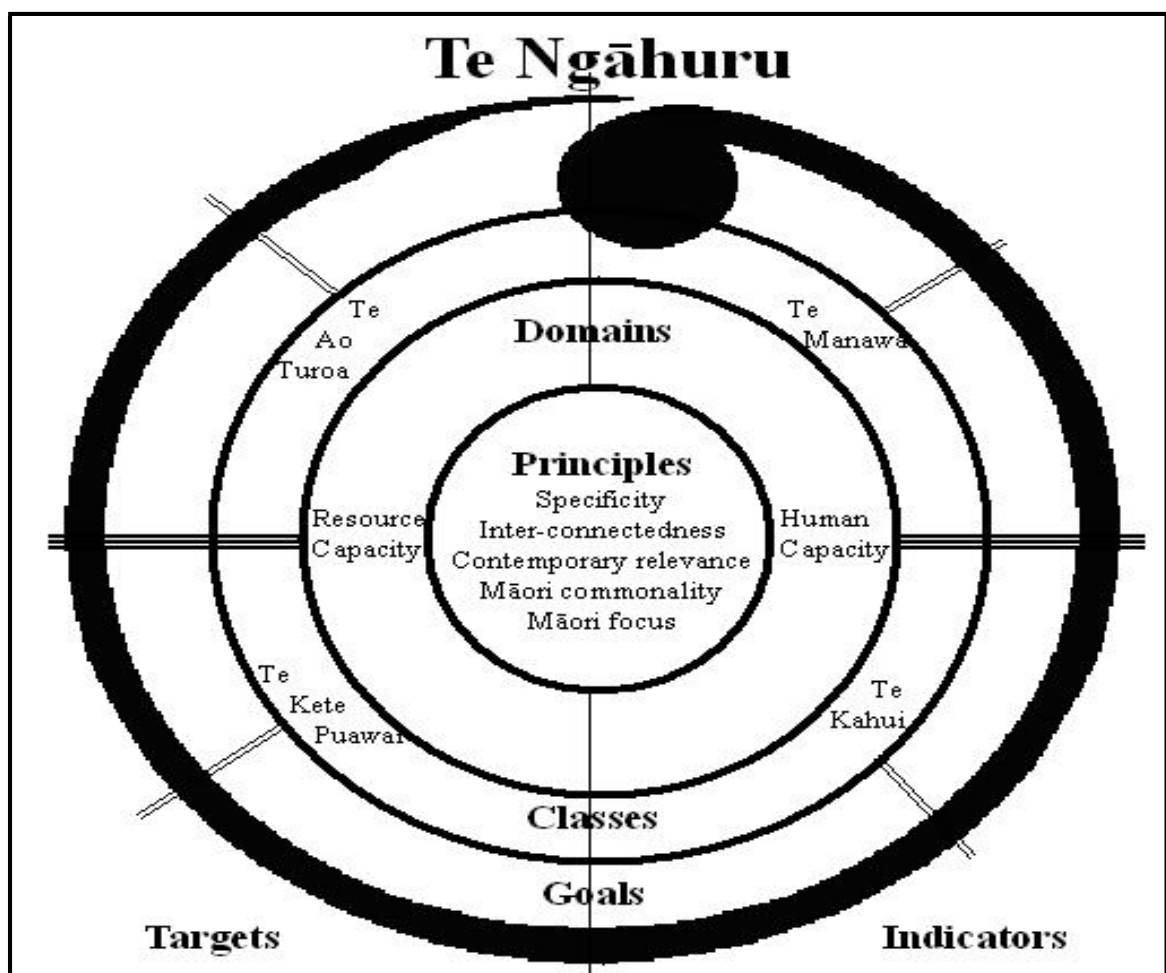


Figure 4.6. Te Ngāhuru outcomes model. (Source: Durie, et al., 2002).

While this is essentially a Māori health model, of interest here is Durie's identification of environmental issues among the outcomes and goals. This is not surprising given the holistic world view of Māori in which mankind and the other elements of the natural world are interconnected by whakapapa, whereby the well-being of one is dependent on the well-being of the other elements.

Cultural Inventory frameworks

Various iwi are using and adapting Gail Tipa's River Health Index (Tipa and Teirney, 2003) and Garth Harmsworth's Cultural Heritage Index (Harmsworth, 2002). Some iwi are modifying these in order to improve their ability to manage and interpret information obtained using these methods, for example, by using Geographic Information Systems (GIS), which provides mapping and geographic modelling ability. Examples were demonstrated and discussed at length at the Māori GIS conference in Christchurch hosted by Ngāi Tahu (2009). Various participating groups showed work being undertaken around the country, particularly in relation to waterways and significant sites.

4.3 Summary

In this chapter we reported on theoretical models and frameworks associated with several areas relevant to our research. The main theories considered were plan evaluation theory (significant to the overall PUCM Phase 3 research) and kaupapa Māori theory (relevant to our Māori research project).

In Section 4.1 we introduced plan evaluation theories as a basis for developing evaluative methods, given that one of the driving factors behind our research project is the widespread failure by councils to evaluate the environmental outcomes of their own plans. Following that, Kaupapa Māori theory, models, and frameworks employed for kaupapa Māori research were reviewed for possible use in our project.

Next, environmental evaluation models used both in New Zealand and internationally were discussed. Models favoured by international organisations, such as the World Bank, United Nations, and OECD have become internationally entrenched as standards for environmental evaluation. This trend was criticized on the basis that they (and in particular the Pressure State Response model) have been largely driven by economics-based rationales, and are inconsistent with indigenous peoples' world views, philosophies, and environmental aspirations. Several Māori models/frameworks were then investigated and their relative merits as approaches to Māori and indigenous outcome and indicator development and implementation considered.

The research approach that we adopted for developing our PUCM Kaupapa Māori Environmental Outcomes and Indicators Framework and Methodology is outlined next in Chapter 5.

Tikanga Rangahau

Research Approach

In covering new ground for identifying environmental outcomes and indicators the use of which by councils would be significant for Maori, we had no predetermined research approach other than it needing to be consistent with Kaupapa Māori research principles. Our search became a long journey of discovery even though we had substantial experience within the team and peer review groups in Māori environmentalism, Māori planning, and even outcomes and indicators work.

The following components were critical for our determination to develop a framework and methodology that was both theoretically sound and consistent with tikanga Māori. The components in our approach included: developing the means for encouraging iterative participation by Māori; carrying out extensive literature reviews; creating a process for developing kaupapa and tikanga for inclusion in the framework and methodology; using GIS for modelling, analysis, and graphic representation of information gathered; and developing the means for trialling the framework, including three kete (baskets) containing outputs and indicators. The main components in our research approach are highlighted in Figure 5.1 below.

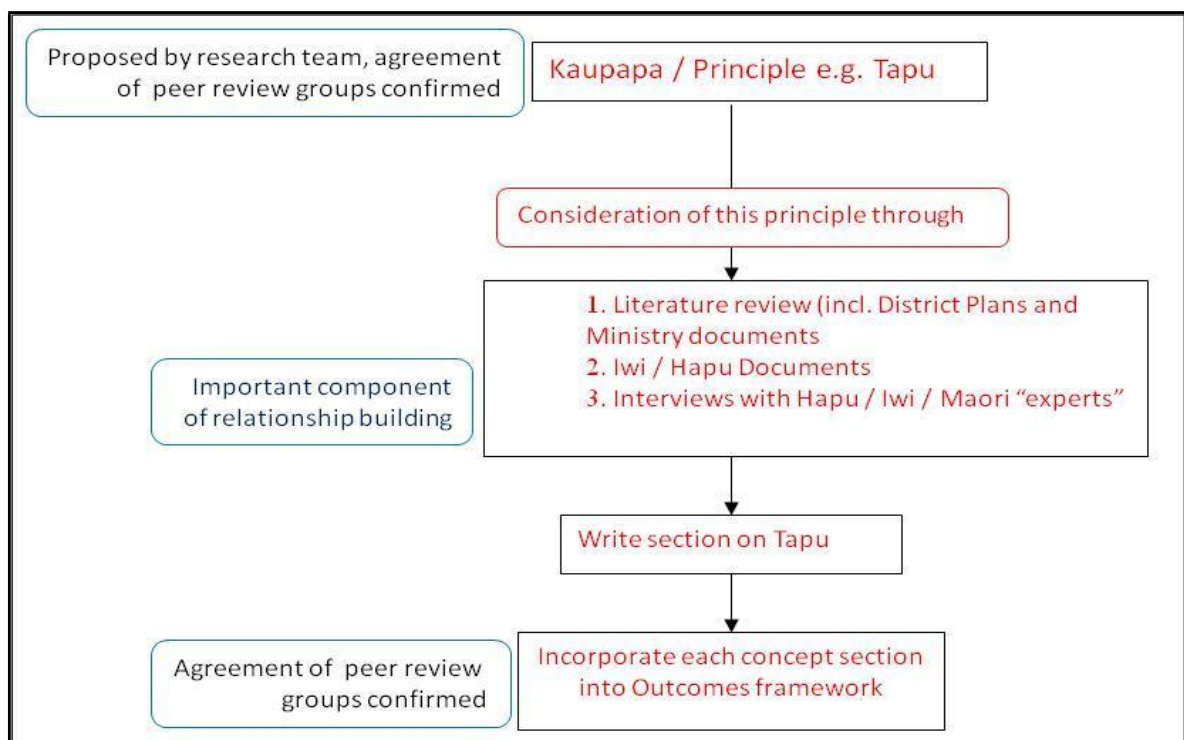


Figure 5.1. Main components in PUCM Kaupapa Māori Research Approach to developing Environmental Outcomes and Indicators

The foundation kaupapa and associated tikanga that were deemed of particular importance in relation to environmental resource management were identified by the PUCM Māori researchers. The proposed kaupapa (e.g., tapu, mana, and mauri) were included in documents for consideration by our peer review groups. The meaning and environmental relevance of each kaupapa was then researched via a literature review, including hapū/iwi planning documents, and our findings then debated with tribal experts.

Following these debates, a section on each of kaupapa was written, which included discussion of the environmental relevance of each and speculation as to what outcomes and indicators might look like. These kaupapa were presented to our peer review group members for comment and confirmation, after which each was included in a master kaupapa Māori outcomes and indicators table in preparation for the determination of outcomes and indicators. Important aspects of our overall research approach and process are elaborated upon further below.

5.1 Participation by Māori

Our commitment to kaupapa Māori research principles required that an iterative and participatory approach to the research be adopted. It is based in, and driven by, the community to which it relates – in this case Māori - and requires that the team be open to reviewing and changing its approach as the research proceeds or as new information comes to hand. Toward this end, tangata whenua have been actively involved throughout the research process. Participation by Māori had four parts: appointing Māori researchers; establishing a Māori Experts Group; establishing a Māori Practitioners Group; and engaging iwi to trial our kaupapa Māori framework. Each of the components of Māori participation in the research is briefly discussed below.

5.1.1 Māori Researchers

As already noted, kaupapa Māori research is, at its most basic level, research undertaken by Māori for Māori. Accordingly, Māori practitioners and academics with particular expertise in Māori environmentalism and local government were employed to lead and execute the research. KCSM Consultancy Solutions Ltd, lead by Richard Jefferies, was brought into the PUCM Research Programme during Phase 2 (1998-2002) to assist in the interpretation of research results from the implementation of plans by councils. KCSM has extensive experience in policy and plan development and evaluation, and also in advising Māori relating to resource and land use.

The backgrounds of the researchers provided experiences from which the kaupapa Maori outcomes and indicators were born. Richard Jefferies has long experience in Māori education, including developing a Kaupapa Māori based education curriculum. This experience proved pivotal in the development of the PUCM Kaupapa Māori framework. Nathan Kennedy was engaged for PUCM Phase 3 (2003-2009), bringing 10 years experience as environment officer for his iwi Ngāti Whanaunga, researching and presenting iwi treaty claims, and working in local government. He initially generated a table of numerous environmental outcomes for Māori and a range of indicators for each of these. Following this, Richard and Nathan worked with other staff members at KCSM to rearrange, refine, add and remove indicators until a draft framework emerged ready for consideration by the peer review groups.

Collectively, Richard and Nathan have worked 1.0 FTE (full-time equivalent) per year on the project. The process of developing, testing and refining our kaupapa Māori framework methodology has to date taken 4 years.

5.1.2 Māori Peer Review Groups

Two peer review groups were formed. The first was comprised of Māori “experts” largely academics and people with substantial planning or related experience. A large proportion of these was then, or had previously been, working within councils or Crown agencies. The second was a group of practitioners; people with long-time experience working for iwi, largely in iwi environmental units. The membership of these two groups changed over time, but they continued to be consulted in relation to our research design, development, compilation, research synthesis, and assessment of results.

The groups met periodically to review progress and give direction to the research team. The intention behind forming the two groups was to take advantage of people from very different work backgrounds, and to ensure that each had the space to articulate their own perspectives and experiences. It was anticipated that both groups would bring perspectives informed by tikanga Māori, but recognised that their quite different experiences would usefully inform our research. We were careful to ensure that both groups had the opportunity to do so without having to spend a lot of energy defending their positions. Decisions have relied at all times on consensus being reached within each group – this being considered consistent with a Māori approach to collective decision-making.

5.1.3 Participation by Iwi

Following the completion of the draft framework and associated outcomes and indicators, we sought input from Māori tribal authorities. We had not preferred iwi over hapū, but most formal tribal organisation occurs at an iwi level and this is where environmental management capacity usually resides. We make this observation mindful of the widely held view that certain authority, mana whenua being a pertinent example here, remains at a hapū rather than iwi level. No position contrary to this view should be assumed by our engagement with iwi, and it has always been our intention that the kaupapa Māori framework would be used by Māori at all “political” levels.

The researchers were aware that Māori are routinely expected to participate in academic research with minimal or no resourcing, giving over their knowledge and time without compensation (Jefferies et al., 2002; Bachurst et al., 2004; Bishop, 2004; Harmsworth, 2004). This is done despite the fact that most iwi and hapū operate under extreme resource constraints. For this reason, we sought from the PUCM leader a contracting arrangement with our participating iwi whereby a reasonable level of resourcing was provided to undertake the trialling.

Initially, participation by four Māori organisations was intended. Approaches were made to a five iwi, but despite the resourcing we had secured only two organisations had the capacity to participate. This was unfortunate in that it had been our intention to include groups with varying circumstances and levels of experience in environmental resource management processes. We were interested in considering differences between the following experiences: rural versus urban organisations; well-resourced compared to less well-resourced groups; and iwi having strong relationships with their councils against those with poor relationships.

5.1.4. Māori Participation in Trials

The two iwi that undertook trialling were Ngāti Maru Rūnanga, based in Thames, and Te Rūnanga o Ngāti Awa of Whakatane. Both iwi have long established, functional, and strong tribal authorities and both have dedicated environment units run by experienced resource management. Members of both iwi had previously participated in the peer review groups, and therefore had been involved with guiding the research process and the development of the framework. However, substantial engagement with the rūnanga began once the methods (kete) for implementing our kaupapa Māori framework were in draft form.

Differences between the two iwi were also of interest for trialling purposes. Ngāti Awa has recently settled its Treaty Claim, and was therefore well-resourced with the benefit of Treaty legislation requiring statutory authorities to involve them in RMA and LGA processes. Ngāti Maru has not yet begun the negotiation of its Treaty settlement and enjoys no such statutory protection. Additionally, the rohe of Ngāti Maru and Ngāti Awa are very different. Ngāti Awa has a discrete and contiguous rohe which falls entirely within a single regional council boundary, although they deal with several local authorities. The rohe of Ngāti Maru includes lands over a vast geographic area taking in three regional councils and numerous district councils. Their rohe includes both rural land, and intensively urban lands including some in Auckland.

Another important distinction is that Ngāti Awa retains considerable land in Māori title, while Ngāti Maru has become almost landless. This is a result of the location of valuable timber and gold resources within their rohe, and their proximity to Auckland. Perhaps most importantly, Ngāti Maru has had to deal with decades of immense development pressure resulting from pressure from Aucklanders for holiday homes along the Hauraki coastline. This forced up property prices and resulted in hundreds of resource consents annually. Ngāti Awa has only recently become exposed to this sort of development pressure and at a significantly lower level. For all these reasons the RMA-related experiences of the two iwi have been very different, and we were interested to see whether this was reflected in trialling results.

Iwi involvement in trialling our kete consisted of two parts. First, we ran several workshops with iwi staff at which the kete and their contents were presented and discussed. Relevant iwi experiences were shared with the researchers, ideas for modifications or additions to the PUCM work were encouraged, and the suggestions or comments recorded. Following these workshops, amendments were made to the kete, and the amendments sent back to the iwi for confirmation that these had accurately addressed issues raised.

5.2 Participation by Councils

While participation by Māori was a prerequisite to undertaking kaupapa Māori research, participation by councils was also an important aspect of the project. In order for the research to make any difference on the ground it was essential to get council buy-in. It was also important to tap into the perspectives of planners within councils, especially Māori staff, if we were to arrive at a kaupapa Māori framework and series of outcomes and indicators that would be effective for evaluating council plans, and would also be used by councils.

As with Māori, council participation was provided for at several levels. Māori staff from several councils participated, with the support of their councils, as members of the Māori experts peer review group. These people contributed to the outcomes and indicators discussion from a perspective that was not only Māori, but also informed by their familiarity with the processes and requirements of councils.

A large number of councils have been kept informed of, and provided opportunity to comment on, the PUCM kaupapa Māori research through presentations at a number of multi-council forums. These include: the Monitoring and Reporting on Community Outcomes (MARCO) indicator development group and Choosing Futures forum, which are collectives of the various district councils within Waikato Regional Council charged with developing regional indicators and outcomes, respectively; and Waikato Information Forum (WINFO) for sharing information amongst councils and other agencies. Similarly, our research has been presented at EBOP (Environment Bay of Plenty) hui involving district council representatives from that region, and to the Hauraki Gulf Forum (HGF), which includes those district and regional councils whose catchments run into the Hauraki Gulf Marine Park. At each of these presentations, invitations were extended to councils to meet further and discuss our research in greater detail, and some of these were taken up.

We therefore had good reason to believe that our work on Māori outcomes and indicators would be of immediate value to councils, and that councils would be keen to participate in trialling, especially since iwi in their areas (Ngati Maru and Ngati Awa) had already agreed to participate. We were therefore particularly keen to organise trials by up to four of the many councils (at least 16) that share common boundaries with the two iwi that had already agreed to trials.

5.2.1. Council Participation in Trials

Following months of effort toward securing participation in trialling by councils, agreement was reached with Environment Bay of Plenty (EBOP) and Matamata Piako District Council (MMPDC). Our intention had been that in each instance where an iwi was engaged to trial our kaupapa Maori framework at least one local and one regional council within their rohe should undertake trialling simultaneously. There were several reasons for this. Firstly, having associated iwi and councils trialling the outcomes and indicators together would potentially make the process more efficient for both. For example, some indicators would likely require information from councils, which would either be provided voluntarily or via requests under the *Local Government Official Information and Meetings Act* (1987). If council planning staff were simultaneously trialling the framework they would have themselves required the information sought by participating iwi – and be more likely to be in a position to provide this with little effort. Secondly, it was expected to be of interest to compare the respective results from trialling by iwi and councils together, in order to identify and consider differences in their respective perspectives regarding their own or the other party's plans and actions. Finally, we expected that considering iwi and council responses together would provide a fuller picture of whether our kaupapa Maori indicators represent effective measures of the selected outcomes, and ultimately whether the outcomes were being achieved.

While we would have liked to engage additional councils to trial the framework, we were pleased that these particular councils had agreed to participate for a number of reasons.

They differ in that one is a high capacity regional council with a dedicated and well resourced iwi liaison team, while the other is a small rural council with a relatively small rating-base and no dedicated iwi liaison staff. Both councils have, however, worked hard to establish and maintain relationships with tangata whenua, and on initial inspection this was reflected in some fairly good Māori plan provisions.

Importantly, both councils were within the tribal rohe of one of our trialling iwi. The respective views of iwi and councils were one of the dynamics we were keen to consider, and relationships between these councils and iwi were relatively strong.

As with iwi, the trialling process involved initial meetings between PUCM Māori team members and the council staff that would be undertaking the trials. The framework was discussed and our ambitions from trialling explained. It is worth noting variations between the staff charged with trialling the framework. For EBOP, this was undertaken by an experienced senior Māori planner who had prior familiarity with our work. For MMPDC it was undertaken by a planner who commented that she had little experience of Māori-specific planning issues, but had studied New Zealand and Maori history at university. We were interested to assess the extent to which level of familiarity with Māori planning issues would affect use of the framework.

Trialling results are discussed further in Chapter 8.

5.3 Literature Reviews

The literature review is discussed below in two parts. The first is the overall review of literature relating to indigenous outcomes and indicators, including those of Māori (Kennedy and Jefferies, 2005b, Māori Report 5). The second review considered Kaupapa Māori literature, and sought in particular to identify writing on primary environmentally significant concepts of kaupapa and tikanga (Kennedy and Jefferies, 2005a, Māori Report 4). Each review resulted in a substantial report that is available on the PUCM website (www.waikato.ac.nz.pucm).

5.3.1 Indigenous Outcomes and Indicators Literature Review

In preparation for the development of the kaupapa Māori framework an extensive literature review was undertaken, in order to gain an understanding of what had been written in New Zealand and internationally on the subject of indigenous environmental outcomes and indicators.

Literature was identified using both online and library searches. These included online social sciences, legal, and indigenous bibliographic databases. Additionally, we searched the websites of government agencies and organisations such as the United Nations, OECD, and World Bank, known indigenous peoples' websites, and also general internet searches using both the Google and Altavista search engines. Enquiries were made to various first nations' organisations for any literature of which they were aware. Citations within material returned and that previously sourced during the PUCM research were noted and a second round of document searching undertaken.

Based on initial findings, the focus of our research into indigenous outcomes and indicators work included several specific areas of enquiry, questions were:

- *Theoretical Models* – Were theoretical models explicitly identified or identifiable as underlying the projects being undertaken?
- *Methodology* – Were approaches to developing outcomes and indicators in projects designed and run by indigenous people based on their own values and methods, and if not were they at least credibly participatory?
- *Indigenous values systems* – Were the underlying values systems of the indigenous groups involved explored? In particular we were interested to find writing on: beliefs regarding kinship between people and the natural environment; and perspectives on time and place.
- *Western and Indigenous values* – Were issues relating to the respective perspectives and authority accorded to indigenous versus colonisers values systems explored?
- *Outcomes and indicators* – What specific outcomes or indicators are reported?
- *Currency and universality* – Was there discussion regarding, or can observations be made regarding, whether outcomes and indicators have limitations in terms of their validity and applicability over time, and to locations other than where they were developed?
- *Implementation* – Were any outcomes and indicators described actually implemented; and implemented outside the specific project in which they were identified / developed?

Prior to starting work on the PUCM kaupapa Māori framework, we had identified approximately 30 pieces of indigenous indicators research, but for only 10 of these could substantial and useful documentation be obtained.

As we report in *Māori and Indigenous Environmental Performance Outcomes and Indicators* (Kennedy and Jefferies, 2005b), a common theme within indigenous literature was tension between scientific and traditional ecological knowledge (TEK), and traditional ecological knowledge generally. There is a wealth of material written on TEK, some of which includes discussion on environmental indicators. Additionally, we found substantial literature on indigenous health, economic, and other non-environmental specific indicators, but less on environmentally focused research. Among the findings of the review relating to the experiences elsewhere were:

- There has been a reversal in recent decades in the trend by some post-colonial states of excluding indigenous peoples from participation in environmental management. This has resulted from organisations, such as the United Nations, increasing international awareness of indigenous rights and the value of indigenous environmental knowledge, and reinforced by indigenous rights movements around the world.
- Indigenous environmental outcomes and indicators programmes are still largely limited to those undertaken by central or local government agencies, although several Canadian examples involved substantial co-operation between indigenous communities and universities.
- A tendency exists, particularly within the agency-driven projects, for indigenous perspectives to be compromised where these are incompatible with prevailing frameworks and models within which outcomes / indicators development is occurring.

Investigation into New Zealand research yielded a greater number of results than the combined international ones. A substantial number of these were New Zealand government-driven and we were concerned at the extent to which they truly reflected tangata whenua aspirations and perspectives. Our concerns were apparently shared by several of the Māori participants in these projects.

For example, regarding the MfE Environmental Performance Indicators programme, members of the Māori advisory panel wrote:

Finally, it is the view of this panel that fundamentally MEPIs (and EPIs) need to be developed by Māori communities themselves. Whilst guidance and views can be expressed at a national level, in order for there to be real community 'buy in', MEPIs need to be created and managed at iwi, hapū and whānau level. The top down approach, suggested by the concept of the generic EPI, will probably work with statutory bodies and it is possible that they are the only audience anticipated by the EPI programme. However, environmental monitoring is being carried out by all manner of groups and individuals, formally and informally, and this is its true context.

and;

There has been an attempt by the Ministry's methodology to 'plug-in' Māori concerns without clear consideration of either the Treaty of Waitangi or the aspirations of methodologies arising from Māori knowledge (Ministry for the Environment, 1998).

