



Research impact evaluation

NZIER report to Ngā Pae o te Māramatanga

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Authorship

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Key points

Ngā Pae o te Māramatanga (NPM) is New Zealand's Centre of Research Excellence (CoRE) in indigenous development. NZIER assisted NPM with the development and application of a framework to assess the economic, social and other impacts of their research investment. The evaluation was not intended to cover academic quality metrics, which had already been assessed by the Ministry of Education.

The evaluation framework and approach

An important purpose of CoREs is that they were established to facilitate collaborative research across tertiary institutions. In addition to helping fulfil this purpose, the mission of NPM is to conduct excellent research relevant to Māori communities and therefore New Zealand. We developed an evaluation framework with three components to assess contributions to this purpose and mission:

- an impact survey of all NPM principal investigators (PIs) to gather metrics of the levels of researcher community engagement and research impacts
- self-evaluation of impacts by a sample of NPM PIs in accordance with an impact logic model relating researcher outputs to impacts and outcomes
- semi-structured interviews with end users to better ascertain, and to verify, the nature and extent of the impacts.

The findings

The key findings from applying the evaluation framework are

- NPM has established an extensive formal and informal network of cooperation between research institutions in accord with its purpose
- 80% of research involved community engagement, and just under half of the research was initiated by community stakeholders
- there is a strong level of engagement with community groups and Iwi Authorities, and a relatively low level of engagement with government
- just under half of the projects surveyed (24) had additional direct funding outside of NPM funding, with the average value being in the region of \$160,000
- the principal sources of additional funds were universities and either tribal authorities or Māori trust funds
- the majority of PIs reported improving the practices, processes and policies of end users such as tribal authorities or iwi
- while there are significant achievements, few projects developed commercial products or services.

We were unable to establish either useful comparator metrics or a counterfactual to fully evaluate the performance and additionality of the research investment.

Overall, the economic and social impacts from research are usually incremental rather than transformational changes. The impacts are often localised and highly relevant to Māori communities in accord with NPM's mission. From the feedback we received the NPM's research is highly valued by its end users.

Contents

1.	duction	4	
	1.1.	Establishing benchmark comparators and the counterfactual	4
	1.2.	Impact evaluation approach	5
2.	Over	view Ngā Pae o te Māramatanga	6
	2.1.	Mission and objectives	6
	2.2.	Participating research entities	6
	2.3.	Building Māori research capabilities	8
	2.4.	Research investment portfolio	9
3.	Impa	ct evaluation findings	. 10
	3.1.	Engagement with stakeholders	. 10
	3.2.	Funding sources and other support	. 13
	3.3.	Social economic and other impacts	. 16
	3.4.	Convergence of qualitative case studies and survey responses	. 22
	3.5.	Conclusions	. 22

Appendices

Appendix A Qualitative case study evaluation template	. 23
Appendix B Case studies	. 25
Appendix C Potential international benchmarks programs	. 38
Appendix D Survey questionnaire	. 43

Figures

Figure 1 Research contract engagement	8
Figure 2 Cooperation between research entities	10
Figure 3 Stakeholder involvement in shaping research	12
Figure 4 Strength of engagement – groups PIs engaged with most	13
Figure 5 Co-funding sources	14
Figure 6 Sources of in-kind support	15
Figure 7 Type of in-kind support	15
Figure 8 Communication channels	16
Figure 9 Projects presented to various organisations	17
Figure 10 Practices, processes and policies	18
Figure 11 Project contributions to areas of research	19
Figure 12 Organisations influenced by projects	20
Figure 13 New products or services developed?	21
Figure 14 Commercial / non-commercial products	21

Tables

Table 1 NPM participating research entities	7
Table 2 Formal and informal cooperation between research entities	11
Table 3 Additional funding	14
Table 4 Key differences between survey results and sample case studies	22

1. Introduction

Ngā Pae o te Māramatanga (NPM) is New Zealand's Centre of Research Excellence (CoRE) for indigenous research. NPM engaged NZIER to assist it with:

- development of a framework for assessing the impact of NPM research
- developing a suite of metrics to measure impacts
- identifying possible benchmark institutions for NPM to help gauge their performance.

The objective of this evaluation work was to document the level of engagement with stakeholders and to understand how NPM research is translated into economic, social and environmental impacts that benefit New Zealanders.

This complements, but does not repeat, significant work already undertaken by the Ministry of Education¹ on assessing research quality and other academic outputs.

1.1. Establishing benchmark comparators and the counterfactual

The evaluation approach assesses impacts principally with regard to the achievement of NPM's mission and objectives, along with consideration of whether NPM has been achieving TEC's purpose for CoREs. As we only have a one year data snapshot of the metrics, we cannot assess the speed at which NPM is progressing towards achieving fulfilment of its mission. If, however, the measurement approach is periodically applied a time series indicating changes in performance could be established.

An ideal evaluation approach would compare the NPM results with:

- the research impacts achieved by other streams of research funding covering a similar topic area
- impacts that would have occurred under 'business as usual' without the intervention of NPM research.

It was not possible to achieve this ideal basis of comparison. We examined the potential for local and overseas benchmark partner organisations to be used and found no comparators. NPM is a unique organisation, undertaking indigenous research in a distinctive context of New Zealand history and culture. Appendix C documents the international indigenous research program efforts we reviewed.

Nor was it possible to roughly benchmark our indicators with other areas of social research outputs, as these indicators appear to rarely be measured and, if so measured, not generally published.

The result is a report that presents an assessment of the impacts and makes a judgement call, supported by evidence, on the counterfactual question of what would have happened under 'business as usual'.

¹ Ministry of Education; CoREs and effect, Research and Knowledge Creation 2013

1.2. Impact evaluation approach

We worked with NPM in a participatory evaluation process. We first agreed on the mix of qualitative and quantitative impact evaluation methods. These involved:

- development of an impact survey questionnaire used to survey all NPM Principal Investigators (PIs) on engagement and impacts (See Survey questionnaire Appendix D)
- self-evaluation of impacts by a sample of NPM PIs in accord with a NZIER developed impact logic model, which included identification of research end users and referees who could attest to the impacts (see Qualitative case study evaluation template Appendix A)
- semi-structured interviews with end users conducted by NZIER to better ascertain and verify the nature and extent of the impacts.

The participatory evaluation involved the following steps:

- ten projects were selected that were representative of the diversity of the NPM portfolio (project size, research type and research area) and which were viewed by NPM staff as showing a range of successful impacts for stakeholders
- principal investigators were surveyed to assess the degree to which they engaged with community stakeholders, gained external funding support, saw their research outputs used and could demonstrate other impact measures
- the principal investigators reported impacts, following an impact logic model, and provided names of stakeholders who could act as referees to vouch for the self-assessed impact claims made
- NZIER staff then undertook semi-structured interviews with these stakeholders to test the veracity of the claimed impacts
- the survey results from the ten projects were compared with the whole project population, and insights from the qualitative research were used to help interpret survey results.

As noted, ten projects were selected and used for the semi-structured interviews. The projects were primarily selected on a range of sample characteristics i.e. maturity, duration, size, topics and then their perceived stakeholder impact.

This *apparent* selection bias was intended to facilitate the development of an impact assessment framework. The approach recognises that most research does not succeed in having immediate social or economic impacts.² Rather, it creates information and capabilities that may be of value sometime in the future. Taking a random sample of projects may risk investing resource to find little and shed no light on whether NPM is in fact contributing to social and economic outcomes.

We sought to identify the high performing projects, from a social and economic perspective, that might indicate a pay-back for the *overall research portfolio* or may be indicative of future outcomes as other NPM research projects mature.

 $^{^2}$ Indeed, almost by definition research will often 'fail' to have social or economic impacts. Otherwise it would lack the risk, novelty and uncertainty inherent in research. Also research is the process of advancing knowledge and understanding – not merely to create social and economic impacts.

2. Overview Ngā Pae o te Māramatanga

Ngā Pae o te Māramatanga (NPM) is New Zealand's Centre of Research Excellence (CoRE) in indigenous development.

It was one of seven CoREs established by government in 2002 to connect and engage in collaborative research across tertiary institutions to improve the research performance of New Zealand's universities.

NPM is funded by the Tertiary Education Commission (TEC) and hosted by the University of Auckland. NPM receives \$5.3 million per annum TEC funding, with a total of \$39.6 million over 7.5 years (2008 to 2015 inclusive).