The findings from the indigenous outcomes and indicators literature review helped establish a base-line in terms of the work that has been undertaken internationally. It also assisted in identifying common indigenous principles and values reported within that work, confirming parallels between those of indigenous peoples elsewhere and Māori. Unfortunately, the research yielded little in terms of indigenous models that might be adapted in our aim to develop a framework for Māori outcomes and indicators that reflected tikanga Māori.

5.3.2 Kaupapa Māori Literature Review

A review was also undertaken into publicly available writing on tikanga Māori. The underlying purpose of this literature review was to establish definitions of the primary concepts of kaupapa and tikanga Māori. Literature discussing tikanga of particular significance to environmental management were of primary interest. The kaupapa/tikanga finally selected for review were: kaupapa (foundation principles); take (important issues); tikanga (customs and values); kawa (protocols); mana (chiefly authority); tapu (sacred); noa (profane), mauri (life principle or life force), wairua (spirit), hau (breath / human essence), utu; (balance); muru (a form of utu); whakapapa (familial connection / genealogy); whanaungatanga (familial connections including rights and obligations); rangatiratanga (chieftainship); kaitiakitanga (ethic of guardianship); rāhui (formal restriction); whenua (land); wai (water); and taonga (treasures).

The intention was not to undertake the definitive review (that is, to identify every writing on each concept), but over 100 documents are referred to in the report which resulted from our literature review (Kennedy and Jefferies, 2005a). Rather, the objective was to identify substantial writings on each of the concepts, and then encapsulate the definitions and descriptions of these into a concise analysis on each. It was expected that this would provide a basis for building the framework upon which kaupapa Māori environmental outcomes and indicators can hang.

In addition, the review sought to identify and describe significant variations between understandings of the key concepts, without attempting to reconcile these. Such variations were anticipated because of tribal or geographic separation. It was not our

intention to make judgments as to relative merits. However, substantial agreement on a particular concept was acknowledged, with variations subsequently identified.

Examples of literature reviewed include: early ethnographies; works of historic and contemporary respected writers on Tikanga Māori; case Law; Waitangi Tribunal reports; reference to Māori concepts within statutes or other Crown documents; and documents, such as advisory papers written for the Crown or Courts by groups, such as the Law Society, which usually include contributions by prominent Māori writers.

Based on this research, key environmental principles and values were selected to be included in the initial group of kaupapa and tikanga for which, after gaining agreement by our Māori participants, outcomes and indicators would be developed.

5.4 Summary

The main components of our Kaupapa Māori research approach to developing an environmental outcomes and indicators framework and methodology have been described in this chapter. A central requirement of Kaupapa Māori research is the positioning of a Māori view as normal rather than other or peripheral. Toward this end, Māori researchers were engaged to lead and undertake the research and meaningful participation by Māori was considered essential at all stages of the research. The means by which this was achieved were outlined.

In order to proceed with the development of contemporary Māori environmental outcomes and indicators, it was considered important to first understand what had been written regarding indigenous (including Māori) outcomes and indicators. It was equally important to establish an understanding and arrive at definitions for those environmentally relevant kaupapa and tikanga upon which the PUCM outcomes and indicators were to be based, and which they were intended to protect. For this reason a significant period was spent on two literature reviews. They showed little accessible published material on indigenous outcomes and indicators, although Māori are leading the way internationally. There was some excellent literature on tikanga Māori, but little that was both environmentally focused and that provided an overview of such tikanga. We compiled two substantial reports to help fill this gap.

Central to the research approach was formation of two Māori peer review groups to provide guidance on the research endeavour. One group consisted of practitioners from within iwi, and the other of Māori professionals from within various agencies. The aim was to have these groups meet in order to provide feedback and direction at strategic times during the research programme, for example before and after the research approach had been designed, to determine the theoretical framework that would be adopted, and to finally adopt the completed outcomes and indicators kete.

Also important was that councils be provided opportunity to participate by having key Māori staff in both regional and district councils on the Māori professional review group and by developing relationships with a range of councils, with a view to having them trial the draft framework and its outcomes and indicators.

We are confident that these measures together constituted a robust research approach, one which would be acknowledged by tangata whenua as being culturally appropriate and deliver a framework and methodology that could assist both Māori and councils achieve improved environmental outcomes.

Te Waihanga Kaupapa

The Kaupapa Māori Framework

An important aspect of our research has been the development of a conceptual kaupapa Māori framework that would enable us to: identify environmental outcomes; develop and link effective indicators to the outcomes; and anticipate how the combination of these would function as an instrument for environmental outcome evaluation. It was also critical that the framework achieved – or more properly assisted us in achieving - these objectives in a culturally appropriate manner.

In this chapter, we describe the process used to develop our Kaupapa Māori outcomes and indicators framework (referred to hence-force in this chapter as “the framework”). We then report on a Māori understanding of outcomes and indicators, which is located within not only traditional Māori knowledge, but also the contemporary statutory environment. We then describe the three kaupapa chosen for the initial series of outcomes and indicators (mana, mauri, and tapu), and the associated tikanga (mana whenua, mauri of waterways, and wahi tapu). The significance of each kaupapa and tikanga is discussed. Each kaupapa and tikanga, and their associated outcomes and indicators, is conceived of as a kete or basket. The structure and function of the three kete is explained. Together they constitute the kaupapa Māori framework.

As this chapter illustrates, the terms “model” and “framework” are used almost interchangeably within the literature cited, with little explanation as to the authors’ intentions for these words. We make the comment that the term “model” as used in this report refers to a theoretical model intended to replicate, make sense of and represent or “model” the real world (in this case from a Māori world view). This is distinct from a “Framework”, which provides a structure in which certain things get ordered, in our case a structure from which we hang the Māori outcome evaluation tools (as explained in the next chapter on methods).

6.1 Theoretical Models – Atua, Wä, and Tikanga

As previously stated, we were determined to develop and apply a theoretical model in order to guide the development and use of Māori environmental outcomes and indicators in a manner that was appropriate for tikanga Māori. From literature reviews and discussions with Māori experts, we identified three potential models for layering or ordering mātauranga Māori / Māori knowledge in a way that would be consistent with tikanga. They were an Atua-based model, a Wä-based model, and a tikanga-based model. In the following sections we describe what each involves, in order to provide a rationale for the ultimate selection of the tikanga model.

6.1.1 Ngā Atua

Ngā Atua refers to the gods. Te Ao Māori or the Māori world is traditionally conceptualised and understood according to whakapapa (genealogical links), which connect all elements of the natural world, including mankind, beginning with ngā Atua. Each Atua has its own particular domain of responsibility. The most well known of these are: Papatūānuku – the earth mother; Ranginui – the sky father; Tāwhirimātea – god of the weather; Tāne Mahuta – god of the forest world; Tangaroa – god of the oceans; Rongomatāne – god of those things that grow within the earth, such as kumara; Haumia – god of wild plants, including the fern root; Tūmataurangi – god of war and ancestor of mankind. There are numerous lesser gods each with their own domain, such as Ikatere, descendent of Tangaroa – god of the ocean, and Tāwhaki – god of thunder and lightning. The Waitangi Tribunal gave the following description of the Māori view of the place of ngā Atua as regulators of environmental resources:

Māori extended their deep sense of spirituality to the whole of creation. In their myths and legends they acknowledged gods and other beings who bequeathed all of nature's resources to them. There was a system of tapu rules which combined with the Māori belief in departmental gods as having an overall responsibility for nature's resources served effectively to protect those resources from improper exploitation and the avarice of man (Waitangi Tribunal, 1992).

It follows then that Ngā Atua provides a potential framework for developing Māori environmental outcomes, where these would be ordered according to the spiritual domains to which they belong. Of the iwi environmental plans we reviewed, several referred to the importance of ngā Atua to a Māori conceptualisation of the natural environment.

The *Ngāti Tuwharetoa Iwi Environmental Management Plan* (Ngāti Tuwharetoa Māori Trust Board, 2003) uses both Atua and physical descriptions to structure consideration of environmental issues. The primary section dealing with environmental issues is headed “*Ngā taonga*” (meaning treasured things). The section uses a combination of Atua and physical descriptions as headings, such as, for example: land is characterised as *Papatūānuku*, and airspace as *Te Ha o Ranginui*, but water is headed *Te Waipuna Ariki* (chiefly springs), minerals as *Ngā Opapa*, and fisheries as *Tauranga Ika* (fishing places).

The illustration in Figure 6.1 shows a vision of the Hauraki Māori Trust Board that locates areas of responsibility for Māori within the realms of the physical world, represented by the various ātua components. These in turn are shown within a continuum that describes a Māori holistic and interconnected view of the world.

The environmental plan of the Hauraki Māori Trust Board (2004) *Whaiā te Mahere Taiao A Hauraki: Hauraki Iwi Environment Plan* structures consideration of environmental issues largely according to Ngā Atua. The plan offers the following explanation of the importance of ātua under the heading Central Principles:

The belief the natural world is the domain of Atua and that all things, both tangible and intangible, are interconnected and possess a life energy principle or mauri guides our interactions with the environment. Sustaining the mauri of a taonga, whether a resource, species or place, is central to the exercise of kaitiakitanga.

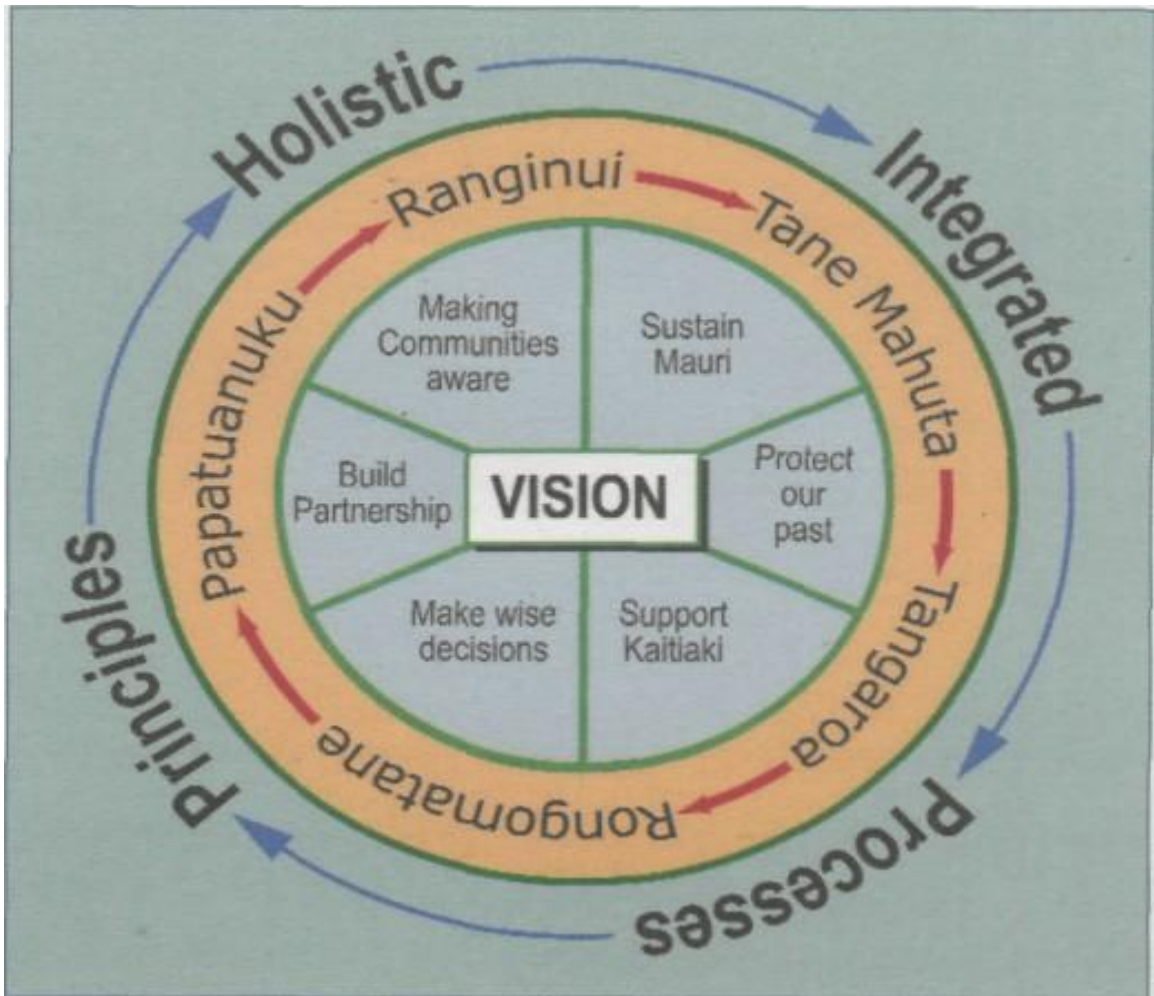


Figure 6.1. An Atua-based environmental vision and associated framework (Source: Hauraki Māori Trust Board, 2004).

The diagram in Figure 6.1 is taken from *Whaiā te Mahere Taiao* and is called an environmental vision rather than a theoretical framework or model. It presents an image of resource management processes based around the domains of key atua, within which Hauraki environmental ambitions and aims are located.

In summary, some iwi use Ngā Atua as a conceptual framework for environmental management. Outcomes and associated indicators are categorised according to the atua in whose domain they reside, for example natural environmental resources are descendents of Tangaroa, Tāne Mahuta, Rongo, etc.

6.1.2 Ngā Wā

Ngā Wā (literally the times) refers to the Māori understanding and classification of time. Central to this approach is the Māori philosophy “*Ka Mua; Ka Muri*” whereby it is said that “*we walk backwards into the future, our eyes fixed on the past.*” Dr Mere Roberts (2005) describes this as “*an aphorism which highlights the importance of seeking to understand the present and make informed decisions about the future through reference to the past.*”

Identifying a distinction between Western and Māori perceptions of time historian Gissele Byrnes (Byrnes, 2006) locates Māori notions of time firmly in Aotearoa:

Non-western concepts of historical time have their own internal structure and logic and are not necessarily determined by ideas of linearity and progression. For instance, –traditional// Māori notions of time are highly localised, in that they are defined in and by this place, that is, Aotearoa New Zealand.

Contrasting this view with a positivist belief that time is absolute, Marsden (1992) speaks of the universe as being finite in extent and relative in time. In his paper *Kaitiakitanga: A definitive introduction to the holistic world view of the Māori*, Marsden offers the following description of the origins of time and of Rangi and Papa in terms of Te kete Tua Tea – the basket of knowledge concerned with time and space – or more properly the world beyond time and space.

The final series of the Tua-Atea genealogy is recited as: ‘Te Hauora begat shape; shape begat form; form begat space; space begat time; and time begat Rangi and Papa (heaven and earth)’. Thus the space-time continuum became the framework into which heaven and earth were born (Marsden, 1992).

We felt that several epochs are important in terms of a Māori perspective on time. These are: Te Timatanga o te Ao – the beginning of the world as described in the creation stories ending with the separation of Rangi and Papa by their children; ngā Tupuna tawhito - the times and deeds of the eponymous ancestors as encapsulated within ngā korero tawhito (the old stories); Hawaiki – traditions from tribal homelands prior to travelling to Aotearoa; the waka traditions – stories of travelling to Aotearoa and establishing dominion over these islands; the Treaty of Waitangi – early colonial contact; and finally the modern day – contemporary Aotearoa. Māori knowledge is – we suggest - characterised as being associated with one of the above periods. Whakapapa – or genealogy and its associated historical and relationship implications – is a fundamental Māori kaupapa that provides the layers of Māori history through the generations and is an integral part of *ngā korero a ngā tūpuna* – the stories of the old people.

Environmental issues and outcomes might usefully be understood in terms of the previously described periods. Mana, mauri, and tāpu flow from the gods having emerged from the creation period, while the origins of knowledge and foundation kaupapa, stem from the actions and teachings of the gods and early ancestors, such as Tāne retrieving the baskets of knowledge. Some tribal traditions and kawa originate from tribal homelands, and many environmental tikanga have been established out of centuries of living in a certain place, as observed by Mutu and McCully (2003):

In Te Whanau Moana and Te Rorohuri's case, this [tikanga] is a vast body of knowledge, wisdom and custom. It derives from the very detailed knowledge gained from residing in a particular geographic area for many hundreds of years, of developing relationships with other neighbouring communities as well as those further afield, and learning from practical experience what works and what does not.

The *Treaty of Waitangi* and colonial contact was of course a critical period for Māori. The Treaty itself and subsequent colonisation changed Māori society drastically. Contemporary environmental resource management legislation includes *Treaty of Waitangi* references.

Finally, Mātauranga Māori (Māori knowledge) is not fixed in some pre-colonial “traditional state”, rather, it is dynamic and has adapted in response to modern developments. Numerous environmental issues have contemporary origins and require

modern responses. This dynamic nature of mātauranga Māori is reported here by the Waitangi Tribunal in its *Muriwhenua Land Report*.

Although custom law is often portrayed as immutable, change was happening all the time. As Māori law was based on values rather than a rigid set of rules, change could be readily accommodated, provided the underlying principles were maintained. Thus, by remaining true to its basic values, Māori culture was able to adopt and adapt while retaining its essential form (Waitangi Tribunal, 1997).

6.1.3 Ngā Tikanga

A model or framework based on tikanga Māori organises consideration, development, and use of Māori environmental outcomes and indicators according to the tikanga brought into play by a particular environmental issue. While the translations used vary, tikanga is generally understood to include Māori beliefs, values, and correct practices, behaviour or conduct (Patterson, 1992; Hohepa and Williams, 1996; Waitangi Tribunal, 1997; Durie, 1998; Mead, 2000). Underlying tikanga are kaupapa, these being the foundation principles of Māori society. Describing the relationship between and origins of kaupapa and tikanga, Marsden (Marsden, 1992) posits that tikanga for a particular issue is determined by reference to the periods of knowledge referred to above:

Kaupapa is derived from two words kau and papa. In this context, kau means to appear for the first time, to come into view, to disclose. Papa means ground or foundations. Hence, kaupapa means ground rules, first principles, general principles.

Tikanga means method, plan, reason, custom, the right way of doing things. Kaupapa and Tikanga are processes ... Māori when contemplating some important project, action or situation that needs to be addressed and resolved the tribe in council would debate the kaupapa, - the rules and principles by which they should be guided.

There is an appeal to first principles in cases of doubt, and those principles are drawn from the creation stories of Tūa-Uri, the acts of the gods in the period of transition following the separation of Rangī and Papa, or the acts of the myth heroes such as Maui or Tawhaki and numerous others. The methods and plans they used in a similar situation are recounted and recommended. Alternative options are also examined and a course of action (Tikanga) is adopted (Marsden, 1992).

A tikanga-based model allows modern environmental issues to be addressed by assisting with the identification of relevant tikanga for a particular issue. As discussed by Marsden above, tikanga provide us with the tools for assessing an issue and developing a response to it. Significant kaupapa and associated tikanga that are considered important for environmental resource management provide the foundation principles for the framework, which functions to bring together relevant outcomes and indicators for consideration in relation to each tikanga. There are numerous tikanga relating to the natural environment, and we are increasingly seeing these expressed and argued within the sphere of contemporary environmental management. Some that have received particular attention in relation to RMA processes are mana whenua, wairua, tapu, wāhi tapu, mauri, and utu. An in-depth discussion of these tikanga is provided in *Kaupapa*

6.1.4 Selection of the Ngā Tikanga Model

The three models summarised above were considered along with the Māori and non-Māori models and frameworks discussed earlier in Chapter 4 Section 4.2. The Māori models and frameworks were: the Partnership – 2 Cultures Development Model, the Mana Whenua framework, the Integrating Framework, Te Ngahuru, and the Tri-axial Māori Development framework.

A PUCM Maori research team workshop was held in 2005 to assess the various models and frameworks as to their likely effectiveness for developing Māori environmental outcomes and indicators and applying them in councils. This consideration, together with the findings from our kaupapa Māori literature review, led us to conclude that a tikanga-based model offers the best prospect. Some elements from the various models and frameworks we assessed were, however, adopted or adapted for inclusion in our kaupapa Maori framework.

The tikanga-based model was ultimately chosen by us because it allows for a close examination of key terms and concepts already in wide use in the domain of environmental management according to tikanga that are widely recognised and adhered to by Maori, and (at a pragmatic level) because it is likely to be the least complex model for both councils and iwi to follow. By utilising a key concept like tapu, the links to key issues, such as wāhi tapu, are more easily made.

Our kaupapa Māori framework was a starting point that allowed us to establish some fundamental positions within te Ao Māori from which to then develop outcomes and indicators. The framework was intended to help identify, explain, and clarify the key concepts from Te Ao Māori that underpin Māori perspectives and beliefs towards, and about, the natural environment.

An important factor in the development of our framework has been strong adherence to the widely accepted principle amongst Māori that tikanga varies from place to place, and that the local interpretation of tikanga is authoritative. This dynamic presented a challenge to our ambition to develop a generic framework relevant to Māori, hapū and iwi across the country. The understandings gained from our literature review assisted in this regard by identifying regional variations in tikanga as well as those tikanga for which there was widespread agreement. It is important to note that tikanga Māori is itself justiciable (able to be argued and protected in law) according to customary and natural law doctrines principles, even where tikanga or specific values are not provided for in statute.

6.2 Outcomes and Indicators

In this section, we define “outcomes” and “indicators” in Māori terms; from a Māori perspective. We then go on to relate how we came to settle on the outcomes or hua we wished to develop and then trial. The trials are the subject of Chapter 8.

6.2.1 Hua - Outcomes

Outcomes are expressions of an environmental ideal, some result that is sought. To locate the modern concept of outcomes in terms of Māori understandings we sought to identify principles within Te Ao Māori (the Māori world), which expressed similar values.

In Māori, the word “hua” provides a useful approximation for “outcome”. Hua is the word for something that grows – hua rākau is fruit, and hua whenua vegetables. Hua is then something that is strived for, something yielded.

As noted in Chapter 4, the most prolific writer on Māori health outcomes is Mason Durie. He and Te Kani Kingi have referred to Māori health outcomes as Hua Oranga, and developed the health-specific outcomes framework called Te Whare Tapa Whā (Durie and Kingi, 1998). There has been growing use of the word hua as conveying the idea of outcome. We therefore adopt hua as being an appropriate equivalent.

As explained in Chapter 2 (Section 2.1), outcomes in the modern statutory context are statements of (in terms of our area of interest) environmental results sought by a community, and measuring outcomes represents a shift away from process and onto results; from how policies and programmes work to whether they work (Bennett, 2001).

Environmental outcomes for Māori often differ from those sought by other stakeholders. The earlier phases of the PUCM research found a lack of understanding amongst councils and other stakeholders as to what those outcomes are (Ericksen, Berke, Crawford and Dixon, 2003). Moreover, the perspectives that Māori, hapū, and iwi have towards the environment are framed by a different worldview, and is explored further below.

Unfortunately, until recently, there was no easily accessible documentation of the body of knowledge relating to Māori environmentalism to allow stakeholders to develop a measure of understanding of this worldview. Our framework is intended to help address this deficiency.

Prior to the LGA (2002), which brought with it the requirement for the development of community outcomes, Māori-specific outcomes had received some attention in the health and education fields. These therefore provide some examples of Māori outcomes frameworks that we considered in preparation for our work.

6.2.2 Tohu – Indicators

Traditional Māori indicators relating to the environment are collectively called Tohu Māori. Tohu are signs or omens, often based on many generations of observation, which are an important means of interpreting and managing our natural environment. Tohu continue to be used today, and the term readily equates to “indicators” as defined in Chapter 2.

Indicators used to keep safe

An example of a traditional Māori indicator can be found in the Southern Cross. Māori use the pointer and tail stars of the cross to locate due south. This might not be of great significance today, but knowledge of such natural signposts was critical to the survival of early Polynesian navigators. As with this example, many of the indigenous and Māori indicators we investigated encapsulated information aimed toward community safety and

well-being. Some Māori place names warn of environmental danger. One such name is “Waikino” meaning “bad water.” Waikino is the name given to a location on the Ohinemuri River near Waihi, which is known by local Māori to flood its banks infrequently. Early colonial settlers built a village there, against the advice of local Māori. The village survived for almost 100 years before being swept away by the river. As in this example Māori have built up familiarity with their local environments over many generations, in some cases this long-term observation has revealed natural phenomena that precede, and thereby provide warning of, weather events such as storms or drought.