2.1. Mission and objectives

The mission of NPM is to conduct excellent research relevant to Māori communities and therefore New Zealand. In 2012 is established a greater focus in its research programme, by creating three research priorities:

- optimising Māori economic performance
- fostering Te Pā Harakeke: healthy and prosperous families of mana
- enhancing Māori distinctiveness.

In addition to this research focus, NPM aims to:

- contribute significantly to increasing the number of Māori people succeeding in tertiary education and research training
- build research and scientifically literate cultures within Māori communities through knowledge-sharing activities
- lead developments on Māori approaches to knowledge creation
- maintain a significant international profile in the field of indigenous development research.

NPM assists the government in meeting Treaty of Waitangi obligations and responds to a wide range of inquiries on Māori social, environmental and economic issues.

2.2. Participating research entities

Ngā Pae o te Māramatanga has been effective in creating a critical mass of Māori researchers by building a national network of participating research entities (PREs). The core of the network was largely created between 2002 and 2006. NPM provides a Secretariat with programme leaders and officers to reach out and work across this network.

The PREs represent Māori research centres, groups, clusters and networks that exist within larger tertiary institutions (including Wānanga), Crown Research Centres and museums.

So while *hosted* by the University of Auckland, NPM has a much larger institutional research reach. The participating research entities are set out in Table 1 below.

Participating research entity	Year partnership established	Participating research entity	Year partnership established
The University of Auckland	2002	Te Tapuae o Rehua	2006
University of Otago	2002	Waikato Raupatu Lands Trust	2006
Victoria University of Wellington	2002	Te Papa Tongarewa	2006
The University of Waikato	2002	Massey University	2006
Te Wānanga o Aotearoa	2002	Auckland University of Technology	2006
Te Whare Wānanga o Awanuiārangi	2002	Lincoln University	2006
Manaaki Whenua Landcare Research	2002	University of Canterbury	2006
Auckland War Memorial Museum	2002	Te Tauihu o Ngā Wānanga/Te Wānanga o Raukawa	2008

Table 1 NPM participating research entities

Source: NPM

The PRE Universities are further represented in the NPM network by the Māori research groups, faculties or centres operating within these PREs:

- University of Auckland (as host of Ngā Pae o te Māramatanga) through Te Wānanga o Waipapa including the James Henare Māori Research Centre
- Auckland University of Technology through Te Ara Poutama, the Faculty of Māori Development
- Massey University through Te Mata o Te Tau and the Whāriki Research Group
- Lincoln University through its Centre for Māori and Indigenous Planning and Development
- University of Canterbury through Aotahi, the School of Māori and Indigenous Studies
- University of Otago representing Te Ropū Rangahau Hauroa a Eru Pomare

 Victoria University of Wellington, though He Pārekereke, Institute for Research and Development in Māori Education and Māori Business, Victoria Management School.

This structure connects isolated researchers working in small teams and institutional silos into a wider community of researchers. The network provides multi-disciplinary research capacities and a critical mass of research effort that did not previously exist. Such a network significantly enhances opportunities for researchers and leverages existing capabilities to better effect.

The organisational reach of NPM is reflected in the proportion of their research contracts that involve more than one organisation. Figure 1 below shows that over 50% of contracts involve more than one research entity, with 35% involving two and 11% involving three research providers. This is an indicator of the degree of formal collaboration that takes place through contracting. However it does not record how collaboration occurs in the day to day programme activities where other parties may also be engaged to contribute to research outputs.

Figure 1 Research contract engagement

The percent of contracts that involve one or a multiple number of providers



Source: Ngā Pae o te Māramatanga, NZIER

2.3. Building Māori research capabilities

NPM's national grants and awards programme has provided over 670 grants and scholarships to support Māori and indigenous students and researchers working in the field of Indigenous (Māori) Development and Advancement. This includes Post-Graduate scholarships, research internships, research projects, publishing and conference support grants, research methods scholarships, Fulbright awards for international research study and to support three Māori students undertaking degrees at Harvard University.

In the period 2002 to 2010, NPM focused on addressing disparities in Māori participation and success in tertiary education and research training. Māori PhD graduates increased from 90 in 2001 to 311 (a 3.5 fold increase), with a further 392

enrolled in PhD programmes. A total of 703 of Māori PhD students were either completed or enrolled as at 2010.

NPM's National Māori and Indigenous (MAI) Post-graduate programme, MAI Te Kupenga, has over 700 students currently involved, with thousands being involved since its inception.

2.4. Research investment portfolio

NPM has funded over 95 research projects that are either completed or underway. This investment has produced over 2500 academic and other research outputs such as conference papers, books, book chapters and journal articles.

NPM research projects have covered a diverse range of subject areas including:

- the use of Māori language
- educational outcomes for Māori
- housing for Māori
- Māori health disparities
- evolutionary biology
- sustainable and more economic commercial fishing techniques
- environmental restoration of lakes and estuaries
- care of elderly Māori
- economic development models and opportunities for iwi.

The breadth of the research portfolio and NPM's newer outcome focused priorities has put an emphasis on highly applied research as evidenced in the survey results and case studies discussed in Section 3. NPM research aims to view the world through a distinctively Māori perspective and to apply the research to addressing contemporary Māori issues and interests. This applied nature of the research makes it very fitting for an impact evaluation.

The diversification of NPM's research base is unusual however, and presents significant challenges for impact evaluation. NPM research is relevant to diverse sectors and hence we had to construct the impact evaluation framework to take account of many potential end users.

As the NPM research portfolio is thinly spread across sectors, it is not realistic to expect the transformational changes you might require from a CoRE or Crown Research Institute with in-depth specialisation in one area of science. While NPM's portfolio may not contain large amounts of leading edge basic research, the focus on applied research offers the opportunities to transfer knowledge to address contemporary Māori issues and interests.

3. Impact evaluation findings

The impact evaluation findings are organised around the survey areas:

- engagement with stakeholders
- funding sources
- social, economic and other impacts.

We report the results below using both survey results and insights from interviews. We also illustrate findings with case stories that came from the interviews we undertook with research end users, which provide further context for interpreting the survey results. The interview key point summaries can be found in Appendix B, which in themselves represent small case studies. Finally, we compare the survey results from all principal investigators (PIs) with the PI results for the case studies to understand how representative they are of the investment in the NPM portfolio.

3.1. Engagement with stakeholders

There is a wide spectrum of stakeholders involved in NPM research and we sought to document these and the level of engagement they had with NPM funded PIs. The intention is to understand whether NPM is achieving its purpose as a CoRE to "strengthen collaborative research across tertiary institutions" and secondly fulfil its own mission to "conduct excellent research *relevant* to Māori communities".

3.1.1. Cooperation between research entities

PIs reported a high level of cooperation between research entities. Figure 2 shows that the majority reported having both formal (63%) and informal collaboration (79%).

Figure 2 Cooperation between research entities

33 Yes, Formal (62.3%), 18 No, Formal (34%), 2 non-responses 42 Yes, Informal (79.2%), 9 No, Informal (17%), 2 non-responses



■ Formal Cooperation ■ Informal Cooperation

Source: NZIER

Table 2 shows the breakdown of formal and informal cooperation reported:

- 29 (57%) reported formal cooperation, which is marginally above that indicated by analysis of contract engagement (51% see Figure 1)
- 17 (33%) had one or the other form of cooperation
- 10% of the projects (5 projects) reported no cooperation of any kind.

Table 2 Formal and informal cooperation between research entitiesNumber of projects reporting cooperation

		In	formal Cooperation	
		Yes	No	Total
	Yes	29	4	33
Formal Cooperation	No	13	5	18
	Total	42	9	51

Source: NZIER

Note that informal cooperation was more prevalent than formal cooperation. This shows the NPM research network outlined in Section 2 is stronger than evidenced solely by formal contracting arrangements across tertiary providers.

3.1.2. Engagement with community stakeholders

We asked principal investigators (PIs) to what extent communities were involved in shaping research questions. They reported that 80% of research involved this kind of engagement (see Figure 3) and just under half of the research was initiated by a community stakeholder.

On average, nearly 70% of the project time was used to gather information from and with stakeholders and to inform those stakeholders of results and implications.

Jamie Ataria, (Manaaki Whenua Landcare Research) worked in partnership with Te Taiwhenua o Te Whanganui a Ōrotu, Ngāti Kahungunu Iwi Incorporation, to assess pollution and development issues in the Ahuriri Estuary.

Rangi Puna, (Mana Ahuriri Incorporated Board Member) was engaged throughout the research process. He assisted researchers to understand the former geography of the Estuary and its fish, shellfish and other wildlife prior to them being affected by uplift from the Napier earthquake, pollution degradation from the Napier industrial estate and other run off, and outlets to the sea being blocked by roads.