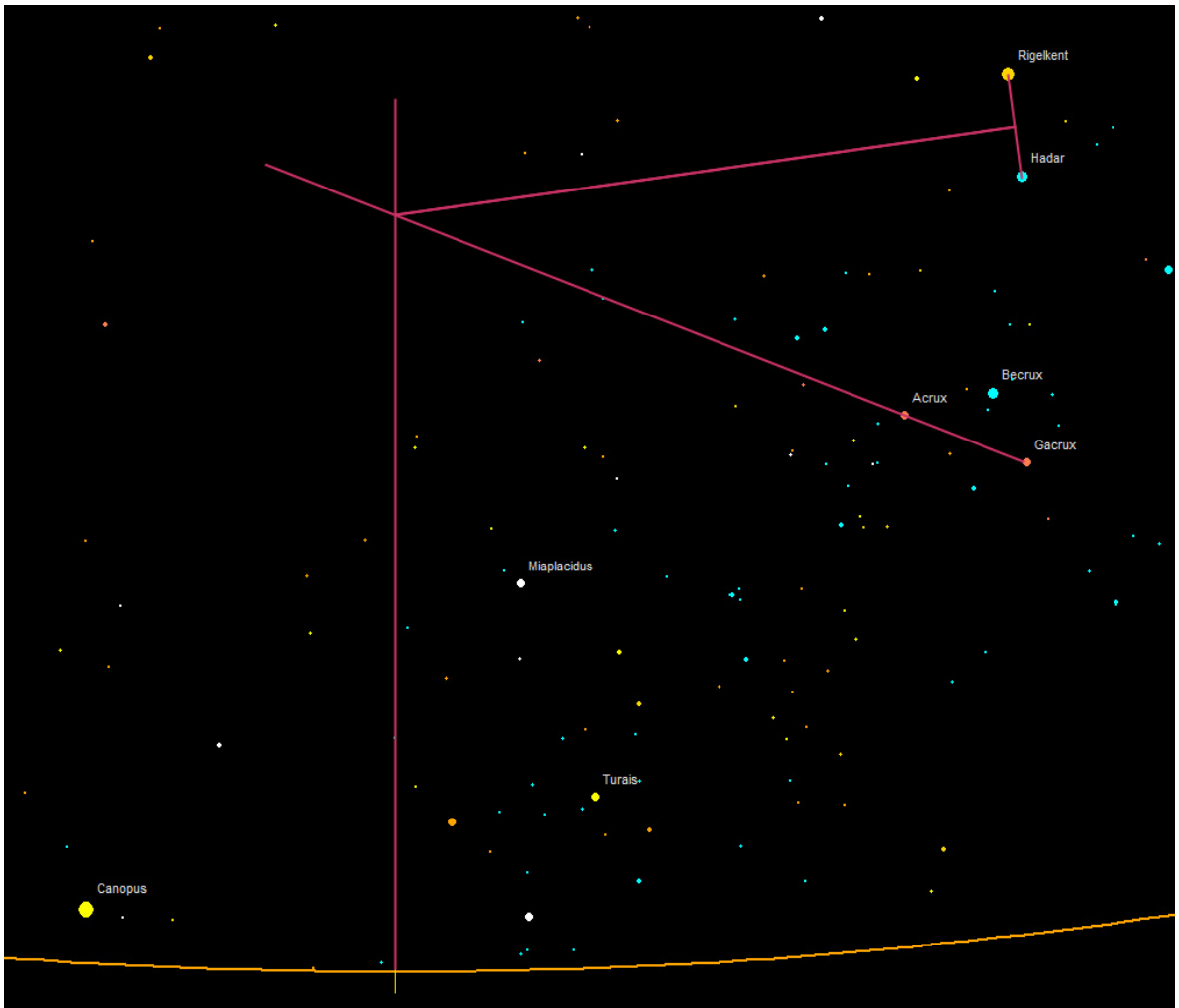


Figure 6.2. Illustration of the method by which Māori have long located the due south. Line 1 runs from the lead star in the Southern Cross and through the tail star. Line 2 between the two bright stars close to the left of the cross, bisected by line 3. Where lines 1 and 3 meet is directly above the South Pole.

Alignment indicators

One form of tohu is what we might call alignment indicators, where one event in nature aligns with another. For example, the flowering of the kowhai tree indicates the right time to harvest mussels. When the pohutukawa tree blooms the kina (sea urchins) are fat and their best to eat. Conversely, some in Hauraki consider that harakeke (flax) flowering suggests that the kina roe is of poor quality. There are numerous similar examples, all based on generations of local observation. Mātauranga Māori (Māori knowledge systems) is not however, fixed in the pre-colonial past. An example of a more recent indicator is the coincidence of the appearance of green leaf buds on willow trees indicating the imminent arrival of whitebait (Hauraki Māori Trust Board, 1999).

Placenames

Another kind of *tohu* is *taunahanaha* – the naming of places. Prior to the arrival of Europeans, *tangata whenua* had imbued almost every feature of the landscape with meaningful names, often those of great ancestors. *Te Whanganui a Hei* (Mercury Bay) recalls the visit of the *rangatira* of the *Arawa waka* of that name. Similarly, *Te Whanganui a Tara* (Wellington) and *Te Ika a Maui* (the North Island) relates to the great fish of Maui. The names and their meanings are recorded in traditions, *waiata* (songs), *mōteatea* (laments) and *whakatauaiki* (sayings / proverbs) and have been handed down for generations. They are a living record linking Māori with the places, often through recollections of the deeds of *tupuna* that occurred at these places.

Traditional Māori place-names remain important to Māori, but also relevant in terms of environmental resource management. Place-names encapsulated that which was important to those naming by reflecting the values and priorities of the time. In addition to recording important historic events, names include descriptions of physical characteristics of a place, and serve to locate and describe sought-after environmental resources, such as plant and animal resources, or to warn of environmental hazards. An example of the latter is the place name *Waikino*, which translates as –bad water|| . , is another such indicator.

Weather and the seasons

Perhaps the best known of the systems of indicators in *mātauranga Māori* are those of the *maramataka* – the Māori calendar. The Māori calendar, developed out of centuries of observation prescribing the best times of the lunar month in which to fish (even to the detail of individual species), plant, and harvest. Popularised by Bill Hohepa, the *maramataka* is still widely used today by Māori (and non-Māori) across the country.

Similarly, weather patterns were predicted using environmental indicators. Darren King and his colleagues reported this *tohu* of *Te Whānau a Apanui*, according to which if the shimmer of *Pareārau* (Jupiter) is light and misty there will follow a wet month. Similarly, the periodic blooming of *pōangaanga* (clematis) predicts a warm season with gentle breezes (King, Goff and Skipper, 2007). The potential for *mātauranga Māori* to be used in contemporary weather forecasting and hazard management has also recently received attention (Harmsworth and Raynor, 2004; King and Skipper, 2006; King et al., 2007).

Tohu are an important component of the “*knowledge and traditional practices*” with which *tangata whenua* managed, and continue to manage, environmental natural resources, which the Rio Declaration recognised as constituting a “*pivotal role in environmental management and development*” (United Nations Conference on Environment and Development, 1992b).

While there are some traditional indicators in our PUCM kaupapa Māori framework, there are also contemporary indicators, both of which were described in Chapter 2. The following section refers primarily to contemporary indicators.

6.2.3 Distinguishing between Outcomes and Indicators

Outcomes are expressions of environmental aspirations, while indicators – in the contemporary sense - are measures of whether outcomes are being achieved. The difference between outcomes and indicators would therefore seem to be clear. We found, however, that many outcomes that have been adopted by councils in LTCCPs (Long

Term Council Community Plans) might more usefully be called indicators, as these would indicate whether higher level outcomes are being achieved.

For example, an outcome might be “Iwi views are sought in relation to intended significant Council activities that affect them.” This would seem to be a reasonable objective of iwi. However a “higher order” objective would be “Māori views are taken into account in relation to all significant Council decisions.” If the latter is considered to be the outcome then the former might be used as an indicator, and be re-stated as “Whether iwi views are sought in relation to intended significant Council activities that affect them.” This would be a reasonable indicator of the higher order objective, as it likely provides an answer as to whether Council is taking iwi views into account in relation to its significant decisions. Arguably, additional indicators would be needed, in order to confidently assess the outcome, including indicators that measure whether views sought from iwi are being taken into account, and (from an iwi perspective) whether council has policies or guidelines that define what constitutes a “significant” decision.

This is the approach that we have taken when developing our kaupapa Māori outcomes and indicators. For each of the kaupapa tikanga combinations and its related outcome, a cascade of indices, indicators, and measures was developed.

Collectively, these provide the means for effectively assessing progress toward achieving overarching outcomes. Indices (plural of index) express higher level enquiries, grouping multiple related indicators which, in combination, provide a fuller picture as to whether outcomes are being achieved. Multiple measures are provided for each of the grouped indicators, these providing the practical means by which the information is to be gathered, in order to answer the questions posed in each indicator. Measures and the way these are used are discussed further in the following Chapter 7 on methodology.

6.3 Ngā Kete – The Baskets

As previously discussed, our initial evaluation areas were chosen in order to align our kaupapa Māori outcomes and indicators work with that of the wider PUCM Research Programme. For practical reasons (time and resources) this resulted in only three foci: council-iwi relationships; kaitiakitanga (guardianship or stewardship) in relation to water; wāhi tapu (significant or sacred Māori sites). During development of the kaupapa Māori framework it was, however, concluded that the focus should be determined by the foundation kaupapa (principle) upon which the framework was built.

In an attempt to retain an association with the three previously mentioned foci, we chose mana, mauri, and tapu as the kaupapa for our first three kete. The tikanga (customary practices) linked to our first three kaupapa (mana, mauri, and tapu) were mana whenua (chiefly authority held over ancestral lands), mauri o te wai (the mauri of waterways), and wāhi tapu (significant Māori sites). These tikanga, and the rationale behind their selection, are described below.

Each kaupapa / tikanga specific series of outcomes and indicators is described as a kete. We have adopted the Māori word “kete” because of the symbolic significance of it to Māori. Kete translates as basket, the analogy being that each indicator series equates to a basket containing a set of tools – methods that Māori and councils can utilise to improve the environment.

Kete are both a device for carrying things, and widely considered a taonga – a treasure – in Māori society because of respect accorded to the art of weaving. The symbolic relevance of the reference to kete is the traditional account of the ancestor of man – Tane – who is attributed with having scaled the heavens to bring back to mankind the three baskets of knowledge. These were called te kete Tuauri, te kete Tuatea, te kete Aronui.

The structure of the kete is illustrated in Table 6.1 below.

Table 6.1. Kaupapa Māori outcomes and indicators kete

	Kete 1	Kete 2	Kete 3
Kaupapa	Mana	Mauri	Tapu
Tikanga	Mana Whenua	Mauri of Waterways	Wāhi Tapu
Outcomes And Indicators	1 Outcome	1 Outcome	1 Outcome
	Various Indicators	Various Indicators	Various Indicators

Each kete contains the following:

- Kaupapa – the overarching value or concept to which outcomes and indicators relate;
- Tikanga - the high level principle or rule which must be upheld;
- Outcome – an expression of a group’s aspiration or objective by which a particular tikanga will be observed or upheld;
- Indices – term for a series of indicators grouped by theme;
- Indicators – the higher level enquiry for evaluating whether outcomes are being achieved, and;
- Measures – lower level enquiry or method, several of which collectively provide the information required for an indicator.

Consistent with the kete analogy, the reference to kete includes the combination of tools developed for its use. This includes a worksheet in which information relating to the indicators is collected. This worksheet is physically located within the kete document. As there are three kete (mana, mauri and tapu), there are three worksheets. The overall kete also includes two supplementary documents that are physically separate from the kete document. The worksheet and supplementary documents are discussed in Chapter 7.

The list of kete contents shown in Table 6.1 includes a three-tier indicators structure. High level indices have been used to group related indicators in an effort to provide a sufficiently comprehensive picture of the various contributions made by regional and district councils, other relevant Crown agencies, Māori, and the wider public toward stated outcomes.

The indicators are (with a few exceptions) each supported by a series of measures – these being intended to provide practical means by which the range of information required to assess each indicator can be gathered.

In Figure 6.3 at the end of this chapter, is an elaboration of the kaupapa kete structure. It indicates that we have been working on three other tikanga-specific kete (Kaitiakitanga, Mātauranga Māori and Treaty of Waitangi), but not to the point of trialling.

In the sub-sections that follow, we explain each of three kete: Mana and whenua; mana and mauri of waterways; and mana and Wāhi tapu. The particular contents of each are considered further in Chapter 7, Filling the Kete. There could, of course, be many more outcomes and indicators kete, but resources restricted us to developing just three of them.

6.3.1 Kete 1: Mana and Mana Whenua

Cultural Significance

As kaitiaki, tangata whenua have responsibility for safeguarding their ancestral lands, defining themselves in terms of their land – tangata whenua. The term mana whenua commonly refers to the authority tangata whenua have over their lands (Walker, 1990; McCully and Mutu, 2003), and tribal mana is widely considered to be diminished where Māori fail in their duty as kaitiaki (guardians) of ancestral lands (McCully and Mutu, 2003; Taua, 2003).

The RMA (*Resource Management Act, 1991*) includes this definition of tangata whenua: “*Tangata whenua, in relation to a particular area, means the iwi, or hapū, that holds mana whenua over that area.*” The Act provides a further definition for mana whenua” “*Mana whenua means customary authority exercised by an iwi or hapū in an identified Area.*”

However, the Waitangi Tribunal in its Rekohu Report (Waitangi Tribunal, 2001) disputed the definitions of tangata whenua and mana whenua within the RMA, offering the following alternative explanation of Tangata Whenua:

We find that we must part company with the understanding of ‘tangata whenua’ and ‘mana whenua’ as used in the Reserves Act 1977, the Conservation Act 1987, and the Resource Management Act 1991. In section 2 of the latter, ‘mana whenua’ means ‘customary authority exercised by an iwi or hapū in an identified area’. ‘Tangata whenua’, in relation to a particular area, is defined as meaning ‘the iwi or hapū that holds mana whenua over that area’. We think that this confuses several things, not least by its association of ‘tangata whenua’ with power. We have thought it best to leave aside the legal definitions and to look at the matter solely in customary terms.

As we see it, the core meaning of ‘tangata whenua’ relates to an association with the land akin to the umbilical connection between an unborn child and its mother. It comes from creation beliefs holding that Māori were born of Papatuanuku (Mother Earth) and is used to describe the first people of a place, as though they were born out of the land. However, it is also used to describe those who have become one with the land through occupation over generations. It is relevant to ask whether the newcomers placed the placenta of the newborn on the land, whether their ancestors have been regularly buried in particular sacred sites, and whether regular respect for those ancestors and sites is still maintained.

These and similar questions define the degree of permanence or transience in cultural terms.

It is interesting to note that this explanation clarifies the cultural bases by which the integrity of the relationship of tangata whenua with their ancestral lands has little to do with retention of legal ownership. Confirming this position the Tribunal went on to discuss mana and mana whenua:

This brings us to mana. Again, this term has many meanings, but it was used in submissions in the sense of political authority and power. In the Ngāti Mutunga submissions, Moriori lost mana through conquest and enslavement. That may be so, but mana is personal to persons or to peoples, and it comes and goes – it is not an institutional power given by history and then entrenched for all time. Were it the case that mana is irretrievably lost by conquest and enslavement, then many tribes, including Ngāti Mutunga, would have no mana today. If it were true that mana went for all time when people were displaced from the land, then most Māori would be without mana today in light of the land losses and the outcome of the wars that followed European colonisation. This was the point of what Sir Monita said, when describing the Māori way, that the mana is in ourselves – we are a people. Mana depends on how we act today and what we make of ourselves. It is something like the definition that Dame Joan Metge put to the Tribunal in the Muriwhenua land claim, with reference to a rangatira, that a rangatira is as a rangatira does.

This description reinforces the comment made above that tribal mana is widely considered to be diminished where Maori fail in their duty as kaitiaki. Lynda Te Aho (2005) describes the traditional operation of mana whenua in terms of natural resources. Our observation is that this explanation is consistent with the repeated assertion and defence of mana whenua within RMA processes:

Collective disputes arose when outsiders challenged the mana of a group. This was seen, for example when one tribe took resources from another area. This was a challenge to the mana of the area, a challenge to their mana whenua, a trespass. These disputes could be criminally, politically, or territorially based. (Te Aho, 2005)

Traditionally, such breaches had serious consequences, and might escalate into outright conflict if appropriate amends were not made. While today breaches of mana whenua are dealt with by other means, Māori still take such attacks very seriously, and the RMA is the statutory arena both in which such breaches are seen to be allowed by remiss statutory authorities, and the arena in which disputes over mana whenua are argued.

Statutory Significance

Setting aside this significant attack on the statutory definition within the RMA by the Waitangi Tribunal, councils have substantive responsibilities to iwi Māori under the RMA. They are required under Section 35a: to keep contact details of each iwi authority within the region or district and any groups within the region or district that represent hapū for the purposes of the Act; enable the planning documents that are recognised by each iwi authority and to be lodged with the local authority; and recognise any area of the region or district over which one or more iwi or hapū exercise kaitiakitanga. However, issues surrounding mana whenua, and particularly disputes over mana whenua, remain of major concern to iwi.

Although enacted 11 years after the RMA, the LGA (2002) includes provision only for “Māori” with no recognition for either tangata whenua, iwi, or mana whenua. However, the LGA does refer to tikanga, and to ancestral lands, thereby providing an implicit obligation on Councils to respect mana whenua. The Act states:

77.1(c) if any of the options identified under paragraph (a) involves a significant decision in relation to land or a body of water, take into account the relationship of Māori and their culture and traditions with their ancestral land, water, sites, waahi tapu, valued flora and fauna, and other taonga.

Despite these provisions, neither the RMA nor LGA include mechanisms for resolving instances where there is dispute over mana whenua. The default position is that decision-makers have recourse to the Māori Land Court as the appropriate authority for determining disputes as to correct representation for Māori. However, with few exceptions, this option has not been exercised by councils, preferring to either ignore disputes between Māori groups over mana whenua, or to make summary judgements themselves despite having no statutory authority to do so.

For tangata whenua, recognition of mana whenua is a fundamental issue essential to their the effective participation by them in resource management processes. Where mana whenua is not recognised or otherwise ignored, whānau, hapū and iwi are often offended and unwilling to develop a working relationship with those who do not recognise their unique status. For this reason, this tikanga (mana whenua) and its associated outcomes and indicators, are critical in that they reflect the extent to which tangata whenua can participate and work effectively with other RMA and LGA stakeholders – particularly councils.

The discrepancy between the understanding of the Waitangi Tribunal as reported in its Rekohu Report and the definitions within the RMA, highlight the problems that can arise where traditional indigenous values are included in contemporary legislation. This becomes a matter for resolution by Māori themselves, who seek to assert their own understandings of these tikanga within RMA processes, and of the courts, which are responsible for interpreting legislation and the intentions of those that wrote it.

Our PUCM kaupapa Māori framework recognises the above issues and includes measures by which tangata whenua and councils alike can scrutinise the plans and policies, and the actions of councils, iwi/Māori, and the Crown in relation to RMA provisions for mana whenua.

6.3.2 Kete 2: Mauri and the Mauri of Waterways

Cultural Significance

Mauri is often defined as the life-force of a physical object (living or otherwise). All things are considered to have mauri. Marsden (1977) refers to mauri as the life-force, essence, life-principle, and suggests that it was originally regarded as elemental energy derived from the realm of Te Korekore, out of which the stuff of the universe was created. Everything has a mauri, including people, fish, animals, birds, forests, land, seas, and rivers. Barlow (1993) observes that the mauri is that power which permits these things to exist within their own realm and sphere.

The maintenance of mauri is widely considered to be the most important responsibility of kaitiaki Māori. The Waitangi Tribunal (1999) describes the importance of protecting the mauri in its *Whanganui River Report*:

Conversely, if the mauri of a river or a forest, for example, were not respected, or if people assumed to assert some dominance over it, it would lose its vitality and force, and its kindred people, those who depend on it, would ultimately suffer. Again, it was to be respected as though it were one's close kin (Waitangi Tribunal, 1999).

Largely in response to the continuing deterioration of our waterways as a result of poorly managed land use effects, the mauri of water has become a primary concern. McCully and Mutu (2003) discuss the obligation on tangata whenua to protect the mauri of the lands and taonga within their guardianship, writing:

Te Whānau Moana must try to restore the hau kainga that has been unnecessarily interfered with and prevent it from being further altered. A taonga whose life force becomes severely depleted, as is the case, for example, with the Manukau Harbour, presents a major task for the kaitiaki. In order to uphold their mana, the tangata whenua as kaitiaki must do all in their power to restore the mauri of the taonga to its original strength.

Our Mauri Outcome is concerned specifically with the mauri of waterways, this being of particular importance to tangata whenua, as evidenced by the numerous planning processes in which tangata whenua participate in an effort to protect mauri.

Statutory Significance

Mauri is not specifically referred to in either the RMA (1991) or LGA (2002), but RMA Section 6(e) does recognise as a matter of national importance: “*The relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga*” and numerous other provisions that have been interpreted by the courts to require the protection of mauri (New Zealand Law Commission, 2001). The Act also recognises kaitiakitanga defining this as “*the exercise of guardianship by the tangata whenua of an area in accordance with tikanga Māori in relation to natural and physical resources; and includes the ethic of stewardship.*”

The LGA (2002) acknowledges tikanga, defining it as “*Māori custom and practice.*” The LGA in setting out the Act’s requirement that councils provide for Māori participation in decision-making, acknowledges the Crown’s Treaty obligations:

In order to recognise and respect the Crown's responsibility to take appropriate account of the principles of the Treaty of Waitangi and to maintain and improve opportunities for Māori to contribute to local government decision-making processes Parts 2 and 6 provide principles and requirements for local authorities that are intended to facilitate participation by Māori in local authority decision-making processes.

Statutory plans under the RMA often include specific recognition of, and protection for, mauri. For example, the Regional Policy Statement of the Auckland Regional Council states in the introduction to its *Matters of Significance to Iwi* section that: “*Traditional approaches to resource management focus on maintaining and enhancing the mauri of ancestral taonga,*” associated Objective 3.3(1) is “*To sustain the mauri of natural and physical resources in ways which enable provision for the social, economic and cultural*

Well-being of Māori” with the combined effect of the associated Anticipated Environmental Results explained as: “*These results mean that the mauri of ancestral taonga in the Auckland Region will be sustained*” (Auckland Regional Council, 1999). While not defined as an outcome, the mauri-related outcome implicit in the ARC RPS is: “*Mauri of ancestral taonga in the Auckland Region will be sustained.*”

The mauri-related outcome (the mauri of waterways) and its associated indicators are intended to provide tangata whenua with methods to determine whether the mauri of waterways within their rohe are in good health, and also to assess the contribution councils and other Crown agencies play in achieving that goal.

6.3.3 Kete 3: Tapu and Wāhi Tapu

Cultural Significance

Tapu is regularly translated as untouchable, sacred, and associated with the gods (Marsden, 1977; Barlow, 1993; Durie, 1994). Along with mana, it is the overarching concept of tikanga responsible for regulating behaviour in Māori society (Marsden, 1977; Te Aho, 2005). Tapu is one of the kaupapa adopted within our PUCM kaupapa Māori framework, with wāhi tapu being the associated tikanga.

There is substantial contemporary debate about what constitutes wāhi tapu, and the consensus in the literature seems to be that they are places of significant tapu. However, such a distinction is not universal, and open to interpretation given that all things have some degree of tapu (Barlow, 1993).

The protection of wāhi tapu is of the utmost importance to tangata whenua. The outcomes and indicators included are intended to provide a series of tools for both the evaluation and protection of tribal wāhi tapu. The indicators are presented in Chapter 7.

Statutory Significance

Wāhi tapu are specifically recognised and provided for in several pieces of legislation, including the RMA (1991), the *Historic Places Act* (1993), the LGA (2002), and the *Foreshore and Seabed Act* (2004). Some of our indicators relate to those statutes and to obligations stemming from them on councils and agencies. Section 6 of the RMA requires that:

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance: e. The relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga.

Part 2 of the *Historic Places Act* (HPA) is entitled *Registration of Historic Places, Historic Areas, Wāhi tapu, and Wāhi tapu Areas*. This includes separate registration and protection provisions and definitions for wāhi tapu (primarily Section 25), and for wāhi tapu areas (primarily Section 31). The Act also provides the statutory mechanism for permitting the modification or destruction of wāhi tapu, these provisions being frequently used by developers.

The LGA (2002) in section 77, Requirements in relation to decisions, states that a local authority must, in the course of the decision-making process:

(c) if any of the options identified under paragraph (a) involves a significant decision in relation to land or a body of water, take into account the relationship of Māori and their culture and traditions with their ancestral land, water, sites, wāhi tapu, valued flora and fauna, and other taonga.

The HPA (1993) is considered by some Māori to represent a tick box exercise in the process of modifying or destroying Māori sites of significance. Gary Law (2000) past president of the New Zealand Archaeological Association and director of the Environmental Defence Society observed that: “Consents to modify or destroy sites are rarely withheld where the destruction cannot otherwise be avoided, but often the conditions require prior investigation or at least monitoring of disturbance of the site by an archaeologist” (Law, 2000).

The Parliamentary Commissioner for the Environment identified a lack of commitment to the protection of Māori heritage sites on the part of Government, noting that –the system for the management of historic and cultural heritage as a whole lacks integrated strategic planning, is poorly resourced and appears to fall short of the principles of the Treaty of Waitangi|| (Parliamentary Commissioner for the Environment, 1996).

The RMA (1991) offers, on those occasions where Māori are given the opportunity to participate, a more robust process in terms of consideration of effects on significant sites. However, various authoritative commentators have observed that the RMA is failing in terms of its heritage protection provisions, particularly those relating to Māori sites (Law, 2000). Observing the ineffectiveness of the RMA in protecting wāhi tapu, the Waitangi Tribunal (2006) made the following recommendation in its *Hauraki Report*:

We recommend that the Resource Management Act (1991) be made more consistently effective for the protection of Wāhi tapu and taonga (which the crown has conceded is not always the case), and that the Government, local authorities, and Māori should work together to publicise the protection measures available under it and ensure their use to the fullest extent possible in this context, we note the difference between archaeological sites and ‘living’ wāhi tapu, known and valued by claimants today. One possible way forward would be for working groups of tangata whenua, crown officials, and local authorities, formed under the resource management act, to locate those living Wāhi tapu most in need of protection (Waitangi Tribunal, 2006).