(See Appendix B.1.2 He Moemoea mō Ahuriri).

Figure 3 Stakeholder involvement in shaping research



43 Yes Responses (81.1%), 8 No Responses (15.1%), 2 Non-responses

Source: NZIER

3.1.3. Areas of stakeholder engagement

PIs were asked which stakeholder groups they engaged with most in delivering their research projects or programmes.

Figure 4 reports on the PI response to this engagement question. Community groups had the highest strength of engagement (7.1 out of 10), with Iwi Authorities second (4.7 out of 10). Engagement with government was the lowest, at a score of around 2.8 out of 10.

Dr Kepa Morgan (Faculty of Engineering, Auckland University) sought out a practical means for engaging the community, to pilot and transfer new building technology under development. He selected Heeni Ahipara and Rueben Hoterere as partners due to their building knowledge and community engagement. They helped construct the first pilot dwelling.

The pilot dwelling was constructed on a Marae. In addition to this community engagement he obtained acceptance for the new building techniques from Far North consenting authorities.

The Te Ahikaroa Trust was established, targeting affordable housing for communities, with partial funding (\$600,000) from Housing New Zealand Social Housing Unit.

The trust has commenced construction of three family homes on Māori land that are estimated to cost \$200,000 each, requiring a deposit and sweat-equity from the owners. The trust now has 20 families on the waiting list and hence potential for a much wider roll out of the new building technology.

(See Appendix B.1.3 Essential Services for Isolated Communities - Whare Uku).

Figure 4 Strength of engagement – groups PIs engaged with most

Community Groups (43, 81.1%), Iwi Authorities (39, 73.6%), Total Government (35.5, 68.9%), Industries or Businesses (39, 73.6%), NGOs (30, 56.6%)



Source: NZIER

Of note is the relatively low level of engagement with government, which includes local and central government. Given the ability of central government to affect change, through the use of policy levers in education, health, housing and welfare, one might have expected greater engagement in this space.

There has, however, been significant engagement with government in a few instances. Also, government agencies were significant co-investors in NPM research projects as discussed further below.

The engagement analysis indicates a degree of partnering with Māori community and lwi Authorities, which is unlikely to be the case in main stream research. This conclusion is further reinforced through analysis of sources of funding and in-kind support discussed below.

3.2. Funding sources and other support

We asked PIs about financial or co-funding support they gained that was additional to NPM funding, and to report sources of in-kind or non-financial support.

3.2.1. Financial support

As Table 3 shows, just under half of the projects surveyed (24) had additional direct funding outside of NPM funding, with the average value being in the region of \$160,000. The total additional funding came in at just under \$4.1 million.

The range of additional funding was between \$5,000 and \$1.3 million. Two projects accounted for nearly \$2.6 million of additional funding; excluding these, the average level of additional funding was approximately \$66,000.

Table 3 Additional funding

Projects which received non-NPM funding

Additional funding:	No additional funding:	Average additional funding:	Total additional funding:
24 projects	29 projects	\$163,898	\$4,097,444

Source: NZIER

Figure 5 shows the main additional funders of research projects were most frequently universities and other tertiary institutions. Government was the second most frequent additional funder of research projects, despite having the lowest levels of engagement as indicated in Figure 4.

However it is important to note that when combined, tribal and Māori trust funds exceed government as source of funding and represent the second most frequent contributor by type of organisation, nearly matching universities. This indicates the Māori community have placed considerable trust and confidence in NPM funded researchers to advance their interests.

Figure 5 Co-funding sources

Tertiary Institution (13, 24.5%), Tribal Authority (5, 9.4%), Māori trust fund (5, 9.4%), Business or Individual (6, 11.3%), Government (7, 13.2%), Other (2, 3.8%).



Source: NZIER

As shown in Figure 6 universities and other tertiary institutions also provided a high level of in-kind support to research projects, which includes the use of facilities and staff hours. Tribal authorities and government also provided significant levels of in-kind support to projects. In contrast, Māori trust funds provided little in-kind support, which is in accord with their principal role as a guardian of funds.