In our experience, wāhi tapu, as with Māori values generally, regularly lose when competing with western values and the many other factors that must be weighed under the balancing act that is the RMA. Solutions, such as in the Tribunal’s recommendations, are recognised in the PUCM Wāhi Tapu kete, the intention being that this will assist iwi and council staff in identifying existing and potential measures toward wāhi tapu preservation.

Having outlined the structure of a kaupapa Māori outcomes and indicators framework and explained the cultural and statutory significance of the three kete that illustrate its potential application, we encapsulate the framework in diagrammatic form in Figure 6.3, next page.

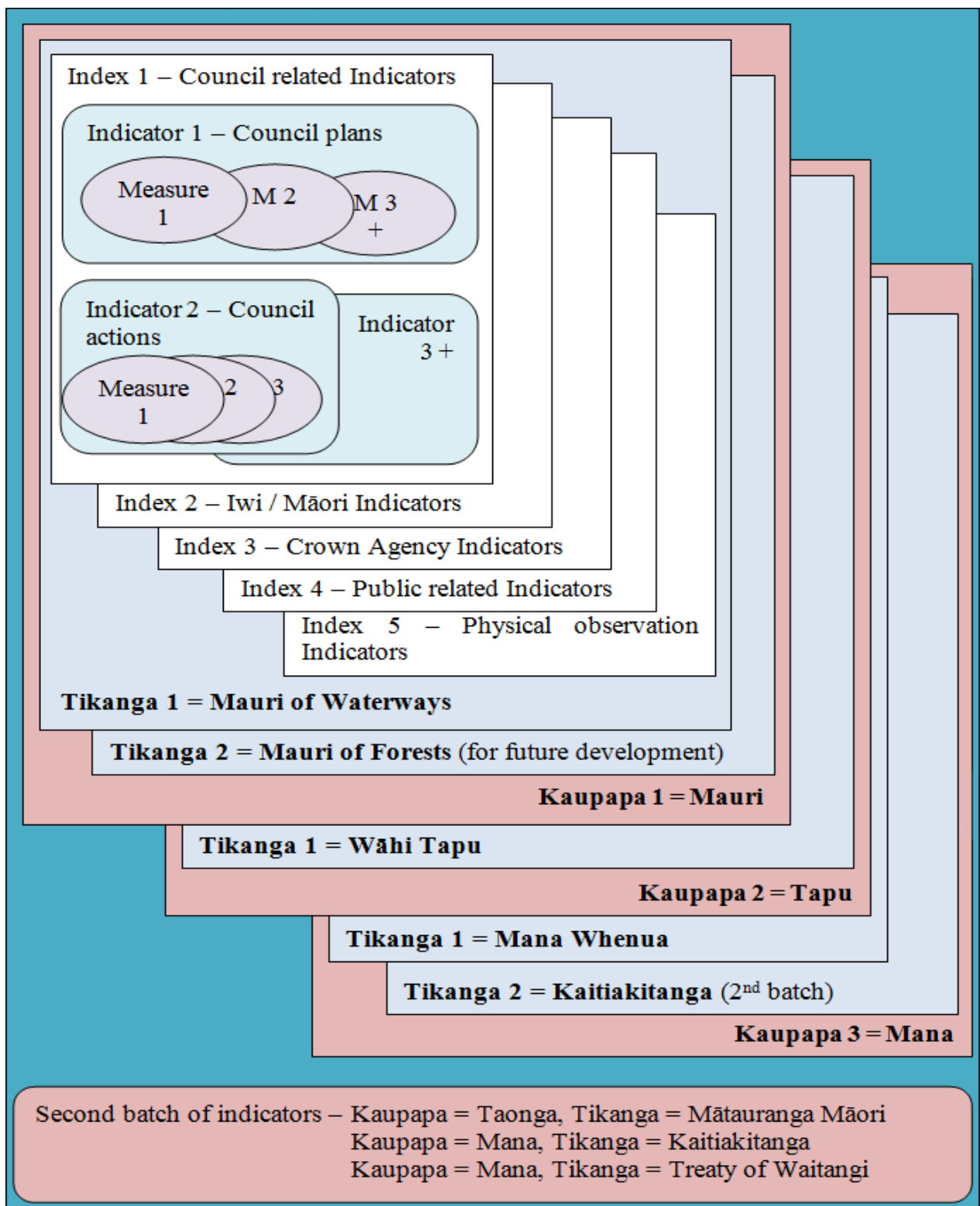


Figure 6.3. Schematic diagram of the PUCM kaupapa Māori framework for environmental outcomes and indicators.

6.4 Summary

In this chapter we explained the Kaupapa Māori Framework, which was developed in accordance with kaupapa Māori research principles as a mechanism for the creation and use of Māori environmental outcomes and indicators. We began by considering Māori theoretical models that have been developed for similar purposes elsewhere, as we had sought to identify likely strengths and weaknesses of these as we went about developing our own conceptual model.

We then went on to describe the three models based on a Māori world view that were investigated as potentially providing the theoretical foundations for our own outcomes and indicators framework. We highlighted examples of them being used for similar purposes elsewhere in Aotearoa, primarily within iwi planning documents, and explained the basis for our decision to adopt the Ngā Tikanga model. It determines the way in which kaupapa (foundation Māori principles) and tikanga (values and protocols that prescribe correct behaviour) are woven into the PUCM kaupapa Māori framework.

Most of our discussion focused on the subject of Māori outcomes (hua) and indicators (tohu). A range of traditional categories of indicators was described and the significance to Māori explained. We then examined modern Māori outcomes and indicators within environmental and other areas – particularly health.

In Section 6.3, we introduced the idea of the kete (literally baskets) and how this was used to structure our kaupapa Māori framework. As we had initially developed three kete, we invoked the symbolism of the Māori creation tradition in which knowledge (including knowledge about the natural environment) was brought to earth from the heavens in three baskets by the eponymous ancestor Tane Mahuta. We explained that in a practical sense, our three kete (mana, mauri and tapu) are the physical devices that carry the methods (outcomes, indicators, and various companion documents and resources) for Māori-specific plan and environmental evaluation.

Finally, we considered the kaupapa and tikanga of our three kete, explaining the rationale for their selection and their cultural and statutory significance. It is to the content and use of the kete that our attention now turns in Chapter 7.

Te Whakaki i te Kete

Methodology: Filling the Kete

In this chapter, the methods that we have developed for using the Kaupapa Maori Environmental Outcomes and Indicators Framework for various purposes in councils and iwi are explained. The chapter is therefore about the methodology that underpins the kaupapa Māori framework outlined in the previous chapter.

The term “methodology” refers to the combined methods used in a research approach. We discussed our research approach earlier in Chapter 5. “Methods” as used here, refers to the means by which our PUCM kaupapa Māori framework (the framework) is intended to be used. This includes: evaluations for improving plan quality; council performance; and environmental outcomes. In short, we address the question: How are the tools developed to be used in order to contribute toward environmental (including cultural) improvement?

The chapter is organised around three main sections. In the first section, we explain the kete and its indicators for assessing whether its outcome has been achieved. Next, we explain the anticipated uses of the kete by councils, iwi and Crown agencies. Finally, in Section 7.3 we consider how users of the kete can effectively interpret the information that they collect through structured worksheets.

7.1 The Kete

To continue the kete metaphor explained earlier in Chapter 6, the kete are the baskets intended to carry the framework’s evaluation tools. Ultimately, the purpose of each kete is the achievement of the respective outcomes expressed therein. That means: for the Mana Whenua kete, mana whenua is appropriately respected; for the Mauri of Waterways kete, the mauri of all waterways are in optimum health; and for the Wāhi Tapu kete, wāhi tapu are protected.

We signal here that the three kete are presented together in the document entitled: *Kaupapa Māori Outcomes and Indicators Guidelines and Worksheets* (Jefferies and Kennedy, 2009, PUCM Maori Report 2a). This document includes introductory and contextual information, the worksheets, and guiding notes for its application. The remaining kete contents are found in two separate supplementary documents (see Section 7.1.2).

Obviously, not all of this kete information can be included in this report. Rather, in this chapter, we simply explain the nature of the contents of the kete, particularly with regard to the “worksheets” for gathering relevant information about outcomes, indicators, measures, levels and so on, by the users of the framework in councils and iwi.

7.1.1 About the Worksheet

The worksheets are the main evaluative component of the kete. The full worksheets are found within the aforementioned document *Kaupapa Māori Outcomes and Indicators Guidelines and Worksheets* downloadable at www.waikato.ac/igci/pucm. They were developed as the method for gathering indicator information. Each kete (Mana, Mauri, and Tapu) includes a worksheet on which users record responses to questions and collect information required for the indicators, and ultimately to evaluate the outcome for each of the three tikanga.

The worksheet is therefore woven into the kete structure. After each of the indicators and associated measures is space in which the user can record responses. The various components of the worksheets are identified and discussed below.

It is possible for users to print out each worksheet and complete by hand. However, the kete have been designed for use on-screen for a number of reasons. The document can be more easily navigated using the Document Map feature within Microsoft Word, and users are not limited by the physical size of the comments boxes, as these grow to accommodate any amount of text when the document is used electronically.

Measures, levels, and criteria are also important components of the worksheet. As previously described in Chapter 6, the framework contains a combination of outcomes, indices, indicators, and measures as the means for evaluating performance against the outcomes identified.

Ngā tohu – The Indicators

In Tables 7.1 to 7.3 below are the indices and associated indicators for each of the three kete. Each table shows the single outcome and the high level enquiry embedded within the worksheets. The indices and indicators are listed here in order to illustrate the type and range of questions that we consider necessary to understand whether, and for what reasons, the high level outcomes identified are being achieved.

Table 7.1. Mana Whenua Kete: Outcome and its Indices and Indicators

Kaupapa	Mana
Tikanga	Mana Whenua
Outcome	Mana whenua is appropriately respected
Index 1:	Extent to which Local Authorities acknowledge Mana Whenua
Indicator One:	Whether respondent agrees that Local Authority acknowledges mana whenua
Indicator Two:	Extent to which iwi / hapū tribal boundaries are known to Council
Indicator Three:	Whether Statutory Plans recognise and provide for mana whenua
Indicator Four:	Extent to which Council monitoring has determined whether Anticipated Environmental Results (AERs) relating to mana whenua provisions have been achieved
Indicator Five:	Extent to which Council provides for mana whenua input into decision making
Index 2:	Extent to which Other Government Agencies acknowledge Mana Whenua
Indicator One:	Whether respondent agrees that Agency acknowledges mana whenua
Indicator Two:	Extent to which Agency's policy documents provide for mana

	whenua
Indicator Three:	Extent to which iwi / hapū tribal boundaries are known to Agency
Indicator Four:	Extent to which Agency provides for mana whenua input into decision making
Index 3:	Extent to which Tangata Whenua assert Mana Whenua
Indicator One:	Extent to which iwi / hapū participate in kaitiaki activities
Indicator Two:	Extent to which Tangata whenua assert mana whenua generally
Indicator Three:	Extent to which iwi / hapū protect and maintain mana whenua

Table 7.2. Mauri Kete: Outcome and its Indices and Indicators

Kaupapa	Mauri
Tikanga	Mauri of Water
Outcome	The Mauri of all Waterways are in Optimum Health
Index 1:	Extent to which local authorities protect mauri.
Indicator One:	Whether respondent agrees that Local Authority actively protects mauri
Indicator Two:	Whether Territorial Local Authority documents contain provisions to protect mauri
Indicator Three:	Whether territorial local authorities act to protect mauri
Index 2:	Extent to which tangata whenua protect mauri
Indicator One:	Whether respondent agrees that tangata whenua actively protect mauri
Indicator Two:	Whether tangata whenua have management documents with provisions designed to protect mauri
Indicator Three:	Whether tangata whenua act to protect mauri
Index 3:	Extent to which other agencies protect mauri
Indicator One:	Whether respondent agrees that other Government agencies actively protect mauri
Indicator Two:	Whether agency takes measures to foster understanding of mauri
Indicator Three:	Whether agency has strategies designed to protect mauri
Index 4:	Extent to which actions of the wider community affect mauri
Indicator One:	Whether respondent agrees that actions of the wider community affect mauri
Indicator Two:	Extent to which individuals and groups are informed about mauri and how it should be protected
Indicator Three:	Whether individuals and groups take active measures to protect mauri
Index 5:	Physical evidence that mauri is protected
Indicator One:	Whether respondent agrees that mauri is protected
Indicator Two:	Physical characteristics of the water
Indicator Three:	Characteristics of the waterway and its immediate environment
Indicator Four:	Characteristics of waterway inhabitants
Indicator Five:	Presence of potential human threats

Table 7.3. Wāhi Tapu: Outcome and its Indices and Indicators

Kaupapa	Tapu
Tikanga	Wāhi Tapu
Outcome	Wāhi Tapu are Protected
Index 1:	Extent to which Local Authorities Actively Protect Wāhi Tapu
Indicator One:	Whether respondent agrees that Local Authority actively protects wāhi tapu
Indicator Two:	Whether Territorial Local Authority documents contain provisions to protect wāhi tapu
Indicator Three:	Whether Territorial Local Authorities act to protect wāhi tapu
Index 2:	Extent to which Tangata Whenua Actively Protect Wāhi Tapu
Indicator One:	Whether respondent agrees that tangata whenua actively protect wāhi tapu
Indicator Two:	Whether tangata whenua have documents with provisions designed to protect wāhi tapu
Indicator Three:	Whether tangata whenua act to protect wāhi tapu
Index 3:	Extent to which Other Government Agencies Actively Protect Wāhi Tapu
Indicator One:	Whether respondent agrees that other Government agencies actively protect wāhi tapu
Indicator Two:	Whether the Historic Places Trust works to protect wāhi tapu
Indicator Three:	Whether other government agencies work to protect wāhi tapu
Index 4:	Extent to which Wāhi Tapu are identified and protected
Indicator One:	Whether respondent agrees that wāhi tapu are widely identified and protected identified and protected
Indicator Two:	Physical characteristics of wāhi tapu
Indicator Three:	Characteristics of immediate environment
Indicator Four:	Presence of potential threats

Measures

Measures in the worksheets are in effect questions, similar to the indicators. They are the lowest level of enquiry within the kete and its respective worksheet, and are intended to provide the basic information required to answer the questions embodied within the indicators.

There are different approaches to solving problems which can impede achieving a desired outcome. An example is found within the measure “Addressing competing claims to mana whenua.” The measures are intended to identify whether potentially diverse approaches are effective toward achieving the outcomes for Māori articulated within the kete. To achieve this, indicative responses for each measure are provided as a range of predefined “levels.”

As seen from Table 7.4 below, the measure encompasses levels, criteria and ideal versus actual situations. These elements are explained in turn below.

Levels

The levels contain descriptions intended to reflect a range of conditions from best to worst. Users are asked to select the description that best reflects their own situation. Because the measures investigate complex arrangements, the level descriptions are sometimes quite detailed, as the example below shows.

Table 7.4. An example of a measure response box from the wāhi tapu worksheet

Measure 2. Quality of TLA planning provisions designed to protect wāhi tapu			
Level 1	Translation /description of wāhi tapu, number of measures, number of threats identified that could damage wāhi tapu, adequate interpretation of range of pressures on wāhi tapu, enforcement level provisions	Ideal	Actual
Level 2	Provisions explicitly stress and strongly require identification of potential impacts on wāhi tapu and include compliance requirements for their protection		
Level 3	Provisions provide apparently adequate protection		
Level 4	Limited provisions that provide limited protection for wāhi tapu		
Level 5	Plans make no reference to, or provision for, the protection of wāhi tapu		
Other / Comments			
Criteria / Examples			
<ul style="list-style-type: none"> • Consistency of provisions through plan “cascade” • Most provisions as worded appear to provide reasonable protection for wāhi tapu • Wāhi tapu effects are identified in sections other than Maori specific sections • Most provisions as worded are consistent with tribal tikanga • All issues important to tangata whenua are adequately addressed • Anticipate Environmental Results accord with those of tangata whenua • Presence of qualifying statements that potentially undermine provisions (negative indicator) 			

It is not necessary for the level as worded to exactly describe the user’s particular situation, although we would expect there to be a degree of agreement. That said, were the levels to be found to regularly fail to reflect real world situations they would serve little purpose and require revision. The Ideal / Actual and Comments fields are expected to assist in determining whether the levels as worded are valid.

The use of measures with predefined level descriptions was adopted rather than allowing users to phrase their own responses for two related reasons. One was in an effort to achieve consistency between the responses of different iwi or councils; the other reason was to prescribe a particular number of levels of quality, both being intended to assist comparison of the findings from different users.

Criteria and Examples

The criteria and/or examples provided for each measure are intended to assist users by laying out the rationale according to which the levels were determined. They do so by clarifying the reasoning behind the selection of factors that constitute most through to least ideal situation

By providing the rationale behind the levels it is hoped that users will be able to locate their own situation in terms of the levels of quality articulated by the level descriptions, even though these might not exactly describe their own situation.

Ideal versus Actual responses

The worksheets include columns for the user's ideal and actual situations for the indicators (see Table 7.4 above). For each indicator-specific measure, we provide a description or definition that we believe reflects various levels from an ideal situation (Level 1) through to the least desirable situation (usually level 5), although some measures have fewer options. The intention was that users should be able to express whether they agree with our definitions, and also articulate whether, for their group, some alternative arrangement might better represent their "ideal."

For example, one measure from the Mana Whenua series reads: "*Territorial Local Authorities effectively manage information associated with wāhi tapu.*" The ideal situation we have defined reads:

TLA has formally transferred its functions in terms of managing Wāhi tapu information to tangata whenua, who implement a range of effective strategies, policies and practices for managing this information. Information is available to council subject to appropriate protocols.

The level 2 description reads: "*TLA implements a range of effective strategies, policies and practices - developed in cooperation with tangata whenua - for managing wāhi tapu information.*"

For some iwi, as we had anticipated, the ideal situation is for them to manage information relating to wāhi tapu, rather than council doing this. However, for an iwi that has more limited resources it might be unrealistic to take on the task of managing wāhi tapu information, particularly where such a task might require specific skills and resources such as maintaining databases or GIS (Geographic Information Systems). In such circumstances the iwi might find it preferable for their council to manage this information, particularly if they enjoy a strong relationship. An example Measure response box is shown earlier in Table 7.4.

Other/ Comments Field

Users are given the opportunity to provide their own comments, qualifications to responses, or notes in relation to every measure (see Table 7.4). As discussed above, this is deemed important for several reasons: the predefined levels are indicative, but are not intended to exactly describe real situations; and users might feel a need to expand upon

or add qualifications to their level selection, refer to another indicator or measure, or comment on the measure itself. They can also describe their own experiences relating to each indicator in this space.

During the trialling stage, users were asked to use the Notes field to provide measure-specific feedback for the purpose of evaluating the framework and its indicators. The comments from Ngāti Maru, Matamata Piako District Council, Environment Bay of Plenty and Ngāti Awa proved particularly useful when reviewing the framework. These were collated and assessed during the review, and some modifications were made largely as a result of the comments provided (see Chapter 8).

To reiterate, the main components of the kete are presented in the document entitled *Kaupapa Māori Outcomes and Indicators Guidelines and Worksheets* (Jefferies and Kennedy, 2009). This document includes introductory and contextual information, the worksheets, and guiding notes for its application. The remaining kete contents are found in the two supplementary documents explained below.

7.1.2 About the Supplementary Documents

Two documents have been written supplementary to the outcomes and indicators kete. Together they are intended to provide people using our framework with guidance as to how to interpret and respond to the PUCM Kaupapa Māori indicators. The companion documents (see Figure 0.1 in Preface) are:

- *Māori Provisions in Plans* (Kennedy and Jefferies, 2008) – a compilation of examples of Māori provisions from many council plans (both RMA and LGA) indexed according to the tikanga or subject to which each relates. Users of the framework can readily compare the provisions in plans they are assessing against these examples in order to assist their evaluation; and,
- *Kaupapa Māori Framework and Literature Review of Key Environmental Principles* (Jefferies and Kennedy, 2005) - the literature review undertaken of publicly available literature on environmentally relevant tikanga, with an introduction to the kaupapa Māori framework.

Together, the worksheets and two supplementary documents provide those using the framework with: a set of instructions as to how to use the framework; a discussion document for the various tikanga that are considered in the kete; and a set of quality examples against which users can assess their own situations.

By using these three documents it is expected that informative, considered answers will be obtained, and that these will be sufficiently comparable between different areas and organisations so that parties can benefit from their collective experiences.

By achieving a level of consistency, it is our expectation that individual iwi and council experiences can be considered against the situation and experiences of those elsewhere. In this manner it is hoped that the framework might be used to investigate both geographic (comparison of findings for different groups and places) and temporal (consideration of change over time) trends or both.

7.2 Anticipated Uses for the Framework

As previously stated, ultimately the purpose of the three kete (and others yet to be trialled) is the achievement of the outcome articulated in each. To evaluate the extent to which those outcomes are being achieved, users will complete the whole of the worksheet within the kete that deals with the particular kaupapa being investigated. There are, however, various other uses to which the PUCM kaupapa Māori outcome and indicators framework and methodology can be applied, for example evaluating the Māori provisions within a single council plan. In this section we first provide an example of using a single kete to evaluate the outcome articulated therein, then we consider various purpose-specific uses of our kete.

7.2.1 Single Outcome Evaluation Using the Kete

The kete can be used in their entirety to evaluate the (currently three) outcomes stated within the respective kete relating to mana whenua, mauri of waterways, and wāhi tapu. Or single kete can be used to evaluate the particular kaupapa to which they relate.

Consider for example the overarching outcome from the Wāhi Tapu kete - Wāhi Tapu Are Protected. This is a statement that describes an absolute – wāhi tapu are protected. The outcome does not identify the geographic area or length of time over which such protection occurs. The wāhi tapu kete can be used at a particular point in time to help determine whether, for a particular area, wāhi tapu are protected, but also to enquire into what factors have contributed to the condition of wāhi tapu. In this manner an information baseline can be established.

One-off use of the framework might take place for different purposes. For example, evaluation of one or more of the overarching outcomes might take place for a single council district or region. Tangata whenua or councils might only be interested in identifying the state of wāhi tapu in their area, but not in investigating the extent to which Crown, council, or iwi plans and practices have contributed to this. Conversely, they may be already familiar with the state of wāhi tapu, and want only to investigate the extent to which different agencies have contributed toward this. For this reason, the various indices within each kete can be evaluated individually in order to obtain a “snapshot” -- a view of a single point in time in relation to the question underlying each of the indices.

For example, Index 1 of the Wāhi Tapu kete enquires into the extent to which local authorities actively protect wāhi tapu. In order to answer this question the indicators are concerned with the respondent’s perceptions regarding council performance, the adequacy of council plan provisions, and of council activities.

If an organisation (Māori/council or Crown) sought to determine the state of wāhi tapu for a region then to obtain the most comprehensive information as to both the state of sites and the factors contributing to their condition the investigator would use all sections of the kete. We now consider this as a scenario and how it would be achieved.

Example – Wāhi Tapu

As an example, we consider the use of the Wāhi Tapu kete to investigate whether wāhi tapu are protected – time specific, but across multiple statutory jurisdictions.

In this scenario, a regional council wants to assess the extent to which wāhi tapu within its region are protected. This would be akin to a state of the environment evaluation and a risk assessment. To undertake such an investigation the kete could be completed in full, including each of the four indices relating to council, Crown, tangata whenua, and sites themselves.

Protection, not simply condition

A key observation to make here is that the outcome does not ask what the condition of sites is, but rather whether they are protected. To determine the condition of sites one would simply inspect sites (or a sample thereof), and draw conclusions regarding their collective condition. But whether sites are protected is a larger question. It assumes that site condition will not deteriorate further, therefore requiring an assessment of site condition. However, it further relies on protection being provided into the future, and to ascertain whether such protection is in place requires investigation of all agencies with responsibility for wāhi tapu.

Assess site condition

In undertaking such an investigation it would be appropriate to first determine the condition of sites. As noted above, the indicators relating to sites include tangata whenua perceptions, physical characteristics of the sites, characteristics of their immediate environment, and identification of potential threats.

Ideally, this investigation would be undertaken for every significant wāhi tapu within the area of interest, with the relevant section of the worksheet being repeated for each site. However, while being desirable this is likely impractical and a council might select the most significant sites in consultation with tangata whenua, and repeat the exercise only for those. The relevant section of the kete would either be printed out the required number of times or copied and pasted repeatedly from the kete into a new purpose-built document.

Assess council plans and performance

The worksheet user would investigate the extent to which the regional council's own documents provide protection for wāhi tapu, the extent to which councils practices provide such protection, and also investigate the perceptions of tangata whenua as to how effective council has been at protecting sites. But this only provides a partial picture because there are potentially numerous other agencies that influence the extent to which sites are protected.

The local authority related indicators (Index 1) would ideally be completed for each of the councils within the region. There are a number of reasons this is desirable: there is now a statutory requirement that lower order plans are consistent with higher ones (rather than the previous requirement that they be not inconsistent); and the RMA (1991) includes specific direction that cross-boundary issues will be addressed in council plans. District and regional councils each have responsibilities relating to wāhi tapu, which of course have protection under Section 6(e) of the RMA. At a practical level this would reveal to council whether there are areas where protection of sites is poor, allowing them to focus future protection efforts there and to discuss the perceived issues with those councils deemed to be offering inadequate protection.

While ideally councils would co-operate in providing this information the *Local Government Official Information and Meetings Act* (LGOIMA 1987) provides a fall-back position should information not be forthcoming.

Assess Crown agencies

While councils have an important role in the protection of wāhi tapu, several Crown agencies also have statutory responsibilities, including the Department of Conservation, the Historic Places Trust, the Ministry for Culture and Heritage, and potentially the Parliamentary Commissioner for the Environment. The Other Government Agencies index (Index 3) would be completed to determine the extent to which the Crown and its agents protect significant sites.

As with councils above, we would expect Crown agencies to openly provide information requested unless there were good reason for withholding, however the *Official Information Act* (1982) might be used to leverage information.

Tangata whenua

Another part of the environmental picture is the extent to which tangata whenua contribute to the protection of wāhi tapu (Index 2). While it can be safely taken as a given that tangata whenua seek the protection of their ancestral sites, circumstances including resourcing and capacity issues influence the extent to which this happens.

When developing Index 2, it was anticipated that tangata whenua would want to assess their own performance in relation to the protection of their sites. It was not anticipated that councils would evaluate the performance of tangata whenua for several reasons: it is anticipated that there would be reluctance by council staff to engage in such an evaluation: it is possible that such an investigation would meet resistance from tangata whenua; and there is no statutory basis for council insisting on this.

That said, some iwi/hapū have published planning documents, and councils can easily evaluate these for the extent to which they might help protect sites. Where relationships are strong between iwi and a council the iwi may be open to undertaking a joint investigation. It is hoped that many tangata whenua organisations will utilize the PUCM kete, in which case it may be that local iwi have already completed the Wāhi Tapu kete, and (again depending upon the quality of the relationship) council may be granted access to iwi findings.

Council might engage and resource local iwi to undertake the evaluation on council's behalf thereby strengthening relationships and building iwi capacity. Examples of how this might take place include council seconding planning staff to iwi organisation to undertake the investigation, employing and training iwi members to undertake the investigation within council, or where tangata whenua have the skills contracting the iwi to undertake the work on council's behalf.

A regional council would, of course, have multiple tangata whenua organisations within its region with which to deal.

Further considerations

Thus far our wāhi tapu example for single outcome evaluation of the kete was with respect to regional councils. We now consider briefly the wāhi tapu example in relation to district councils and iwi organisations.

A district council concerned with identifying whether the high level outcome relating to wāhi tapu is being achieved might follow a similar process to that described above for regional councils. They probably would not, however, evaluate other district councils, although there would likely be lessons to be learnt from being familiar with the

approaches of neighbouring councils, and this would be in line with the Acts intention that councils consider cross-boundary issues.

An iwi or hapū organisation might have different motivations for using our kaupapa Māori framework. The methods would, however, be similar to those used by councils. As with councils, iwi/hapū may have multiple local or regional councils within its rohe, this may make the task of completing the kete prohibitive. Options that might assist include iwi organisations completing the kete in stages, say council by council, or seeking council or other external resourcing and assistance.

Again, where councils and iwi are both completing the kete there are efficiencies to be gained as both organisations are undertaking the work anyway and asking the same questions, opening the door to a combined investigation. We encourage this and make the point that such an approach has potential spin-off benefits including a providing a better understanding of each other's practices, values and perspectives, and thereby strengthening iwi – council relationships.

7.2.2 Purpose-Specific Uses

Rather than using the framework to evaluate whether the overarching outcomes articulated within the three kete are being achieved some organisations will use it for specific reasons. These include evaluating a council plan to assess the quality of its Māori provisions, and undertaking evaluation of the physical condition of those features to which the kete relate. Some such purpose-specific uses are, by iwi:

- evaluating council plans, policies and practices and testing whether these reflect tikanga Māori, and Māori environmental values and goals;
- evaluating the plans, policies and practices of other relevant Crown agencies;
- supporting iwi/hapū arguments for improvements to unsatisfactory plans, policies and practices;
- evaluating their own plans, policies and practices;
- helping monitor the state of the environment within tribal rohe;
- investigating to what extent councils, Crown agencies, tangata whenua, and the public have contributed to the state of the environment;
- identifying and developing outcomes, either for their own purposes or in relation to statutory processes; and,
- assisting tangata whenua in identifying and developing indicators, either for their own purposes or in relation to statutory processes.

And by councils:

- evaluating council policies and practices in order to better understand and provide for mātauranga Māori and kaitiakitanga, thereby helping to build bridges of understanding;
- monitoring the state of significant Māori sites (either individually or collectively) within a councils' geographic jurisdiction according to Māori environmental perspectives;
- monitoring the state of the mauri of district or regional waterways according to Māori environmental perspectives;
- assessing existing and new plan quality, effectiveness, and integrity in terms of tikanga Māori.

For most of the above purposes a subset of indicators from a single kete, or from all the kete would be selected and used. Accordingly, only those sections of the worksheets relevant to the particular enquiry would be completed.

As stated elsewhere, each of these applications would benefit from simultaneous completion of the indicator investigation by tangata whenua and councils. This is the case for at least two reasons: iwi might be asking questions of council in order to complete the indicator exercise, thereby requiring council staff to expend energy that could contribute to both an iwi and council investigation; and any variations in the respective conclusions drawn by iwi and councils might in themselves be of interest – potentially providing clarification of those areas in which iwi and council are talking past each other.

7.2.3 Evaluation of Change-Over-Time

While it is useful to ascertain plan quality and to evaluate the state of the environment, in order to identify the extent to which the overarching outcomes are being achieved, there is the need also to assess change-over-time. This is an important anticipated use for our framework, and necessary for gaining the long-term view needed to effectively determine whether high-level outcomes articulated in the three kete are being achieved.

Some of the measures have a temporal component in that they enquire into actions or activities that have taken place over time. However, in order to ascertain whether progress is being made in relation to the overarching outcomes it is intended that users will use the framework repeatedly at appropriate intervals.

The duration and frequency for which the framework should be used depends upon the purpose for which it is being used. For example, if being used to evaluate the planning instruments of a particular council, the specific elements of the various kete that relate to plan evaluation would be used only when a new plan was produced or relevant changes made to existing plans. In contrast, if being used for “state of the environment” monitoring, relevant sections of the framework might be used regularly – possibly annually.

Tohu Māori, like the body of knowledge that is mātauranga Māori, is developed by a group and tested over a long period of residing in a particular location. Observation about the environment over time allows for the identification of cycles and processes that may be difficult to see in an environmental snapshot.

7.3 Interpreting Worksheet Data

In the above sections we have discussed ways in which the kete can be used to collect information required to answer particular environmental “questions” relating to Māori values. Whatever the application of our kete, filling in the worksheets generates a lot of data. In order to make sense of data, it is necessary to store then interrogate them. This is the process of turning data into knowledge.

For some purposes the essential information required might be the response to a single indicator, or a single measure. For example, while it can be argued that high level Plan issues and objectives acknowledge the need to protect wāhi tapu, there are no rules or other methods that can be demonstrated to offer effective protection. This is an important finding on its own.

However, in order to approach the evaluation of whether the kete outcomes are being achieved, particularly beyond the jurisdiction of a single council, it is necessary to aggregate the results of each worksheet so that the wider view can be achieved. We now turn to the issue of how to manage and interpret the large amount of information that might be generated by use of our kete.

7.3.1 Technical Solutions – Data Processing and Querying

While information gathered from a small number of uses of the kete can be adequately interpreted “manually” it is anticipated that over time information gathered from across the country might be collected together and interpreted at different levels -- local, regional, and national.

Examples of the interpretation and graphic representation of responses to the indicators are provided in the following Chapter 8, which describes the trialling carried out and our interpretation of the results of four trials.

Currently, information gathered in the worksheets is analysed in that form, or it is transferred manually to an excel spreadsheet for evaluation purposes and representation, for example the generation of graphs. Excel allows data to be aggregated, so that performance scores can be determined for measures, indicators, indices, and even for kete in relation to each outcome.

As an example, we consider here the Mauri of Waterways kete. The maximum score a council could obtain regarding its plan provisions relating to mauri of waterways is 20 (4 measures with a maximum score of 5). For its actions in relation to the mauri of waterways the maximum score is also 20. There is another possible 5 points for the respondent’s perception as to whether the council actively protects mauri, giving a maximum score of 45.

Results are presented in either text, tabular, or graphic form. Later in this section, we discuss issues associated with the quantification of non-numeric information.

A database

In order to allow effective data management there is a need for a simple relational database as a method for entering, storing, and managing information gathered. An Access database or similar will be adequate, but given the intention that these tools be easily accessible to iwi and hapū an open source database would be preferable.

In order to get a glimpse of the benefit of such a collection of information, readers are directed to our document entitled: *Māori Provisions In Plans* (Kennedy and Jefferies, 2008). Using the Document Map feature in Microsoft Word, users are able to navigate best practice examples from a range of district and regional plans and policy documents, selecting Issues, Objectives, Policies, Outcomes, Indicators, and other plan components. Similarly, the report entitled *Kaupapa Māori Framework and Literature Review of Key Environmental Principles* (Kennedy and Jefferies, 2005a) provides a form of searchable database of published descriptions, definitions, and discussions about environmentally relevant tikanga.

A database allows for the interrogation of data, and for queries to be run between information from different fields or between datasets, for example: Which are the local authorities with strong wāhi tapu-related plan provisions where the condition of wāhi tapu has deteriorated over a particular period?

This sort of analysis is possible where all relevant data is held in an appropriately configured spreadsheet, but significantly more difficult when having to either capture information from hard copies or from electronic MS Word documents. This matter is taken up in the section on future work in Chapter 9.

Issues with translating qualitative statements into numeric values

Initially, it was intended that the worksheet collect only qualitative information, so as to avoid the abstraction of responses that potentially occurs during the quantification of value statements. However, in order for the framework to be used to evaluate change-over-time or to assess the relative quality of different planning instruments, it was deemed necessary to derive numeric values. An example of a measure and associated levels was provided previously in Table 7.4.

There is an inherent risk associated with the abstraction that occurs when assigning numeric value to subjective values. This issue has been considered at length in the social sciences (Sayer, 1992). This problem is compounded in our case, as we attempt to identify and describe levels of adequacy in relation to many different issues being assessed within the three kete.

The quantification of information that occurs in the worksheet takes place in relation to measures via their associated levels. As explained earlier, levels present a hierarchy of statements reflecting quality of conditions or responses in relation to the particular issue that the measure deals with. The levels are accorded scores of between one and (up to) five, which are recorded.

Accordingly, the analyses that we propose involves converting qualitative statements to numeric values, then aggregating these values in order to draw conclusions that will answer the questions inherent in indicators, and ultimately to determine whether outcomes are being achieved.

As we have opted to quantify responses we are aware of the need to employ caution in the manner to which results are interpreted. For example, caution must be exercised where the quality of the planning instruments of one council are compared with those of another, particularly where these are assessed by different users. For this reason we have taken the following measures intended to assist in achieving consistency:

- providing instructions to users regarding the intention of the measures in the worksheet and the manner in which these were worded;
- explicitly declaring the criteria by which the quality levels in the worksheets were determined;
- providing the supplementary document *Māori Provisions In Plans*, in order that all users can assess their own plans against the same best practice examples, and;
- providing a notes and comments field in the worksheets in which users are able to expand upon the level selected.

The potential for distortion increases where the individual numeric values returned are correlated. For example, it is one thing to arrive at a single value that reflects the quality of a council plan as it relates to wāhi tapu, but further abstraction occurs when all plan-related numeric values are used to arrive at an overall plan score. That is not to say that there is no merit in determining an overall plan score, but caution is required regarding what such a score means. Similarly, when scores for multiple plans are summed and averaged.

7.3.2 GIS: Processing and Presenting Information

Geographic Information Systems (GIS) offer a powerful means of observing, measuring, and representing natural and cultural environments. GIS enables the manage analysis, and representation of information in spatial form. Increasingly, it is being used to map and represent abstract information, including, cultural values and indigenous knowledge systems (like mātauranga Māori), and intangible or spiritual values. GIS are also effective for investigating and modelling change-over-time and the processes that are behind such change.

Arguably, every piece of information has a spatial component; it relates to a particular location, or, at the very least once it is recorded, it resides at some location. Accordingly, many of the data returned by completing the worksheets can be mapped and spatially analysed. Most GIS have spreadsheet / database connectivity, allowing the type of data querying described above.

Uses of GIS

Specific ways in which GIS might be applied to information obtained from using our framework include:

- geographically representing mātauranga Māori and cultural value, including intangible values (see Fig 7.1 below);
- mapping Outcomes and Indicators;
- geographically representing Māori provisions in council plans;
- identifying and addressing cross-boundary issues for Māori;
- demonstrating the results for Māori of council environmental performance;
- mapping conflict between consent application or planning proposals and tikanga Māori;
- graphically representing findings for PUCM indicators across multiple councils or rohe;
- indicating the location, distribution, and extent of sites or areas according to indicator information;
- mapping Jurisdiction - representing the boundaries of councils in relation to those of hapū or iwi (Figure 7.2); and
- mapping promises made to Māori.

The rationale for, and application of, GIS is expanded upon in our report entitled *Mapping Māori Outcomes and Indicators* (Kennedy, 2008a – in progress), and readers are directed there for a fuller discussion on the use of GIS in PUCM Kaupapa Māori research.

7.3.3 Reporting

The types of evaluation discussed above are not undertaken for the sake of creating information, but for communicating findings and ultimately effecting change. The data analysis methods above are intended to feed into council, iwi, or Crown agency reports. Reports will vary from being a simple copy of a completed worksheet with a cover page, to user-generated documents containing information extracted from one or more worksheets, graphs, tables, or maps as described in this section, depending on the purpose of the report.

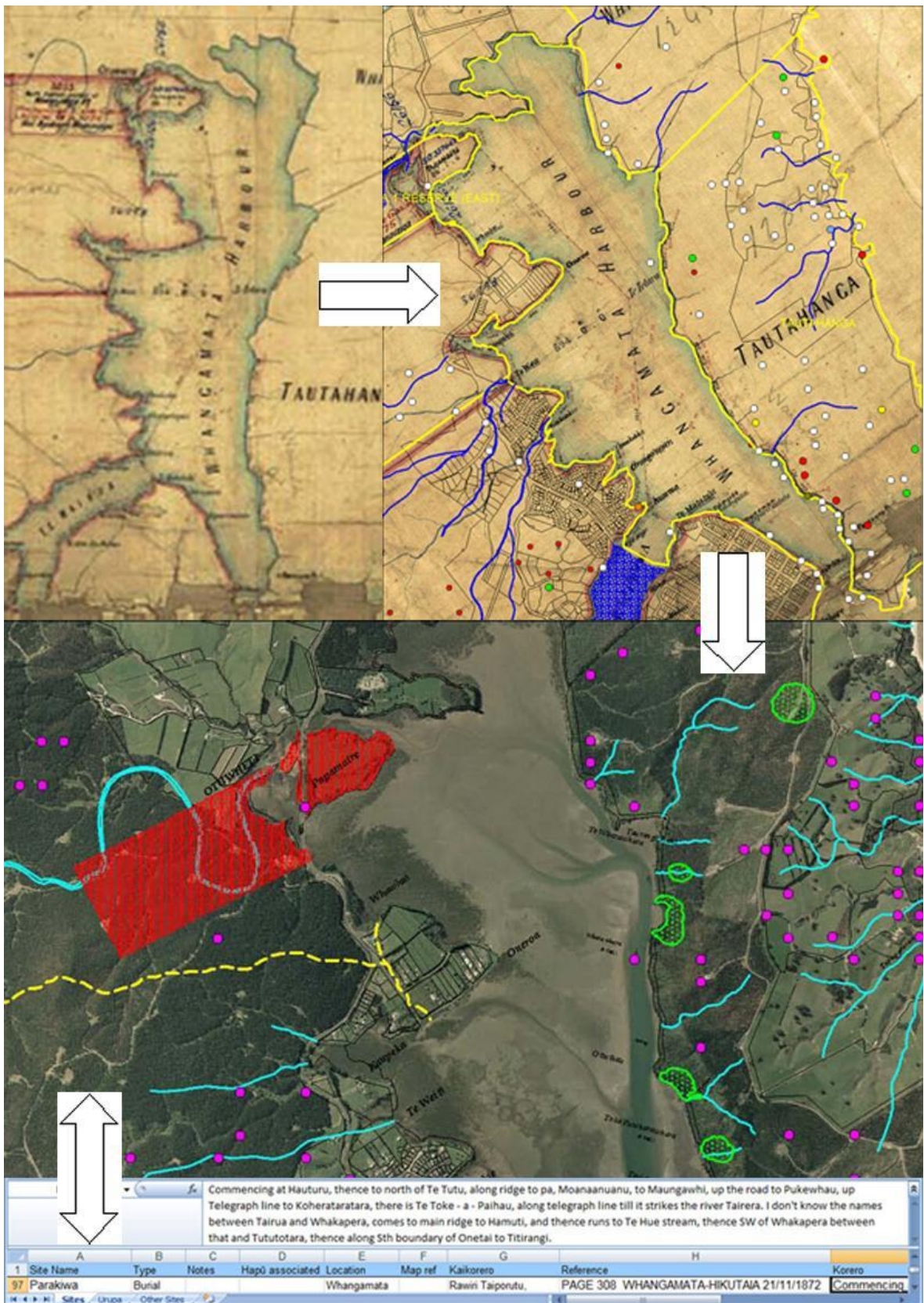


Figure 7.1. Extraction of mātauranga from early survey plans into GIS

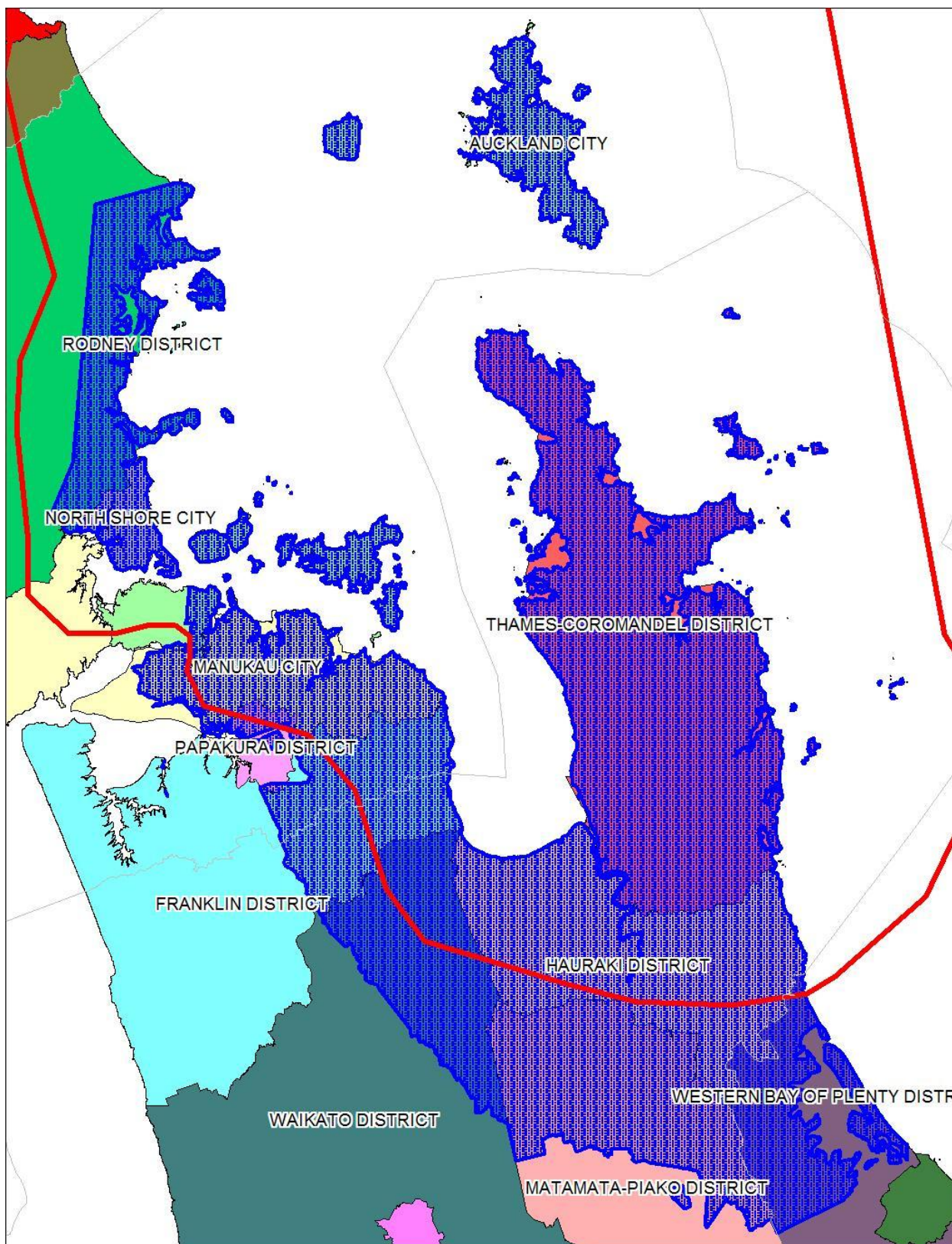


Figure 7.2. The use of GIS to represent multiple spatial datasets. The map illustrates the relative extents of TLA and iwi rohe boundaries (Marutuahu Rohe dark blue) and the Hauraki Gulf Marine Park (Red line). (Source: Mapping Māori Outcomes and Indicators).

The type and content of a report will be determined by the purpose for which the framework/kete was used. Some likely uses were described in Section 7.2. For councils and Crown agencies, some of these uses relate to statutory obligations and this will determine the form and content of reports produced.

The environment in which iwi organisations operate is increasingly demanding in terms of monitoring and reporting, transparency and accountability standards to tribal members. Such obligations are sometimes imposed on Māori organisations by external agents, for example requirements for receiving fisheries entitlements of claims settlements. As Māori seek to survive and remain relevant in the 21st century, iwi and hapū organisations increasingly have to step up their performance.

Our PUCM Kaupapa Māori environmental outcomes and indicators framework provides a series of methods by which Māori and councils alike can evaluate their plans and performance relating to several important tikanga. Importantly, it provides the tools with which they can demonstrate findings using empirical evidence, but in a manner that is culturally sensitive.

7.4 Summary

In Chapter 7, we considered the methods by which the PUCM kaupapa Māori framework is intended to be used by councils, iwi and Crown agencies. We discussed the make-up of the kete, including introductory notes, worksheets, guides for use, and supplementary documents. The component for collecting information by users is the worksheet, which contains a hierarchy of outcomes, indices, indicators, measures, and levels.

Indices, indicators, and measures provide a hierarchy of questions and are the means for evaluating the single high level tikanga-specific outcome articulated within a kete. *Indices* present a line of enquiry the information for which is provided by a combination of similarly focused indicators. *Indicators* in effect present key questions, for which *measures* are used to provide answers.

The kete also includes two supplementary documents, created to assist users of the framework: one provides examples of high quality Māori provisions in plans; the other a literature review pulling together important published material on environmentally significant tikanga. They provide not only assistance to users, but also a degree of consistency in the way users interpret the contents of the kete, and the manner in which they assess their own planning documents against the descriptions and criteria provided.

The means by which users can analyse and report on worksheet findings was explained. While there are dangers associated with the abstraction of information, particularly when it is reduced to numeric values, we have taken a range of measures to ensure that the integrity of information gathered is not compromised.

In order for users to make sense of a wide range of information, we described various data management and analysis methods, including the use of spreadsheets, databases, and GIS. These technologies provide simple and widely accessible methods for interpreting, presenting, and reporting on the information returned by the worksheets.

There is a wide range of uses anticipated for the framework, and particular applications can be developed according to users' requirements. These include: high level cultural outcome assessment; evaluation of individual planning instruments or comparison of plans; evaluation of the performance of multiple councils in relation to Māori values; and on-the-ground assessment of the state of the environment from a Māori perspective.

In the following Chapter on trialling our framework, we provide several examples of the results obtained by using the methods described in Chapter 7.

Ngä Mahi ä Iwi, ä Kaunihera

Trialling the Kete with Iwi and Councils

In this chapter we report on trialling of the kete that was undertaken by staff in selected iwi and councils. First, we consider the trialling process and the rationale behind it. Second, the trials are outlined in terms of the suitability of outcomes and effectiveness of indicators. Third, we review the framework and methodology, and present the more significant findings.

8.1 The Trialling Process

The trialling process was intended to ensure that our kaupapa Mäori framework and methodology worked for end users. We were in effect assessing three things: the indicators; the adequacy of the outcomes these are intended to evaluate; and the kaupapa Mäori framework and methodology. Important questions relating to the framework were the extent to which it effectively structures outcomes and indicators, and the extent to which it is consistent with tikanga Mäori.

As we approached trialling the kete and its indicators we were mindful of the following practical questions:

- How many hours/days would trialling one kete take?
- How would we physically set about trialling?
- What resources would be required for each trial?