Figure 6 Sources of in-kind support

Tertiary institutions (19, 36%), Tribal Authority (12, 23%), Māori Trust Fund (2, 4%), Business or Individual (0, 0%), Government (10, 19%), Other (0, 0%)



Source: NZIER

The most common form of support received was staff time with the use of facilities close behind; the number of staff hours for each project was on average, 61 hours. A total of 2,138 staff hours was used, with one project receiving 500 hours of staff time.

Unfortunately, without having comparative data for other research in New Zealand, we cannot say whether the level of in-kind support is exceptional. We suspect it is at least well above the average experience. NPM has a large network operating across universities as discussed and many of the applied and often local research projects would require support researchers working outside their base town.

Figure 7 Type of in-kind support

Use of facilities (26, 49%), Staff time (29, 55%), Other (7, 13%)



3.3. Social economic and other impacts

We used standard metrics for evaluating social and economic impacts from research and innovation:

- documenting communication and research dissemination channels
- assessing impacts on improving practices, processes and policies on agencies, groups and companies
- assessing product innovation and development.

3.3.1. Communication and research dissemination channels

PIs were asked whether their research project or results were discussed in a variety of public and other communication channels.

Figure 8 presents the results. Many PIs had their research aired through multiple media channels (percentages in Figure 8 add to over 250%). It is very common for the research community to access public media and in this case for example 50% of PIs report being on a national television station. Again, we don't have a comparator to say whether this level of transfer is more or less than usual.

What is very significant for public research is that the most commonly used communication channel is Board or tribal council meetings (54.7%). This provides further evidence of NPM acting in accord with its mission to undertake research relevant to Māori communities.

Figure 8 Communication channels

Websites and other new media (16, 30.2%), Newspapers (20, 37.7%), Local government council meetings (16, 30.2%), Board or tribal meetings (29, 54.7%), Local radio stations news report (11, 20.8%), National radio station news report (29, 54.7%), National television station news report (27, 50.9%)



PIs were asked whether they had received invitations to present their research and from what organisations the invitations came. Figure 9 shows invitations most frequently came from academic organisations (83%), followed by tribal authorities or iwi (57%). There was also a strong international interest in the results (42%). This is in accord with our finding that there are no benchmark indigenous research institutions. Rather NPM is seen as a leading centre of indigenous research, hosting fellowships and visitors from other centres that typically have a much more limited scope of work (*See Appendix C*).

Figure 9 Projects presented to various organisations

Academic organisation (44, 83%), internationally (22, 42%), local authority (8, 15%), central government (9, 17%), industry or private business (8, 15%), tribal authority or iwi (30, 57%), regional council (8, 15%)



Source: NZIER

Those organisations which did not invite many researchers to present their findings cover both local and central government alongside industry or private business. This is reflected in the level of engagement seen earlier in Figure 4, which was lower with government and business. This may indicate a lack of interest from government and businesses in Māori Research, specifically NPM's community focused Māori research agenda.

3.3.2. Improvements in practices, processes and policies

The majority of projects reported an improvement in practices, processes and policies in the areas researched (see Figure 10). Improvement in practices was the most commonly reported and significant impact (40, or 75.5%).

Bridget Robson researched the feasibility and implications of developing an indigenous standard population for age-standardisation techniques for use in comparing indigenous and non-indigenous population health outcomes. The results of research demonstrated the need to replace and to standardise statistics for the Māori population using results from that population rather than relying on the World Health Organisation approach.

Paula Searle, Manager Māori Research & Māori Health, Ministry of Health, reported to us it is now policy and standard practice to use Robson's approach. Now widely adopted and embedded in a range of Māori specific statistics, publications and policy work across government.

(See Appendix B.1.7 Kaupapa Māori Epidemiology in Health Research: Finding Our Own Standards).

Figure 10 Practices, processes and policies

Practices – Yes (40, 75.5%), No (3, 5.7%), Don't Know (5, 9.4%), 5 Non-responses. Processes – Yes (31, 58.5%), No (4, 7.5%), Don't Know (12, 22.6%), 6 Non-responses. Policies – Yes (26, 49.1%), No (3, 5.7%), Don't Know (12, 22.6%), 12 Non-responses



Practices Processes Policies

Source: NZIER

Improvement in processes was the second most commonly reported and significant impact (31, or 58.5%), which is consistent with community and iwi authority engagement discussed above.