These considerations were (and remain) important for not only effectively trialling the kete, but also as factors in whether iwi and councils would ultimately adopt it. For these questions we had preconceived expectations. For example, we anticipated that trialling would involve several activities, including:

- undertaking a desktop exercise, to evaluate statutory and other planning documents;
- informally asking questions of council and other agency staff and iwi members;
- lodging official information requests with agencies;
- searching through agency, public, or iwi records;
- conducting interviews and engaging in correspondence with key agency staff and iwi members;
- undertaking physical inspections of, and information gathering for, significant places; and
- completing an evaluation of findings and write-up.

Based on these expected activities we were able to anticipate the level of resourcing each iwi would require. Limited resourcing influenced our decisions regarding the extent of

iwi participation in trialling. The effects of this were twofold: first it was necessary to reduce the number of iwi from four to two. And second, we decided to omit trialling of the final index in the Wāhi Tapu Kete, this being the series of indicators relating to on-the-ground inspection. While the indicators dealing with physical condition of sites represent only a quarter of the total number of indicators within the Wāhi Tapu kete, all of the indicators are used for each site inspected. Given that a sample of at least five sites was deemed to be required in order to determine the effectiveness of the indicators for different site types. For these reasons, completing them to a useful level was expected to take longer than completing all the other indicators combined.

The decision not to trial the physical inspection indices was also influenced by the fact that these indicators were similar to Māori and indigenous indicators that had been successfully trialled and used elsewhere by others. In particular, we had investigated the Māori indicators work undertaken by Gail Tipa and Laurel Teirney relating to mauri waterways (Tipa and Teirney, 2003; Tipa and Teirney, 2006), work conducted by Garth Harmsworth (Harmsworth, 2002) on wetlands, and work on indigenous cultural sites by the Australian Department of the Environment (Pearson, 1998). It was considered reasonably likely that the application of those techniques elsewhere provided a satisfactory indication of how they would perform in our case study trials.

Having previously completed a pilot trial of one of the kete, we were able to advise participants as to the likely time required for the desk-based component of the trialling process. In arriving at estimates for trialling time we were mindful that our trialling had been undertaken with the benefit of familiarity with the organisations and plans being evaluated. In addition to efficiencies resulting from familiarity with subject organisations, our -test trials|| had been undertaken without the need to seek additional information from councils, either via informal requests or (where these fail) formal requests under official information legislation. Any such information request would extend the time required to complete trialling, possibly by several weeks.

8.1.1 The Trial Groups

In Chapter 5, we explained how we went about choosing the iwi and council groups that participated in trialling the kete. We described there the factors considered important, including that iwi and council trialists each had different circumstances. For councils, this included, for example, high versus low capacity, rural versus urban, and regional versus district. For iwi, it included, for example, Treaty claims settled versus no settlement, rural versus urban, and high development pressure versus low.

It so happened that during much of the development work for the framework and methodology staff members from the environmental units of two iwi were involved, and these iwi agreed to trial the completed kete, as explained in Chapter 5. They were Ngāti Maru of Hauraki and Ngāti Awa of Whakatane.

A policy planner at Environment Bay of Plenty (EBOP) had been a member of our Māori experts panel, and his council later agreed to trialling the kete. As well, a prior relationship with Matamata-Piako District Council, explained in Chapter 5, led to that council agreeing to trial the kete.

Thus, we had two iwi and two councils to trial the kete. This fulfilled our hope that each participating iwi and council would have a shared boundary (Chapter 5).

Each iwi selected a single kete to trial, Ngāti Maru choosing the Mana Whenua kete and Ngāti Awa Wāhi Tapu kete. The third series, Mauri of Waterways, was trialled by PUCM researcher Nathan Kennedy, who is also a long-time environment officer for his iwi Ngāti Whanaunga. In completing the third trial, Nathan sought to set aside his familiarity with the PUCM framework and respond as he otherwise would in his capacity as an iwi environment officer. It is acknowledged that this is not ideal, but our limited resources left us little option.

Our desire in terms of related iwi and councils each trialling the framework was partially fulfilled when Ngāti Awa chose to use the framework to evaluate EBOP and its plans. However, Ngāti Maru opted to evaluate Thames Coromandel District Council (TCDC) rather than MMPDC, on the basis that MMPDC were already held in high esteem in terms of its plan provisions and attitude toward tangata whenua, while TCDC was considered wanting in these areas.

8.1.2 The Questions asked of Trial Groups

In order for us to have trial groups focus on the suitability and effectiveness of the outcomes and indicators, and indeed the framework itself, participants were asked to consider the following questions:

- Are the single overarching outcomes relevant or adequate, if not what outcomes would participants change or add?
- Are there sufficient indicators to give us a clear picture about what's happening - are there too many – or too few?
- Are indicators presented in a useful way, and are the explanations given easy to understand and useful?
- How might your group use the indicators; in some particular combination, or using a complete tikanga series?
- We need to be confident that the indicators are actually telling us what we think they are telling us. Do you have any thoughts in this regard?
- Have we worded the indicators / measures so these are clear and understandable?
- Are the draft indicators likely to provide us with enough information to assess whether an outcome is being achieved, or progress toward achieving it, and have we used sufficient indicators to adequately reduce doubt in this respect?
- Have we considered all relevant factors?
- If not, what additional types of questions (measures or indicators) do you think we need to ask?

These questions are highlighted in the discussion of trial results in Section 8.2 below.

In order for trialists to easily provide feedback for each indicator, review mechanisms were built into the worksheet. While each group was asked to trial one kete from start to finish (less the physical characteristics indicators), it was always anticipated that iwi and councils might selectively use subsets of the indicators for particular purposes (see Chapter 7).

8.2 Trial Results

By 30 February 2009, we had results from two iwi (one each for two of the three tikanga-based indicator kete developed), and a third set of results from an iwi perspective

obtained by undertaking trialling of the third kete ourselves. We also had results from two councils that had trialled our framework and methodology.

We describe below the results of the trialling undertaken, separating them into: suitability of the outcomes; effectiveness of the indicators developed; and the effectiveness of the Kaupapa Māori framework itself. In each instance we consider the responses of iwi and councils trialists.

8.2.1 Suitability of the Outcomes

As reported in Chapters 6 and 7, the structure employed for the Kaupapa Māori framework and methodology takes key kaupapa and tikanga relating to them that are important in terms of environmental resource management, and for each tikanga identifies a single outcome. This approach varies from that of most councils, as reflected in many first-generation LTCCPs, which generally include several outcomes for each identified issue, and then provide a relatively small number of indicators for each outcome. In our approach for each of the PUCM tikanga-specific kete a single high-level outcome is adopted. As previously reported, the outcomes adopted for the first three kete are:

- Mana whenua is appropriately respected;
- Mauri of all waterways are in optimum health;
- Wāhi tapu are protected.

As discussed in Chapter 6, these high level outcomes are considered to effectively capture lower level ones. This is a product of their reflecting fundamental tikanga – which are understood themselves to represent absolutes or fundamental bottom lines. In this sense, our outcomes differ from the community outcomes in LTCCPs, which are subject or activity-specific. Furthermore, what we have regularly seen expressed as outcomes in LTCCP could often, we suggest, more effectively be expressed as indicators of higher level environmental aspirations.

Trialists were asked whether they considered the single overarching outcomes to be relevant and adequate, and if not what outcomes they would change or add. While each iwi and council only completed trialling for one of the three kete, some had previously evaluated all three during initial workshops, where both the framework structure and wording of each of the outcomes and indicators had been considered.

While no structural changes or changes to the wording of outcomes had been proposed, we had made some modifications to the wording of several indicators as a result of comments or suggestions from those workshops. These had been referred back to Ngāti Maru and Ngāti Awa for confirmation prior to final trialling.

Each of the trialling iwi and councils confirmed that they considered the outcomes used to be both relevant and appropriate in terms of the ability to address plan provisions and the activities of their organisation in terms of the tikanga (mana whenua, mauri of waterways, and wāhi tapu). Accordingly we remain confident that the approach we adopted was the correct one.

8.2.2 Effectiveness of the Indicators

While it is difficult to make a judgement call with only limited trialling having been completed, we believe that the range of indicators selected for each kete realistically

provides a useful evaluation as to whether or not, and to what extent, these outcomes are being achieved.

As with the outcomes described above, each of the indicators (and their associated “measures” developed for the three draft kete were individually considered at workshops with Ngāti Maru and Ngāti Awa. In trialling the Kaupapa Māori framework there were several specific questions the research team set out to answer. Those relating specifically to indicators were listed earlier in Section 8.1.

Although there is overlap between some of the questions, we consider the findings in relation to each below.

Q. Are there sufficient indicators to give us a clear picture about what’s happening - are there too many – or too few?

The rationale behind this question was not only concern over adequacy of the combined indicators, but also in practical terms as to whether there was an appropriate number of indicators. We were mindful of the tendency, particularly in relation to LTCCP Community Indicators, to settle for a small number of indicators per outcome, generally between 1 and 4. This being the case, we were aware there may be a perception that the number of indicators (combined with measures) in our framework was excessive.

Both iwi trialists confirmed that the range and number of indicators was appropriate, and that these collectively provided a clear picture of what was happening in relation to the outcome of interest.

Q. Are the indicators presented in a useful way, and are the explanations given easy to understand and useful?

As previously explained, the framework adopts a structure of kaupapa – tikanga – outcome – indices – indicators – and measures. This question was intended to obtain a user’s opinion on the way these are presented and grouped. For example, the Mana Whenua kete includes four indices:

- Index 1: Extent to which local authorities actively protect wāhi tapu.*
- Index 2: Extent to which tangata whenua actively protect wāhi tapu.*
- Index 3: Extent to which other government agencies actively protect wāhi tapu.*
- Index 4: Extent to which information and knowledge of wāhi tapu is effectively managed*
- Index 5: Extent to which wāhi tapu are identified and protected*

Each index in turn includes a number of indicators intended to return a range of information that together will assess the enquiry of that particular index.

Both iwi trialists said that the framework structure was useful in the way it presented high level indices which grouped like indicators, which in turn include multiple measures. Both also confirmed that in their opinion the descriptions and explanations provided – particularly those defining the levels of each measure - were appropriate.

Q. How might your group use the indicator Kete, in some particular combination, or using a complete tikanga series?

This question recognises that some groups will use the framework and its kete in total in an aim to determine whether, for their own areas, the outcomes are being achieved. That is whether mana whenua is appropriately respected, whether the mauri of all waterways are in optimum health, and whether wāhi tapu are protected.

The combined indicators of the three kete are intended to answer these questions and to tell us not only whether this is the case, but also how and to some extent why that is the case. Over time, repeated use of the indicators will also identify trends in relation to the three outcomes. This potential is considered further in Chapter 9.

It is our expectation that others will use a subset of indicators from one or more of the kete for specific purposes; for example, by combining each of the plan evaluation indices from the three kete, in order to undertake a comprehensive plan evaluation. Or by using only the Wāhi Tapu physical characteristics Index to undertake an assessment of significant sites within the rohe.

Both iwi trialists indicated that they anticipated using the framework both in its entirety (as described in the preceding paragraphs) and selectively for different purposes.

Ngāti Awa suggested that they anticipated incorporating the combined iwi related indicators from each of the three kete (and if possible from those still to be trialled) as part of their ongoing Environment Unit performance assessment. They also said that they would similarly combine the council plan and performance indicators as part of their periodic appraisal of consent authorities.

Ngāti Maru saw particular merit in combining the plan evaluation indicators from each of the kete, in order to undertake assessments and comparison of the numerous district and regional plans that operate within their rohe (see Chapter 5, Section 1.3 for a description of the Ngāti Maru rohe).

Q. We need to be confident that the indicators are actually telling us what we think they are telling us – do you have any thoughts in this regard?

One trialist was satisfied that both individually and combined the intention and results of the indicators were clear. The other trialist expressed a view that in interpreting the responses we need to take into account the set of circumstances of responding iwi. Of particular concern was that some will be in the position of having completed Treaty settlements, while others might not. The practical implications of this are that some will be well-resourced, and also have specific protections through their settlement legislation, while others will not have these advantages. The suggestion is that factors such as Treaty claims settlement will significantly influence the indicator results – and that this must be both declared and taken into account when interpreting results.

We had been mindful of these dynamics. Indeed several of our indicators specifically refer to Treaty settlements and associated legislation. However, the issue is a wider one relating to capacity and the extent to which a particular group (either iwi or council) is resourced. This might indeed have a bearing upon responses to many of the indicator questions.

This dynamic is also acknowledged within the indicators. However, we have taken on board the observation of our trialist and believe that it might best be addressed by requesting that those using the framework make an initial statement that briefly declares

their circumstances, such as the number of ratepayers or tribal members, whether they have a treaty settlement, and the number of volunteers or employees working for the organisation.

This information is not intended to detract from the responses, but it can be taken into consideration if the responses of a particular group are to be assessed against those of others, or responses combined or aggregated.

Q. Have we worded the indicators / measures so these are clear and understandable?

Some suggestions were made at the initial workshops for modifications to the wording of indicators, and these were largely in the form of minor changes to clarify the intention of the indicators. Each suggestion made was acted on and any changes referred back to both iwi for confirmation prior to final trialling.

It was therefore of little surprise to the researchers that minimal modifications were suggested given earlier reviews for over a year, including peer review by the wider PUCM team, which includes experienced planning practitioners and scholars, some of whom are well versed in environmental indicators.

One of the trialists brought to our attention the likelihood that our user's level of understanding is likely to be broad, with some very familiar and others not so familiar with the processes and peculiarities of legislation and planning instruments. For this reason we were encouraged not to take a high level of understanding for granted, and accordingly to avoid wording indicators in a manner that renders them difficult to interpret.

We had been mindful of this, but have made several modifications where particular examples were brought to our attention.

We are also aware, however, that a person undertaking a role as an iwi environmental officer or council planner should possess a reasonable understanding of such processes and instruments, and the need for our indicators to effectively refer to these. In other words it is not practical to word the indicators to cater for someone who has no familiarity with statutory processes and instruments. Also, the companion documents provided – particularly *Māori Provisions in Plans* (Kennedy and Jefferies, 2008) - are intended to assist in those circumstances.

Q. Are the draft indicators likely to provide us with enough information to assess whether an outcome is being achieved, or progress toward achieving it and have we used sufficient indicators to adequately reduce doubt in this respect?

Generally, both iwi trialists indicated satisfaction with the number and range of indicators used in their respective kete. Ngāti Awa suggested several wāhi tapu related queries. We would see these as being potential measures rather than indicators. These include:

- incidence of return of artefacts into tangata whenua custodianship;
- the extent to which consent authorities invest in their heritage protection authority responsibilities; and
- number of consent orders and heritage orders they pursue and manage.

These are consistent with existing measures, and likely complementary, and we are currently investigating their inclusion.

Ngāti Awa made several other recommendations for either indicators or measures, but these related to tikanga other than the one reflected in the kete they were trialling (wāhi tapu). Each of the recommended queries have already been included in relevant kete, with the exception of some that we would expect to include in future proposed kete based on the tikanga Kaitiakitanga. This has been brought to the trialist's attention. Similarly, council trialists confirmed the effectiveness of the indicators selected. One trialist observed that while all of the indicators were valuable, that their council was inclined to be selective in which they would adopt. For example, while acknowledging the value of the tangata whenua indicators, he anticipated that Māori would use these rather than his council. We return to this theme below at 8.3.1. It is hoped the work begun with the first batch of outcomes and indicators trialled here will carry on into the future towards developing a more comprehensive range of tools across more of the Kaupapa Māori Framework.

Ideal versus actual responses

Earlier in this Chapter we explained that the Worksheet for each kete included columns for indicating the user's ideal and actual situations (see Table 7.4). For each indicator measure, we provided a range of definitions that reflect various levels from an ideal situation (Level 1) through to the least desirable situation (usually level 5 although some measures have fewer levels).

Trialists were asked to indicate whether they agreed with our definitions, and also whether for their own group, some alternative arrangement might be "ideal."

All trialists commented favourably on the provision of ideal versus actual response boxes. None of them selected any alternative ideal position. However, several of the comments provided gave us cause to consider rewording some definitions.

Comments and Notes Fields

The comments from each of the trials proved to be valuable in terms of providing the research team with a greater understanding of trialists' perspectives, and particularly the relevance of their unique circumstances. This latter consideration is important given that a relevant consideration with indicator development generally is the extent to which indicators are transferable to different locations and different circumstances – either of iwi or councils.

For some of the indicators, trialists commented that the definitions we had arrived at as being ideal were fine, but that these "set the bar too low" in terms of what we should be demanding of councils. For example, one of the measures reads: "*Extent to which Tangata whenua proactively assert mana whenua within legislative instruments. We had refined an ideal as: Iwi continuously and as a matter of policy asserts mana whenua via a large number of the available legislative instruments.*"

The trialist indicated that this reflected their own situation, but commented "*So the ideal is that we don't need to assert mana whenua because things actually happen – that is ideal for us as Ngāti Maru – others might say we have to keep asserting to uphold mana.*"

A similar comment related to the measure Tangata whenua respond to encroachments by other iwi/hapū. The trialist commented that: *“The ideal is actually that relationships, respect, and tikanga would mean no encroachments.”*

The point being made is that we should not need to assert mana whenua because it should not be challenged in the first place. This is of course a desirable situation, and the argument being put forward by the iwi is that we should adjust our expectations – and the definition of ideal accordingly. This is about how high we set the bar, and we received several similar responses. There is logic to this argument, in that iwi should maintain high expectations in relation to recognition of tribal mana both by councils and neighbouring iwi. On one level this is also a philosophical issue – whether iwi should assert mana whenua whether or not it is being challenged.

While we agree with this ideal, our experience of iwi participation in environmental resource management processes is that there are regularly disputes between iwi and hapū groups as to which holds mana whenua for a particular place, and in such situations claims are made regarding encroachment in the course of RMA processes.

Based largely on this experience, we had made judgement calls when drafting the indicator (as with each of the indicators) as to the current climate – in this case in terms of recognition of tribal mana whenua. Additionally, each measure needs to be considered in the context of the indicator it is intended to substantiate, and the indicator in turn needs to be considered in the context of the outcome it is intended to assess. In this instance the indicator reads *“Extent To Which Tangata Whenua Assert Mana Whenua; and the Outcome Mana Whenua Is Appropriately Respected.”*

While we agree with the sentiment that ideally iwi should not have any need to assert mana whenua, it remains our position that within the reasonably foreseeable future this will remain a necessity. Accordingly, we have retained the wording of this particular indicator. However, the respondent’s observation was an important one, and motivated us to review the framework to ensure we remained comfortable with the judgement calls we had made as to what is realistically achievable and consequently what we should be defining as ideal.

The non-Māori trialist found the comments and notes fields particularly helpful and used them extensively.

We comment further on work that should be undertaken to fully assess the effectiveness of some indicators in Chapter 9, Future Work and Recommendations.

8.3 Review of Framework and Methodology

The three initial tikanga series of indicators have been developed and trialled and the results of three trials scrutinised, leading to the findings noted above. While, as discussed above, the trialling has given us a greater understanding of the limitation of some indicators when these are considered in isolation, we remain of the view that even these are valid measures in that information returned will become increasingly valuable when used over time or by multiple groups so that multiple findings can be collated.

Overall, then, the trialling results have confirmed the suitability of our Kaupapa Māori framework and methodology, as well as the adequacy of its associated outcomes and indicators. Some modifications were suggested by trialists to wording to do with the

levels against which measures are to be assessed, and ways in which the worksheet might be simplified, particularly for users not previously familiar with Māori plan and policy provisions or with outcomes and indicators. Specific indicators were modified, mainly in response to minor drafting errors requiring minor changes.

8.3.1 Some significant findings

Some significant findings from the four trials were that:

- indicators selected should all be retained – even though some are difficult to “answer” e.g. council track record in protecting mauri;
- some indicators will prove valuable only after multiple responses are compared, for example:
 - multiple assessments by different groups of one organisation
 - multiple responses to the same indicator over time
 - responses by both iwi and council for indicators relating to one or the other
 - responses by a large number of iwi and or councils in order to get a regional or national comparison;
- while the responses to the “levels” gave us the basic information required to answer the questions implicit within the indicators, the greater detail and comments provided were useful as they allowed the individual opinions of the respondent iwi and councils to be expressed;
- a comment in workshops and confirmed following trialling with both iwi and councils was that certain combinations of our indicators can be useful for particular purposes, such as plan evaluation, or assessment of community outcomes and indicators; and
- we need to do more trialling.

Many of our assumptions based on previous findings seemed to have been born out, these include:

- indicators need to be flexible to suit local situations and this can be addressed by having a large range of indicators with an appropriate framework guiding their use;
- councils may be reluctant to evaluate the plans and practices of iwi;
- councils are likely to be selective in which indicators they adopt.

Having considered the results of trialling at length in relation to both the framework and its associated outcomes and indicators, we are convinced as to the effectiveness of the framework as an instrument for evaluating environmental outcomes using particular tikanga as a starting point. This being the case, we intend to make no changes to the framework, or the three initial kete as a result of the first set of trials. However, we are still in discussion with a number of additional iwi and councils with the aim of having them also trial the three kete. For this reason, we remain open to revising our position, including not only the indicators, but even the framework itself should the results from new trials require it.

Accordingly, we are now ready for final presentation to our Māori Expert Peer Review group and Māori Practitioner group for review of our findings and anticipate adoption of our Māori Kaupapa Environmental Outcomes and Indicators Framework and Methodology. Following peer review it is our intention to distribute it more widely as a tool for iwi environmental managers and council planners, and believe it provides an opportunity for improving Māori and local statutory authority relationships.

8.4 Summary

In this chapter we have provided a description of the trialling undertaken by iwi and council staff of our PUCM Kaupapa Māori environmental outcomes and indicators framework and methodology. This description involved first providing an outline of the process developed for trialling process, and then considering the results of the trials.

Trialling involved two iwi, each evaluating a single kete, with the third being trialled by suitably experienced PUCM staff. While we had intended four iwi, each trialling all three kete, this had not been possible mostly due to funding constraints. However, the trialists from the two trialling iwi are amongst the more experienced iwi environmental practitioners in Aotearoa, and provided comprehensive responses and useful comments based on their years of experience. As we had anticipated, the time taken for the iwi trials varied substantially, this being a product of iwi capacity and particularly pressure on staff time.

Iwi trialling results confirmed the effectiveness of the kete from a tangata whenua perspective. Feedback from trialists indicated that the structure of the kete as well as the indicators and measures included in it are appropriate as instruments for assessing whether Māori aspirations relating to environmentally important tikanga are being achieved. Some modifications to individual indicators were suggested, but these were in the nature of grammatical corrections and slight changes in wording to clarify intentions.

A further set of questions was put to trialists about whether, and in what way, they might use the PUCM Kaupapa Māori framework for their own purposes. Both iwi trialists confirmed that they would use the framework in its entirety (i.e. to evaluate whether the tikanga specific environmental outcomes are being achieved), and for various other purposes. These included council plan evaluation, and as a method for assessing their own environment unit activities. In contrast, both council trialists indicated they would use elements of the framework selectively, primarily for plan evaluation (one trialist) and for state of the environment monitoring (the other trialist).

The PUCM Kaupapa Māori framework includes three (so far) tikanga-specific kete of outcomes and indicators and various support documents including use guidelines, a document of examples of Māori provisions in plans, and a tikanga Māori literature review. The framework also incorporates the theoretical model called Ngā Tikanga, and the kaupapa Māori research approach both of which have strongly influenced the structure and content of the final kete. The results and comments from the iwi trials have confirmed for the PUCM researchers that the kaupapa Māori framework and methods will provide effective tools with which iwi to evaluate environmental outcomes within their rohe.

Two councils - Matamata-Piako District Council (MPDC), and Environment Bay of Plenty (EBOP) - have trialled the framework and methodology. Discussions continue with several other councils that have indicated their intention to engage further with the PUCM team, both trialling our work and seeking our input into their Māori indicator development. Being able to show councils that iwi have trialled and approved our Kaupapa Māori Environmental Outcomes and Indicators Framework and Methodology, might go a long way towards encouraging additional councils to engage in trials.

The PUCM Research Programme has responded to a fundamental planning and resource management issue that the vast majority of researchers in New Zealand and internationally have either ignored or failed to effectively respond to – the provision for

indigenous perspectives based on kaupapa Māori at both theoretical and application levels. Initial trials suggest councils, iwi, and other stakeholders see this work as beneficial and we are confident the resulting tools can be used effectively alongside tools based on Western models.

The benefits of comparing data and making sense of it were already obvious after only five trials, two of which related to the same council plan. None of the initial trial results or findings was of great surprise to us as environmental practitioners. But a value of this framework and its methods is that it provides an opportunity for consistent information to be gathered over time and space. The potential value of information gathered is expected to increase if this is collated, processed, and compared over a wider area and longer time-frame. This is one of the future challenges that is considered now in Chapter 9.

Hei Whakamutunga: Toward Utu - The Restoration of Balance

Given strong Māori provisions within local government and environmental resource management legislation in Aotearoa, tangata whenua have a reasonable expectation that Māori values would be accorded due regard in the planning process. PUCM, and other, research over 13 years, has confirmed that participation by Māori is minimal (Rennie, 2000; Jefferies et al., 2002; Joseph and Bennion, 2002; Carnie, 2003; Bachurst et al., 2004; Rennie, 2007). PUCM Phase 1 (1995-1998) on evaluating plan quality showed that while regional and district plans recognised Māori interests there was too little flow through to methods and processes for dealing with them.

As explained in Chapter 1, when evaluating the quality of the implementation of district plans under PUCM Phase 2 (1999-2002), we could not find enough resource consents with Māori participation in them to research. Instead, we had to examine the processes by which councils consulted iwi and hapū over resource consents in attempt to find out why so few of them failed to include any consultation with iwi or consideration of Māori values. As explained in Chapter 3, having identified barriers to better inclusion of Māori in the statutory planning process, we then embarked upon research for PUCM Phase 3 (2003-2009). This focused on developing and testing a kaupapa Māori framework and methodology for identifying important tikanga and associated outcomes and indicators for measuring their achievement in local government planning.

There had by then been recent statutory focus on community outcomes and indicators for four well-beings as a result of the *Local Government Act, 2002* (LGA), including environmental outcomes. This interest on outcomes built on that generated earlier by the *Resource Management Act, 1991* (RMA). With both statutes, the development of Māori-specific outcomes and indicators was anticipated by Government and expected by Māori.

It was therefore timely for us to develop a framework for Māori outcomes and indicators that would serve both to evaluate Māori plan provisions and their implementation, and contribute to nation-wide community (including Māori) outcomes and indicators development.

9.1 Take – Utu – Ea

We think that the lack of participation by Māori in local government planning, and provision for tikanga Māori in RMA decisions reflects a serious imbalance between the recognition of the rights and values of Māori versus those of our Treaty partner. According to the model put forward by respected Māori scholar Sydney Mead (Mead, 2003) this imbalance is the take - the distortion or imbalance that needs to be addressed - whereby utu is required in order to restore balance – ea. This principle was discussed earlier in Chapter 2 under the heading Utu. There it was observed that the popular

translation for utu as revenge is misguided, and that utu in terms of environmental balance is an important principle in Māori environmental management.

The PUCM Kaupapa Māori framework is intended to provide an element of that utu – a series of methods to assist in the restoration of environmental balance including that between recognition and provision for Māori versus non-Māori rights and values within environmental resource management in Aotearoa.

In the sections that follow, we first summarise our kaupapa Māori research approach. Next, we consider development of our outcomes and indicators methodology and its application, and make observations and conclusions from the experience. We then go on to highlight future work that is needed to further test the robustness of our methodology across a variety of iwi and council settings. Finally, we offer some recommendations for action by central and local government and iwi.

9.2 The Kaupapa Māori Research Approach

Our current research has taken place over a period of 5 years and has been concerned with evaluating environmental outcomes for Māori from planning under the RMA (1991) and LGA (2002). It has been conducted as Kaupapa Māori research. This means that it has been conducted in accordance with tikanga Māori, it has been guided by Māori aspirations, and it has included participation by Māori at every stage.

9.2.1 Literature Review

An important component of the research was two major literature reviews: one on environmentally significant tikanga; the other on indigenous (including Māori) outcomes and indicators work. The first review of the kaupapa Māori literature investigated the foundation principles upon which the kaupapa Māori outcomes and indicators framework was to be built. It was also to guide the research is the selection and treatment of the various kaupapa and tikanga on which the three kete we produced were ultimately based. Additionally, many of the indicators within these kete refer to, and assess performance with regard to, tikanga.

The second review into indigenous outcomes and indicators work was important in that it provided a comprehensive picture of what work had been undertaken internationally within our fields of interest. We had several particular fields of enquiry, including: the theoretical models and approaches taken to indigenous indicator projects; and the treatment of traditional indigenous knowledge within those projects. It also considered those fields on Māori outcomes and indicators, again taking account of models and frameworks referred to, the treatment of tikanga, and particularly mātauranga Māori (Māori knowledge and systems of knowing).

Completed in mid-2005 these were, and we believe remain, perhaps the most comprehensive literature reviews of their kind. Because of the large number of sources consulted, and the inclusion of case law and Waitangi Tribunal consideration of tikanga, the kaupapa Māori review is believed to be a significant stand-alone reference. It is currently being updated with a view to publication following positive feedback about its potential as a reference for tikanga Māori.

9.2.2 Participatory and Iterative Research

We were determined that our research be participatory for several reasons, including: Māori-related research has for too long been undertaken by non-Māori; it is for Māori to determine what is significant for them; and outcomes arising from the research should benefit Māori. Participation by Māori was deemed essential at every stage of our research, from design of the research programme, development of a theoretical framework, the creation of outcomes and indicators, and to finally trialling and reviewing them. The nature of participation was explained in detail in Chapter 4, and included: staff in the Māori development firm of KCSM Consultancy Solutions Ltd; staff in the environmental unit of Ngāti Whanaunga; a Māori Peer Review Group, whose members work within government organisations, including councils; and a Māori Practitioners Group of experienced iwi environmentalists and managers. These groups convened periodically to review progress on our research and provide guidance.

The research has therefore been iterative in that at each stage feedback has been sought from our Māori participants and modifications made as a result of that feedback before proceeding to the next stage. That continued until all outcomes and indicators had been trialled to satisfaction of all parties.

9.2.3 Kete Trials by iwi and Councils

While we considered it desirable to have iwi and related trials run at the same time, this was not feasible due to an inability to engage a willing council until a year after the first iwi trial in early 2008. By February 2009 two iwi (Ngāti Maru and Ngāti Awa) and two councils (Environment Bay of Plenty and Matamata-Piako District Council) had completed the trials. The trials resulted in no substantial change to the kete contents, only relatively minor changes of wording and emphasis. Thus, the appropriateness of the outcomes and indicators in the kete were confirmed. While iwi trialists acknowledged they would use the full sets series of indicators, both councils intimated that they would selectively use the indices (series of indicators) while recognising that others might use the full kete.

Other iwi and councils were approached to trial the kete, but priorities and/or capacity prevented them doing so. However, some councils have indicated the prospect of using the framework, including Auckland Regional Council, Environment Waikato and the Hauraki Gulf Forum. We presented our work to numerous councils via several forums, and initial discussions with three councils quickly turned to the potential for us to assist them in the development of their own Māori outcomes and indicators.

9.3 The Kaupapa Māori Framework

As discussed in Chapter 4, the Pressure-State-Response (PSR) framework is increasingly being used as the theoretical basis for developing and evaluating environmental outcomes in Aotearoa – largely driven by the international influence of the OECD and consequent preference for this model by the Ministry for the Environment. However, we maintain that the PSR model does not adequately accommodate Māori (or non-Māori) cultural values and concerns.

After reviewing a range of models and framework we shortlisted three: Ngā Wa, Ngā Atua, and Ngā Tikanga, and chose the latter. This was because it allows for a close examination of key terms and concepts already in wide use in the domain of

environmental management according to tikanga that are widely recognised and adhered to by Maori, and (at a pragmatic level) because it is likely to be the least complex model for both councils and iwi to follow. By utilising a key concept like tapu, the links to key issues, such as wāhi tapu, are more easily made.

Here we encapsulate the main elements of the framework in terms of kete structure, and the outcomes and indicators that filled the kete.

9.3.1 Kete Structure

The final product from trialling our PUCM kaupapa Māori framework is of the three kete, each based on a single tikanga, and a single outcome articulating an ideal in relation to that tikanga. As described in Chapter 6 a three-tier indicator structure has been adopted of indices, indicators, and measures. Collectively, these evaluate whether or not the high-level outcomes are being achieved.

We noted that the main area in which outcomes and indicators are currently being developed in Aotearoa is by councils in relation to LTCCPs (long-term council community plans) under the LGA (2002), and that – in contrast to the approach we have taken – most councils arrive at a relatively large number of community outcomes and a small number of indicators for assessing these. This has given rise to expressions of concern regarding the perceived complexity of our approach. Following trialling we conclude that, contrary to this perception, our structure provides a useful approach to outcome evaluation (Chapter 6). Rather than being complicated, our trialists thought that the multi-level indicator approach is simple to interpret in the manner that it separates evaluation of council, Crown, iwi / Māori, public, and physical characteristics. Trialists offered useful advice relating to the wording of measures and of the levels that are presented in the worksheet and these were then modified in some places.

9.3.2 Outcomes and Indicators

As discussed in Chapter 6, each of kete includes a single outcome: Wāhi Tapu are Protected, The Mauri of all Waterways are in Optimum Health, and Mana Whenua is Appropriately Respected. These high level outcomes are considered to capture lower level ones.

The indices are themselves expressed as indicators, for example:

- Whether respondent agrees that Local Authority acknowledges mana whenua;
- Extent to which iwi / hapū tribal boundaries are known to Council;
- Extent to which tangata whenua protect mauri;
- Extent to which Local Authorities actively protect Wāhi Tapu;
- Extent to which Local Authorities acknowledge Mana Whenua.

These indices each include between three and five indicators. Each indicator has several Measures – these being practical means for gathering the information needed to answer the questions posed in the indicators. Options for each Measure are presented in a table in the form of descriptions or definitions and ranked 1 to 5. As discussed in Chapter 8, the range and number of indicators was deemed to be appropriate by the two trialling iwi. Each of the indicators within the three kete were also approved by the trialists.

9.3.3 Restoring Balance

The PUCM Kaupapa Maori framework and methodology has been trialled for three areas of interest: relationships between councils and hapu /iwi/ Māori; the mauri of waterways; and wāhi tapu. Chapter 3 describes the widespread failure of councils to fulfil their obligations under the RMA to evaluate their plans and the environmental results of these. It is our expectation that the PUCM kete will provide iwi and councils with simple to use tools to assist in this evaluation in relation to Māori provisions in their plans. Significantly, they will incorporate a tikanga Māori perspective into such an evaluation; this will go a long way toward utu – the restoration of balance.

Strenuous efforts over 4 years to engage an appropriate range of councils within our two iwi areas to trial the kete resulted in only two being available in the 2008-09 period. We can only speculate as to the reasons for the slow response from councils (Chapter 5.2), but it likely includes: substantial workloads with limited resources; high staff turnover; and Māori indicators not having a high priority in the work programmes of councils.

We are, however, confident that other councils will soon oblige. This hope is buttressed by the observation that councils with whom we have had discussions have completed development of their wider community outcomes, and indicators for them, but have not yet developed their Māori-specific indicators, for which they need help.

Our expectation is that the research undertaken within our PUCM Māori project will provide a product with which iwi/Māori and our Treaty partner – in this case councils via the RMA and LGA mandate from the Crown – can reach some understanding and common ground as to their respective roles and perspectives relating to environmental resource management in Aotearoa / New Zealand. In this manner it is hoped that use of the kete will go some way to addressing the imbalance in treating Māori values and aspirations and those of other interest groups in local government planning.

In this manner, the PUCM kaupapa Māori kete can contribute to the sustainable management of natural resources of importance to Māori, hapu and iwi - values shared by large sections of non-Māori.

9.4 Future Research

We move focus now to consider research that still needs to be done, both as an extension of the current research and for complementary research that will be new. They are considered separately below.

9.4.1 Additional Trials of Current Kete

As previously reported, only two iwi and two council trials have taken place. To date no trialling of all three kete by any one iwi or council has been completed. Trialling is of course only a step along the path toward having the PUCM kaupapa Māori framework and methodology actually used by iwi and councils throughout New Zealand. Our ambition remains the future use of the kete by iwi and councils.

We remain of the opinion that a minimum of four iwi and four councils should be engaged to trial the outcomes and indicators kete, with each trialling multiple tikanga-specific kete. This will allow the various kete to be tested in differing situations. The variation we anticipate is between the circumstances of iwi (and councils) including their

location and level of resourcing. For iwi we are also interested in their capacity to engage in council processes, strength of relationships with councils (or iwi), and whether or not they enjoy the status and protection provided by Treaty settlement legislation. Each of these factors needs to be considered alongside an assessment of the performance of other relevant parties (such as Crown agencies) and against “on the ground” physical observation and testing in order to properly test the PUCM kaupapa Māori kete.

Additional trialling requires additional funding, and this is most likely to come from participating councils, but ought to be matched by central government agencies, like TPK and MfE. Where additional trials take place with iwi, the trials will ideally involve councils from within their rohe. The reasoning for this was explained in Chapter 6.2.2. For our trial iwi, both Auckland Regional Council (ARC) and Environment Waikato (EW) - whose regions intersect with the rohe of Ngati Maru - have confirmed their intention to discuss potential use of our work. Discussions are also under way with Whakatane District Council and Environment BOP within the rohe of Ngāti Awa toward them trialling the three kete.

9.4.2 New Kete to Develop and Trial

A second series of tikanga-specific outcomes and indicators has already been largely developed, if not packaged. A selection of these will be trialled over the coming year, iwi trialling being funding dependent. We have been seeking to answer particular questions relating to environmental outcomes resulting from statutory regional or district Plan implementation, and the outcomes and indicators framework with the three suites of indicators (kete) discussed above have been largely aimed at providing a means of answering those questions.

Our focus will shift for the next batch of outcomes and indicators from primary consideration of statutory provisions, to greater emphasis on those tikanga particularly important to the issues facing contemporary Māori communities. Those kete developed, or under development, include: Taunahanaha, Kaitiakitanga, Manaakitanga, Mātauranga Māori, and Utu. That is not to say that these have any more or less relevance than the three already completed in terms of our statutory environment, but their development is not intended to be driven by statutory provision.

The outcomes for the new kete have already been developed and the individual indicators drafted, but not yet configured into complete kete. Some effort is yet required before they will be ready for trialling.

This work also depends on the ability to secure additional funding, in order to trial additional kete developed with both iwi and councils.

9.4.3 Aggregation and Comparison of Iwi and Council Information

There are several situations where it will be necessary to develop methods for gaining maximum advantage of the kete’s use. As a simple example, if a council or iwi use a kete for the purpose of periodic review of progress, then to it is necessary to have a method that will best enable interpretation of the information collected. That method is subject to further research.

As another example, if in a region several councils within the rohe of an iwi used a kete. Then there is opportunity for comparing results for various purposes across the councils. The methods for doing that have not yet been developed.

In short, research is needed in order for the experiences and findings of individual iwi and councils to be evaluated against those of neighbouring ones, and over time. This in turn will allow consideration of the extent to which the plans and actions of particular agencies have contributed toward environmental outcomes.

New methods raise the issue of aggregating data. The responses returned by the worksheets are by nature largely qualitative, rather than quantitative, that is, the answers are generally a matter of subjective evaluation and description. Few of the indicators or measures return absolute, numeric or yes/no type, answers (the exception to this is the physical-characteristic indices). Users select an answer that describes some real-world situation.

The PUCM kaupapa Māori worksheet utilises tables for the basic unit of assessment – the Measure. Results for measures are ranked, with the ideal obtaining a score of 1, and the worst result ranking (up to) 5. Having converted these value judgements into numeric values it is possible to aggregate the findings and to more easily compare results. The lower the total score for a particular index or indicator the better the result. Analysis along these lines can be undertaken for a single council over time, or to compare the performance of multiple agencies – iwi, Crown agencies, or councils.

While we are mindful of limitations associated with aggregation of information along these lines, particularly the potential for abstraction and distortion, we consider that this method of interpretation will prove increasingly useful over time as more groups utilise the kete. In order for increasing amounts of information to be aggregated there is a need to develop a more sophisticated database for capturing, storing, and processing aggregated information.

9.5 Facilitating Uptake

A fundamental difficulty faced by councils implementing requirements of the RMA is that they were required to carry out tasks for which there were no available methods. This included methods for evaluating the effectiveness of plans and their implementation, and for effectively taking Maori interests into account. The overall PUCM Research Programme has progressively developed and tested relevant methods for use by councils and others. It is, however, one thing to develop and test innovative methods in a few select councils and iwi and quite another to have them taken up nation-wide. Yet that is what is expected of publicly funded FRST research. Even when innovative evaluative methods become available, there is reluctance by councils to risk highlighting past planning failures when it is politically more rewarding to gloss over these and write new plans. Our experience, as supported by the MfE's own surveys, points toward entrenched and institutional barriers to plan and environmental performance evaluation by councils. For this reason, the PUCM team seeks further FRST funding to undertake research into the nature of institutional barriers in local government in relation to planning performance by councils.

In the meantime, to help lift barriers, the PUCM team has created a Practice Development Programme (PDP). It aims to help facilitate uptake of its various products by councils. In

this section, we highlight the main features of the PUCM PDP as it relates to our Maori research products, and then outline proposals for a more broadly based National hui.

9.5.1 PUCM Practice Development Programme

While we have seen immediate uptake of the framework and methods by two councils, and the statements from iwi about their intention to do so, it is clear from initial discussions that, for most councils, there is a significant and potentially drawn-out stage between trialling, use, and adoption. The PUCM Practice Development Programme (PDP) is expected to address impediments to uptake over time by educating newly emerging and experienced planners, iwi environmental staff, senior managers and councillors, especially through its recently instituted Practice Training Programme (PTP).

The PUCM kaupapa Maori framework and methodology, and related products, need to be widely disseminated for use by other councils and iwi. This will be done in part through the PUCM PDP (Practice Development Programme), which includes a dozen ways of transferring information to end users, including the PTP. The PTP (Practice Training Programme) consists of workshops around specific topics, like identifying Maori community outcomes, developing effective Māori indicators, and monitoring environmental results according to Māori values. Inclusion of the kaupapa Māori framework within the PDP and PTP will provide a means for facilitating up-take of our kete in iwi, hapū, and councils.

Tertiary teaching programmes:

One way to reach out to councils and iwi is to train university students who aim to become planners in the use of methods for evaluating various aspects of plans and planning. To this end, we have written a paper based on our kete and presented it to post-graduates in a programme on Resources and Environmental Planning (REP) at The University of Waikato (Kennedy, 2008b). In that instance, the Kaupapa Māori framework was applied to consideration of the Coromandel Blueprint project, a collaborative forward planning exercise between the Department of Conservation, Thames Coromandel District Council, Environment Waikato, and Hauraki Maori.

In another interdisciplinary graduate programme called Climate Change Adaptation (ENVS522), run by IGCI, we presented a paper entitled Māori and Climate Change, which offered a tangata whenua perspective on environmental change, and framed the discussion around the use of Māori environmental indicators as methods for identifying and interpreting environmental change.

It is our intention to expand on these papers for use in other planning schools and other programmes, such as those in government-funded Wānanga, and for use by Māori, hapū and iwi in their own learning settings.

Practice Guidelines:

We are currently preparing two practice guidelines for use by practitioners working in, or giving advice to, councils and Māori organisations. The Practice Guidelines provide practical advice to practitioners about how the PUCM Kaupapa Māori outcomes and indicators framework and methodology can be used by their organisations to improve environmental outcomes in terms of Māori values.

The first practice guideline is for Māori and aims to assist environmental staff to employ and adapt the PUCM Kaupapa Māori framework in several ways: 1) to evaluate the quality of council and crown plans and policy documents in terms of their Māori provisions; 2) to evaluate the state of their environment over time and to determine the extent to which the plans and activities of various groups have contributed to this; 3) to evaluate their own plans and practices against environmental aspirations; and 4) to assist iwi in promoting higher standards of Māori provisions from councils and Crown agencies.

The second practice guideline is for councils and is intended to assist planning staff in the use of the framework. Given our research findings that councils and iwi are often talking past each other (Bachurst et al., 2004), it aims to assist councils in understanding Māori environmental values. Other specific purposes for the guideline include: 1) providing methods for evaluating the Māori provisions in existing plans and when drafting new ones; 2) factoring Māori values and perspectives into state of the environment monitoring and reporting; and 3) assessing the respective contributions of councils, Crown agencies, and other groups to environmental outcomes.

While the two guidelines share some common purposes they will be structured and worded to recognise the distinct backgrounds, perspectives, and experiences of many council and iwi staff. As with other PUCM Practice Guidelines previously released, these two guidelines will be made available to iwi and councils via the IGCI website and publicised through networks established during the PUCM Māori research, and articles in planning journals.

Report to iwi

A report to iwi has been prepared that presents the PUCM Māori research and products to a Māori audience (Jefferies and Kennedy, 2009, PUCM Māori Report 8). It concentrates on our research results, including the kaupapa Māori framework and the methods by which these can be used to benefit Māori by improving the environment in a manner consistent with tikanga Māori.

9.5.2 A National Hui

We will high-light our PUCM Kaupapa Maori framework and methodology for environmental outcomes and indicators at a national Kaitiaki hui in November 2010 (*Mana Kaitiaki Conference – Indigenous Planning and EnviroOnmental Decsion-Making*). The first hui was held in 2005 at Hopuhopu near Ngaruawahia. The second national kaitiaki hui will differ from the previous one in that it is aimed at iwi environmental practitioners rather than Māori kaitiaki generally. This two day hui will highlight the RMA and LGA-related experiences of iwi practitioners from around the country and internationally – both positive and negative - in order for those experiences to be shared and lessons learnt. The expectation is that best case examples will be identified.

A key intention is that groups with limited experience and resources will learn from the experiences and approaches of high capacity groups. Tangata whenua of other first nation peoples from North America have already confirmed their intention to attend, and it hoped that sponsors will be found to help fund travel and participation of key speakers from abroad.

This hui is to be held in Whakatane at Te Whare Wānanga o Awaunuiārangi, the birthplace of the internationally important 2003 Matātua Declaration on Cultural and Intellectual Property Rights of Indigenous Peoples. It will precede and link to, the UN international indigenous kaitiakitanga hui taking place a year later, also in Whakatane.

The PUCM Kaupapa Māori framework (including the outcomes and indicators kete and the theoretical underpinnings of these based on tikanga Māori) will be presented, and a demonstration of its potential use by iwi and councils given, emphasising the means by which both groups can use the framework to better understand the perspectives and positions of the other.

Practical applications of the kete will be discussed including the potential for iwi to use either the various complete kete, or sections of these for specific purposes (such as evaluating council plans), or the kaupapa Māori framework as a basis for selecting and adapting select indicators to develop community outcomes and indicators for their local LTCCPs (Long-term Council Community Plans).

It is intended that on the second day of the hui staff from councils and other relevant Crown agencies will be invited to address the hui to communicate their perspectives and ideas regarding Māori participation in RMA and LGA processes. Similarly, a session is proposed in which best case iwi participation examples are presented to council staff.

9.6 Recommendations

In this final section of the report, we use our experience of working with central and local government agencies and iwi and hapū over the past 5 years to highlight some actions that, if adopted, will go a long way towards enhancing the up-take by them of Kaupapa Māori outcomes and indicators in support of implementation of the RMA and LGA mandates.

9.6.1 Central Government

Over nearly two decades, the Government has worked hard to put in place legislation in support of Māori interests. There have been some impressive Māori provisions included in council plans produced under both the RMA and LGA. However, there remains a widespread failure to give effect to these provisions - both those within legislation and statutory planning instruments. There are various reasons for this, one of which is a Treaty partnership arrangement that does not bind local government because it is an agent of Government and not a direct partner with Māori.

In our report we have observed that while MfE has reported regularly that councils have failed to fulfil their environmental reporting obligations under the RMA, the Ministry has itself never taken any action to push councils into action. Similarly, the LGA (2002) includes principles and requirements for local authorities that are intended to facilitate participation by Māori in local authority decision-making processes. While most have written policies for improving Māori participation, many of these are weak in that they largely paraphrase the statutory provisions, and offer few or no practical means by which Māori can lever greater participation. For this reason, many are clearly of little value to Māori, and most have not been implemented.

Central Government through MfE started some credible work into Māori indicators as part of its national indicator development programme in the late 1990s. However, efforts were criticised by Māori participants who identified conflicts between the methodological approach adopted for the programme and that preferred by Māori communities (Ministry for the Environment, 1999). The Māori discussion group noted:

It is the view of this panel that there are numerous faults in this methodology and these will be discussed in due course. Its major fault is that it is not based upon the Treaty of Waitangi. Further, it represents an attempt to 'fit' Māori concerns into the Ministry's methodology (particularly the 'strand' concept) with little or no discussion (Ministry for the Environment, 1998).

Regardless of these faults, the MfE indicators programme yielded many national “mainstream” environmental indicators series, but none for Māori. The programme was then abandoned. While statistics New Zealand later took up responsibility for national indicators development, no credible work has resulted on Māori indicators. The PUCM kaupapa Māori framework is intended to address this deficiency.

Te Puni Kokiri (TPK) is the Crown department with primary responsibility for Māori development, and was approached repeatedly for support of the PUCM Māori research to no avail. There is a need for a network of Māori units in all of the four well-being ministries that links to TPK. Such an approach would better deal with programmes, such as Māori outcomes and indicators, which cross the boundaries between areas such as environment, health, education, and social welfare.

More can be done by central government agencies to facilitate the development and, more importantly, up-take by councils of kaupapa Māori outcomes and indicators in support of Māori interests. Central Government agencies, such as the Ministry for the Environment, Department of Internal Affairs, Ministry of Social Development, Ministry for Culture and Heritage, and Te Puni Kokiri each have a role in identifying Māori outcomes and contributing toward their achievement, including the development and use of appropriate indicators. We suggest that the PUCM *Kaupapa Māori Environmental Outcomes and Indicators Framework and Methodology* provides a useful starting point for such a task. We make two recommendations for action.

Recommendation #1: That central government resumes its programme of Māori indicator development that was started in the late 1990s as part of its wider indicator programme and then abandoned. Existing work on Māori outcomes and indicators should be drawn upon, including the PUCM Kaupapa Māori framework and methodology, and other work undertaken by some councils and other research institutes, and input from Māori who are leading in the field of Māori indicators should be sought with a view to establishing a credible series of Māori indicators.