Policies were the lowest reported impact area, with the highest number of nonrespondents (12, or 22.6%). This could be put down to either the type of community focused projects which don't affect policy making, or a lack of feedback from the projects into areas where research could affect the policy making process. To be influential in policy typically means engagement with central government, which we found to be lower than engagement with community and iwi authorities.

PIs were also asked to indicate the research areas in which they had impacts on practices, processes or policies. The areas are shown in Figure 11 and are quite diverse with the main topics being Māori distinctiveness, Māori health and Education. There was less of an emphasis on Social housing or commercial opportunities for Māori.

Figure 11 Project contributions to areas of research

Environmental quality (16, 30.2%), Māori social housing (3, 5.7%), Education (23, 43.4%), Māori distinctiveness (27, 50.9%), Natural resources (17, 32.1%), Māori employment (16, 30.2%), Commercial opportunities (8, 15.1%), Māori health (24, 45.3%), Strengthening family mana (16, 30.2%), N/A (5, 9.4%)



Source: NZIER

The project "Te Ataakura" illustrates research aimed at enhancing Māori distinctiveness. It sought to reconnect voyage collections in archives and museums across the world though the use of digital media and thereby make them more accessible.

Researcher Dr Wayne Ngata has created a collection of digital taonga from voyages that visited Aotearoa between 1765 and 1840, and the artefacts they collected, with a particular focus on the Tairāwhiti region.

The use of a digital format supports iwi initiatives to reconnect with their taonga, now dispersed throughout the world. The digital format not only preserves them for future generations, but also makes them more accessible for educational uses.

Te Ataakura also contributed to the Transit of Venus celebrations programme for 2011-2012 organised with the Royal Society of NZ, the MacDiarmid Institute and Te Aitanga a Hauiti/Uawa community.

(See Appendix B.1.5 Te Ataakura).

The range of organisations that the projects influenced was also quite varied, with Tribal authority or iwi (26 projects) and Research organisations (24 projects) being the largest (See Figure 12). Education also featured heavily, while judicial organisations were only influenced by a very small number of projects. This could highlight an opportunity for further research to increase relevance in this area.

Figure 12 Organisations influenced by projects

From Regional councils to Research institutions



Source: NZIER

3.3.3. Product and service development

Less than 20% of the research projects developed a product as part of their findings (see Figure 13). The majority of projects did not develop a product or if they did, it was for non-commercial use. A small handful developed a product for commercial use; which may have significant impacts.

Dr Shaun Ogilvie (Cawthron Institute) investigated the commercial feasibility of using Mātauranga Māori-based fish traps to eliminate bycatch associated with commercial fishing

Glenice Paine, Chair, Te Ātiawa ki te Tauihu o Te Waka-a-Māui works closely to co-ordinate the research with the Waikawa Fishing Company which undertook sea trials and the technology will be made available to other fishing companies over the coming years.

The success of the Mātauranga Māori-based fish trap has helped Dr Ogilvie attract \$8.9 million over 6 years, aimed at revolutionising the large export scampi fishery using a similar approach.

(See Appendix B.1.9 Commercial Feasibility of Using Mātauranga Māori-based Fish Traps to Eliminate Bycatch).

Figure 13 New products or services developed?

Products – Yes (11, 21%), No (36, 68%), 6 Non-responses Services – Yes (21, 40%), No (26, 49%), 6 Non-responses



Source: NZIER

By contrast, a significant number of projects developed a new service, but again we see only a handful of these services are for commercial use (5 projects), with the services developed mainly for non-commercial uses. These results are in accord with the research portfolio, which has a significant amount of social and environmental research for public and social good rather than commercial benefit

Figure 14 Commercial / non-commercial products

Products – Commercial (2, 4%), Non-commercial (11, 21%), N/A (28, 53%), 12 non-responses Services – Commercial (5, 9%), Non-commercial (16, 30%), N/A (21, 43%), 9 non-responses



Source: NZIER

3.4. Convergence of qualitative case studies and survey responses

We see few differences in the comparison between the sample used for qualitative interviews or case studies and the total population. The case study research used the same communication channels and worked in similar proportions with tribal authorities or iwi for instance. Two differences we identified are contained in Table 4.

Table 4 Key differences between survey results and sample casestudies

Area	Survey	Case Studies
Engagement Project time spent working with stakeholders to gather information and to inform stakeholders of results and implications	70%	40%
Funding \$ amount of additional funding	\$42,000	\$164,000

Source: NZIER

Due to the small sample size of the case studies we cannot draw any normative conclusions from the differences, and have documented them for the record.