Recommendation #2: That central government, through departments, including; Ministry for the Environment (MfE), Department of Internal Affairs (DIA), Ministry of Social Development (MSD), Ministry of Culture and Heritage (MCH), and Te Puni Kokiri (TPK), resource Māori via the establishment of Māori units where these do not already exist. These units would take responsibility for co-ordinating inter-agency efforts toward Māori well-being, including Māori indicator development. They should undertake to ensure that indicators and other mechanisms once developed are adopted and used, in order to address the current lack of knowledge as to whether Māori outcomes, and accordingly Māori well-being, are being achieved.

9.6.2 Local Government

Local Government has been devolved many of the functions and decision-making authority of central government. Yet as identified by the Waitangi Tribunal in its *Ngawha Geothermal Resource Report*, local government empowering legislation fails to confer on councils the associated duties as a Treaty partner:

The tribunal finds that the Resource Management Act 1991 is inconsistent with the principles of the Treaty in that it omits any provision which ensures that persons exercising functions and powers under the Act are required to act in conformity with the principles of the Treaty of Waitangi (Waitangi Tribunal, 1993).

Lack of accountability to the Treaty is likely one reason why central government intentions for greater Māori participation in local government decision-making have largely failed to eventuate. Council policies for ensuring greater Māori participation in decision-making are generally weak, and seldom implemented.

The intention that all councils consider separate Māori representation has resulted in one out of 85 doing so – the rest unilaterally opposed this. Māori continue to have little say in council affairs, and there remain widespread institutional barriers to the implementation of measures that would improve the situation of Māori.

Some councils have taken steps to develop Māori outcomes stemming from their responsibilities under the RMA (1991) and LGA (2002). However, while most have completed the development of wider community indicators, few to date have made credible progress toward developing Māori indicators. Given the previously identified problems with council implementation of their Māori plan provisions, and the wealth of statistical information confirming that Māori remain at the bottom of the heap in terms of all the social well-being measures, such indicators are all the more necessary.

The PUCM kaupapa Māori kete include numerous indicators that identify the systematic institutional failures highlighted above. It is our intention that over time these will become an instrument for assisting iwi and councils in understanding each other's perspectives, and gaining some common ground in relation to environmental resource management and community planning. We make two recommendations for action.

Recommendation #1: That measures be taken to integrate the fragmented efforts that have occurred to date toward the development of Māori outcomes and indicators. Measures should foster co-operation between Māori, councils, Local Government New Zealand (LGNZ), TPK, and MfE aimed at bringing together any relevant Māori outcomes and indicators work that has been done by these organisations with the PUCM Kaupapa Māori framework and methodology.

Recommendation #2: That Local Government New Zealand (LGNZ) establish a Māori unit in its organisation in Wellington to liaise with Te Puni Kokiri, Māori and councils, in order to assist councils with the development of Māori indicators and also with the development and evaluation of Māori policy, including: consultation with Māori; provision for greater participation in decision-making; and provision for employment of Māori staff, these being specific obligations under empowering legislation - *Local Government Act (2002)* and *Resource Management Act (1991)*.

9.6.3 Iwi / Hapū

Hapū and iwi are keen to participate in council decision-making, including RMA and LGA processes wherever their interests are affected. Exclusion mechanisms, such as the 2005 amendments to the RMA, a liberal interpretation of the permitted baseline principle, and inconsistent and often inexplicable decisions as to whether council activities trigger ambiguous definitions of significance, continue to result in Māori being excluded from the vast majority of council processes and decisions. This is clearly contrary to the intentions of those that enacted the RMA (1991) and LGA (2002).

As discussed above, while councils are required to provide for greater participation by Māori in decision-making this has not happened and there are effective and deep-seated institutional barriers to Māori participation that remain in place. This situation is compounded by a widespread lack of capacity of iwi to engage. Most iwi authorities are drastically under resourced, few have people with the skills to engage at a high level, and few of the ones that do are able to pay them. Central and local government promises regarding support and capacity-building have come too little. The notable exception is those hapū and iwi that have achieved settlement of *Treaty of Waitangi* claims.

Few iwi have functioning and experienced environment units, and others are just now seeking to establish these. Yet despite whakapapa and waka links, iwi around the motu often struggle in isolation to participate in council processes. There is a need to greater co-operation between hapū and iwi, so that those with greater capacity mentor and assist those with less. However, there are practical reasons why this is not happening, primarily that even those “high” capacity iwi often struggle to meet their own obligations, and here again there is a need for the government to contribute.

Regardless of these negative observations, Māori continue to strive to fulfil their obligations as kaitiaki, including engaging with councils. The PUCM Kaupapa Māori kete offer a simple-to-apply instrument with which hapū and iwi can evaluate the performance of their local authorities against promises made in legislation and statutory planning instruments. Some of the iwi who have used the kete to date have also indicated an intention to use them to assess their own policies and performance in an effort to improve these and maximise the returns on their limited resources.

There have been some notable examples of efforts at inter-tribal co-operation. The national Kaitiaki hui held at Hopuhopu in 2005 was heralded as a great success for the many Māori that attended. The PUCM team intends another hui in 2010, focusing on participation in council processes and aimed at iwi environmental practitioners. Iwi and others need to build on these opportunities for strengthening networks between iwi environmentalists and sharing experiences. We offer two recommendations for action.

Recommendation #1: That iwi seek to establish a pan-tribal kaitiaki working group, with a view to greater co-operation between hapū and iwi in relation to environmental management and participation in local government processes. Such a group would bring together experienced practitioners, in order for these to develop resources to assist hapū and iwi. It would also act as a forum for channelling resources and lessons learnt from positive experiences, and mentoring hapū and iwi seeking to establish their own environment units. This would require funding to operate – and this should be sought from both central and local government.

Recommendation #2: That hapū and iwi – to the extent they are able – pressure their local authorities to complete the development of Māori outcomes and indicators, and that

they expect that Territorial Local Authorities (TLAs) resource tangata whenua to participate in this development. We further recommend that hapū and iwi use the PUCM Kaupapa Māori Framework and Methodology on several levels. First, in its entirety so as to evaluate whether the overarching outcomes relating to important environmental tikanga are being achieved. Second, our framework and method can be used by iwi to evaluate council plans and the performance of their local authorities. Third, it can be used as a baseline against which to assess the quality and credibility of any Māori outcomes and indicators proposed by their local and regional councils.

References Cited

Case Law

- (1978). US vs. Washington 2nd. 573 F. 2nd, 1123,1126, US Ninth Circuit Court of Appeal.
- (1984). Guerin vs. The Queen. J. Dickson, Supreme Court of Canada. 13 DLR (4th)
- (1989). Environmental Defence Society vs. Mangonui County Council. In Cooke P, M. J., Somers J, Casey J, Bisson J (Ed.).
- (1990). Sparrow vs. The Queen, Supreme Court of Canada. [1990] 1 S.C.R. 1075.
- (1992). Mabo vs. Queensland (No 2). J. Brennan, High Court. 175 CLR 1.
- (1993). Te Runanga o Whare Kauri Rekohu vs. Attorney-General 2 NZLR. 301: 305.
- (2002). Ngāti Maru Iwi Authority Inc vs. Auckland City Council. B. J, High Court, Auckland.

Other References

- Auckland Regional Council (1999): *Auckland Regional Policy Statement*. Auckland: Auckland Regional Council.
- Bachurst, M., Day, M., Crawford, J., Ericksen, N., Berke, P., Laurian, L., Dixon, J. and Chapman, S. (2002): "The quality of district plans and their implementation: towards environmental quality." *Impacts: Australia - New Zealand Planning Congress*. Wellington.
- Bachurst, M., Jefferies, R. and Ericksen, N. (2004): *Evaluation of Iwi and Hapu Participation in the Resource Consents Processes of Six District Councils*. Hamilton: The University of Waikato, The International Global Change Institute (IGCI) and Opotiki: Kokomuka Consultancy Ltd, PUCM Māori Working Paper No. 2.
- Baer, W. (1997): "General plan evaluation criteria: an approach to making better plans," *Journal of the American Planning Association*, 63, 329-344.
- Ballara, A. (2003): *Taua - Musket Wars, Land Wars or Tikanga - Warfare in Māori Society in the Early Nineteenth Century*. Auckland: Penguin Books.
- Barlow, C. (1993): *Tikanga Whakaaro: Key Concepts in Māori Culture*. Auckland: Oxford University Press.
- Barsh, R. L. (1986): "Indigenous peoples: an emerging object of international law," *The American Society of International Law*, 80, 369-385.
- Bennett, C., Donald G. Lenihan, John Williams and William Young (2001): "Measuring quality of life: the use of societal outcomes by parliamentarians," *Changing Government Series*. Centre for Collaborative Government, Canada.
- Bishop, R. (2004): *Freeing ourselves from neo-colonial domination in research: A Kaupapa Maori approach to creating knowledge*. Hamilton: The University of Waikato, School of Education.
- Blalock, A.(1999): "Evaluation research and the performance management movement: From estrangement to useful integration?" *Evaluation Review*, 5, 117-149.
- Byrnes, G. (2006): "Relic of 1840 or founding document? The Treaty, the Tribunal and concepts of time, Kōtuitui," *New Zealand Journal of Social Sciences*, 1, 1-12.
- Carnie, J. A. M. O. (2003): "Duty of consultation with Māori on resource consent applications," *RMLA*, 11, 29-32.

- Chen, H. and Rossi, P. (1980): "The multi-goal, theory driven approach to evaluation: a model linking basic and applied social science," *Social Forces*, 59, 106-122.
- Chen, H. and Rossi, P. (1989): "The conceptual framework of the theory-driven perspective," *Evaluation and Program Planning*, 12, 391-396.
- Commonwealth Heads of Government (1979): *The Lusaka Declaration of the Commonwealth on Racism and Racial Prejudice*. Lusaka, Zambia, British Commonwealth Heads of Government.
- Davis, S. H. (1993): *Indigenous Views of Land and the Environment*. Washington, D.C.: World Bank.
- Daw, J. (2008): Personal Communication. In Kennedy, N. (Ed.), Hamilton.
- Dumanski, J., and C. Pieri (2000): "Land quality indicators: research plan," *Agriculture, Ecosystems and Environment*, 81, 93–102.
- Dumanski, J., H. Eswaran and M. Latham (1991): "A proposal for an international framework for evaluating sustainable land management." In Dumanski, E. P., M. Latham, R. Myers and Collin R. Elliot (Eds.) *Evaluation for Sustainable Land Management in the Developing World*. Bangkok: International Board for Soil Research and Management.
- Durie, E. T. J. (1994): *Custom Law*. Wellington: New Zealand Law Commission.
- Durie, M. (2000): "The application of tapu and noa to risk, safety, and health," Presentation to *Challenges, Choices and Strategies* (Mental Health Conference 2000). Wellington.
- Durie, M., Fitzgerald, E., Kingi, T. K., Mckinley, S. and Stevenson, B. (2002): *Māori Specific Outcomes and Indicators - Te Hoe Nuku Roa*. Palmerston North, Te Puni Kokiri.
- Durie, M. H. (1998): *Te Mana, Te Kawanatanga - The Politics of Māori Self Determination*. Auckland: Oxford University Press.
- Durie, M. H. and Kingi, T. K. R. (1998): *A Framework for Measuring Maori Mental Health Outcomes*. Palmerston North: Massey University, Department of Māori Studies, Te Pumanawa Hauora.
- Ericksen, N., Crawford, J., Berke, P. R. and Dixon, J. (2001): *Resource Management, Plan Quality, and Governance*. Hamilton: The University of Waikato, The International Global Change Institute (IGCI).
- Ericksen, N., Berke, P., Crawford, J. and Dixon, J. (2003): *Plan-making for Sustainability: New Zealand Under the RMA*. Hamilton: The University of Waikato, The International Global Change Institute (IGCI). (NZ Edition)
- Ericksen, N., Berke, P., Crawford, J. and Dixon, J. (2004): *Plan-making for Sustainability: The New Zealand Experience*. Aldershot, England: Ashgate Publishing Ltd. (International Edition)
- Harmsworth, G. (2002): Environmental performance indicators: a proposed land indicators framework for Environment Bay of Plenty. In Austin, A. (Ed.) *Landcare Research Report*. Palmerston North: Landcare Research NZ Ltd.
- Harmsworth, G. & Raynor, B. (2004): Cultural consideration in landslide risk perception. In Glade, T., Anderson, M. and Crozier, M. (Eds.), *Landslide Hazard and Risk*. London: John Wiley.
- Harmsworth, G. R. (2004): *The role of Māori values in Low-impact Urban Design and Development*. Palmerston North: Landcare Research NZ Ltd.
- Hauraki Māori Trust Board (1999): *Hauraki Customary Indicators Report*. (Environmental performance indicators). Wellington.
- Hauraki Māori Trust Board (2004): *Whaia te Mahere Taiao a Hauraki - Hauraki Iwi Environment Plan*. Paeroa: Hauraki Māori Trust Board.
- Hohepa, P. and Williams, D. V. (1996): *The Taking into Account of Te Ao Māori in Relation to Reform of the Law of Succession*. Wellington: NZ Law Commission.

- Jeffereis, R. and Kennedy, N.. (2008a): *Māori Outcome Evaluation: A Kaupapa Māori Environmental Outcomes and Indicators Framework and Methodology*. Hamilton: The University of Waikato, The International Global Change Institute (IGCI) and Opotiki: KCSM Solutions Ltd, PUCM Māori Report 1 (edition 2, 2009).
- Jefferies, R. and Kennedy, N. (2009a): *Ngā Mahi: Kaupapa Māori Outcomes and Indicators Kete*. Hamilton: University of Waikato, International Global Change Institute (IGCI) and Opotiki: KCSM Solutions Ltd, PUCM Māori Report 2.
- Jefferies, R. and Kennedy, N. (2009b): *Kaupapa Māori Outcomes and Indicators Guidelines and Worksheets*. Hamilton: The University of Waikato, The International Global Change Institute (IGCI) and Opotiki: KCSM Solutions Ltd, PUCM Māori Report 2a (An expandable / Editable Word File).
- Jefferies, R., Warren, T., Berke, P., Chapman, S., Crawford, J., Ericksen, N. and Mason, G. (2002): *Iwi Interests and the RMA: An Evaluation of the Quality of First Generation Council Plans*. Hamilton: The University of Waikato, The International Global Change Institute (IGCI) and Opotiki: Kokomuka Consultancy Ltd, Māori Working Paper No. 1.
- Joseph, R. and Bennion, T. (2002): "Maori Values and Tikanga Consultation under the RMA 1991 and the Local Government Bill – Possible Ways Forward." *Inaugural Maori Legal Forum Conference*. Te Papa Tongarewa, Wellington: Te Matahauariki Institute.
- Kennedy, N. and Jefferies, R. (2005): *Kaupapa Māori Framework and Literature Review of Key Environmental Principles*. Hamilton: The University of Waikato, The International Global Change Institute (IGCI) and Opotiki: KCSM Solutions Ltd, PUCM Māori Report 4 (2nd edition 2, June 2009).
- Kennedy, N. and Jefferies, R. (2008b): *Māori Provisions in Plans*. Hamilton: The University of Waikato, The International Global Change Institute (IGCI) and Opotiki: KCSM Solutions Ltd, PUCM Māori Report 3.
- Kennedy, N. and Jefferies, R. (2008c): 'Viewing the World through a Wider Lens than that of Western Culture - A Kaupapa Māori Outcomes and Indicators Framework', *WINFO - Mātauranga, Māori Knowledge, Information and Indicators Seminar* held at The University of Waikato. (Published as: *A Wider Lens: An Iwi Planning Perspective*, Hamilton: The International Global Change Institute (IGCI) and Opotiki: KCSM Solutions Ltd, PUCM Māori Report 6).
- Kennedy, N. (2008a): *The Use of GIS Within the PUCM Kaupapa Māori Framework*. Hamilton: The University of Waikato, The International Global Change Institute (IGCI) and Opotiki: KCSM Solutions Ltd, PUCM Māori Report 7 (In progress).
- King, D. and Skipper, A. (2006): "Understanding local weather and climate using Maori environmental knowledge," *Water and Atmosphere*, 14, 22–23.
- King, D. N. T., Goff, J. and Skipper, A. (2007): "Māori environmental knowledge and natural hazards in Aotearoa-New Zealand," *Journal of the Royal Society of New Zealand*, 37, 59-74.
- Laurian, L., Crawford, J., Day, M., Kouwenhoven, P., Mason, G., Ericksen, N. and Beattie, L. (2008): *Evaluating the Outcomes of Plans: Theory, Practice, and Methodology*. Hamilton: The University of Waikato, The International Global Change Institute (IGCI). PUCM Report Series.
- Law, G. (2000): "Managing our cultural heritage in archaeological sites – a role for the RMA and local government?" *Resource Management Law Association Review*, 3.
- Lunt, N., Davidson, C. and McKegg, K. (Eds.) (2003): *Evaluating Policy and Practice, a New Zealand Reader*. Auckland, NZ.: Pearson, Prentice Hall.
- Marco (2005): *Monitoring and Reporting Community Outcomes - A Resource Kit for Integrated Monitoring and Reporting*. Hamilton: Choosing Futures Waikato.

- Marsden, M. (1977): "God, Man and Universe: A Māori View." In King, M. (Ed.) *Te Ao Hurihuri: Aspects of Maoritanga*. Auckland: Reed (2nd Ed.).
- Marsden, M. (1992): *Kaitiakitanga; A Definitive Introduction to the Holistic World View of the Māori*. Wellington: Ministry for the Environment.
- Mccoy, M. and Hargie, O. D. W. (2001): "Evaluating evaluation: implications for assessing quality," *International Journal of Health Care Quality Assurance*, 14, 317- 327.
- Mccully, M. and Mutu, M. (2003): *Te Whānau Moana: Ngā kaupapa me ngā tikanga - Customs and Protocols*. Auckland: Reed.
- Mead, H. M. (2000): "The nature of tikanga," *Mai i te Ata Hāpara*. Otaki: Te Wānanga o Raukawa.
- Mead, S. M. (2003): *Tikanga Māori: Living by Māori Values*, Wellington: Huia Publishers.
- Metge, J. (2001): *Commentary on Judge Durie's Custom Law*.
- Ministry for the Environment (1998): *Māori Environmental Monitoring*. Wellington: Ministry for the Environment.
- Ministry for the Environment (1999): "Māori input into the environmental Performance indicators programme," *Environmental Performance Indicators*. Wellington: Ministry for the Environment.
- Ministry for the Environment (2005): *Resource Management Act: Two-yearly Survey of Local Authorities 2003/2004*. Wellington: Ministry for the Environment.
- New Zealand Law Commission (2001): *Māori Custom and Values In New Zealand Law*. Wellington: The New Zealand Law Commission.
- Ngati Tuwharetoa Māori Trust Board (2003): *Ngati Tuwharetoa Environmental Iwi Management Plan*. Turangi: Ngati Tuwharetoa Māori Trust Board
- Organisation for Economic Co-operation and Development (2003): *OECD Environmental Indicators - Development, Measurement, and Use*. Paris: Organisation for Economic Co-operation and Development.
- Panoho, J. (2007): 'Who is afraid of the postcolonial?' *Organisation, Identity, Locality III*. Albany: Massey University.
- Parliamentary Commissioner for the Environment (1996): *Historic and Cultural Heritage Management in New Zealand*. Wellington, Parliamentary Commissioner for the Environment.
- Patterson, J. (1992): *Exploring Māori Values*, Palmerston North: Dunmore Press.
- Pearson, M., D. Johnston, J. Lennon, I. McBryde, D. Marshall, D. Nash and B. Wellington (1998): *Environmental Indicators for National State of the Environment Reporting -- Natural and Cultural Heritage. Australia: State of the Environment (Environmental Indicator Reports)*. Canberra: Department of the Environment.
- Pihama, L. (2001): *Tihei Mauri Ora: Honouring Our Voices. Mana Wahine as a Kaupapa Māori Theoretical Framework*. Auckland: University of Auckland, Education Department.
- Pihama, L., Cram, F. and Walker, S. (2002): "Creating methodological space: a literature review of Kaupapa Māori research," *Canadian Journal of Native Education*, 26, 30-44.
- Pinkerton, E. (1992): 'Translating legal rights into management practice: overcoming barriers to the exercise of co-management,' *Human Organization*, 51, 330-341.
- Powick, K. (2003): *Māori Research Ethics: a literature [review] of the ethical issues and implications of kaupapa Māori research and research involving Maori for researchers, supervisors and ethics committees*. Hamilton: The University of Waikato, Wilf Malcolm Institute of Educational Research.

- Puketapu-Hetet, E. (1989): *Māori Weaving*. Auckland: Pitman.
- Rennie, H. (2007): 'Section 33 Transfers - Implications for Co-management and Kaitiakitanga,' *DSL Environmental Handbook*. Wellington: Brookers Law.
- Rennie, H., Jill Thomson and Tikitu Tutua-Nathan (2000): *Factors Facilitating and Inhibiting Section 33 Transfers to Iwi*. Hamilton: University of Waikato, Department of Geography and Eclectic Energy Cambridge.
- Roberts, M. (2005): 'Walking backwards into the future: Māori views on genetically modified organisms.' *Indigenous voices, indigenous visions - World Indigenous Nations Higher Education Consortium Journal*, 10.
- Roberts, M., W. Norman, N. Minhinnick, D. Wihongi, and C. Kirkwood, (1995): "Kaitiakitanga: Māori perspectives on conservation," *Pacific Conservation Biology Journal*, 2, 7 - 20.
- Sayer, A. R. (1992): *Method in Social Science: A Realist Approach*. London and New York: Routledge.
- Segnestam, L. (2002): *Indicators of Environment and Sustainable Development - Theories and Practical Experience*. Washington: The World Bank Environment Department.
- Smith, G. (1997): *The Development of Kaupapa Māori: Theory and Praxis*. Auckland: University of Auckland.
- Taua, T. W. (2003): "Maori perspectives on landscape." In Society, E. D. (Ed.): *The New Zealand Landscape Conference*. Takapuna, Auckland: Environmental Defence Society.
- Te Aho, L. (2005): "Contemporary issues in Māori law and society," *Waikato Law Review*, 13, 145–168.
- Te Puni Kokiri (2001): *A Guide to the Principles of the Treaty of Waitangi As Expressed by the Courts and the Waitangi Tribunal*. Wellington: Te Puni Kokiri.
- Tipa, G. and Teirney, L. (2003): *A Cultural Health Index for Streams and Waterways Indicators for Recognising and Expressing Māori Values*. Wellington: Ministry for the Environment.
- Tipa, G. and Teirney, L. (2006): *Using the Cultural Health Index: How to Assess the Health of Streams and Waterways*. Wellington: Ministry for the Environment.
- United Nations (1992): *Convention on Biological Diversity*. New York: United Nations.
- United Nations (2003): *Mechanisms To Promote The Effective Participation Of Indigenous And Local Communities In Matters Related To The Objectives Of Article 8(J) And Related Provisions*. New York: United Nations.
- United Nations Conference on Environment and Development (1992a): *Agenda 21*. Rio de Janeiro: United Nations.
- United Nations Conference on Environment and Development (1992b): *Rio Declaration on Environment and Development*. Rio de Janeiro: United Nations.
- United Nations Division for Sustainable Development (2001): *The CSD Work Programme on Indicators of Sustainable Development*. Ottawa, Canada: United Nations.
- Waitangi Tribunal (1987): *Report of the Waitangi Tribunal on the Orakei Claim*. Wellington: Waitangi Tribunal.
- Waitangi Tribunal (1988): *Report of the Waitangi Tribunal on the Muriwhenua Fishing Claim (Wai 22)*, Wellington: The Waitangi Tribunal.
- Waitangi Tribunal (1992): *Ngai Tahu Sea Fisheries Report*. Wellington: Brooker and Friend.
- Waitangi Tribunal (1995): *Ngai Tahu Ancillary Claims Report 1995*. Wellington: Waitangi Tribunal.
- Waitangi Tribunal (1997): *Waitangi Tribunal Muriwhenua Land Report*, Wellington: Government Publications.

- Waitangi Tribunal (2001): *Rekohu: A Report on Moriori and Ngati Mutunga Claims in the Chatham Islands* Wellington: Government Printer.
- Waitangi Tribunal (1993): *Ngawha Geothermal Resource Report 1993*. Wellington: Brooker and Friend Ltd.
- Waitangi Tribunal (1999): *The Whanganui River Report*, Wellington: GP Publications.
- Waitangi Tribunal (2006): *The Hauraki Report*. Wellington: Waitangi Tribunal.
- Walker, R. J. (1990): *Ka Whawhai Tonu Matou - Struggle Without End*, Auckland: Penguin Books.
- Walker, S., Eketone, A. and Gibbs, A. (2006): "An exploration of kaupapa Maori research, its principles, processes and applications," *International Journal of Social Research Methodology*, 9, 331-344.
- Weiss, C. (1972): *Evaluation Research: Methods of Assessing Program Effectiveness*. Englewood Cliffs, NJ: John Hopkins Press.
- Weiss, C. (1997): "How can theory-based evaluation make greater headway?" *Evaluation Review*, 21, 501-524.
- Williams, J. (1998): *He Aha Te Tikanga Māori*. Wellington: New Zealand Law Commission.
- World Bank (2001): *Making Sustainable Commitments: An Environment Strategy for the World Bank*. Washington: World Bank.