What is of more interest is the broad commonality of results on most measures. We selected case studies across the NPM research portfolio taking account of size, duration and other factors and which *were seen by NPM staff* as having potential impacts. The convergence between survey and case study results is suggestive of there being more success stories to uncover.

3.5. Conclusions

An aim of this evaluation was to develop a framework for assessing the social and economic impacts of NPM funded research. A framework has been developed with a suite of metrics to measure impacts. However it could be improved significantly with comparator metrics or a time series of NPM's results. Despite these limitations, we have been able to significant shed light on the impacts of NPM's research portfolio.

NPM has established an extensive formal and informal network of cooperation between research institutions in accord with its purpose. Its research outputs appear to be highly valued by end users and collaborators. This is evidenced by the fact that just under half of the projects had additional direct funding outside of NPM funding.

NPM funded researchers are highly engaged with the Māori communities. They shape research to directly address concerns of these communities and apply research to address and improve social, economic and environmental outcomes. The research portfolio is however highly diverse, dispersing social and economic impacts across sectors and communities, rather than having concentrated impacts. This spread is nevertheless in accord with NPM mission and research priorities.

Appendix A Qualitative case study evaluation template

Evaluation Information and Responses

Project Title: Project.

PI/Researcher responding:

Research programme or project PREPOPULATED BY NPM INFORMATION			Research and development activities PREPOPULATED BY NPM INFORMATION		Evaluation Focus RESEARCHER TO COMPLETE		
Objectives			What research is being delivered and how? (NB REPORTED ON ALREADY)		How has the research been transferred to users and what are the impacts?		
Description of project / projects (the project brief summary and research questions)	Life-stage (determined from contract start)	Duration (actual length of the project)	Objective/s (project objectives as stated in contract/agreed proposal)	Activities (the work and key tasks, stages of the project)	Planned Outputs (outputs agreed and expected, academic, community, events etc)	Early outcome translation or transfer activity (list of outputs e.g. achievement of a planned output and any outcomes through the project)	Impacts (the contribution the outputs (or early outcomes) have made to end users – e.g. changing policy)
						[researcher to provide responses on next page]	[researcher to provide responses on next page]

Programs and activities are different

Note activities & outputs are different

Outcomes become progressively difficult to attribute to impacts due to external influences e.g. other government funding instruments

Evaluation Responses - RESEARCHER TO COMPLETE

(please use as much space as you require)

Project Title: .

A. Evaluation Focus - How has the research been transferred to users and what are the impacts?

- 1. Early outcome translation or transfer activity
 - Please list recent outputs not provided/reported to NPM
 - List any outcomes through the project
 - Other translation or transfer activities
- 2. Impacts

Please outline the contribution the outputs (or early outcomes) have made to end users or communities e.g. changing policy, changing practice

B. Nominated end-user or stakeholder to contact for impact and value questions/statements

Please provide the name or names of people we can contact to undertake a simple verification (few questions) of the value and impact of your research.

Name:
Role:
Contact details –
Phone:
Email:
Nature of involvement/relationship?

Ngā mihi. We appreciate your time completing this and assisting NPM tell the story of the value and impact of our research.

Appendix B Case studies

B.1 Qualitative impact evaluations

B.1.1 Bring 'Me' Beyond Vulnerability

Project	Bring 'Me' Beyond Vulnerability. Elderly Care of Māori, by Māori
	Kei hinga au e, kei mate au e. Te Tiaki ā te Māori i te hunga kaumātua Māori
Researcher	Dr Mere Kēpa
	Ngā Pae o te Māramatanga, University of Auckland, New Zealand
Responding stakeholder	Dr Ngaire Kerse
	Ngaire Kerse, Head of School of Population Health, Faculty of Medicine and Health Sciences, Tāmaki Campus, University of Auckland
	Also practicing GP in primary health care and professor of Gerontology at the Population Health Centre, University of Auckland
Other stakeholders	Professor Sandy Grand, Marara Rogers-Koroheke, Project Manager, Hokianga Health Trust, Rāwene
Research objectives	A. To study the notion that vulnerability exists within our own communities e.g. social isolation experienced by elderly Māori men and women, intergenerational disintegration, the influence of under- education & unemployment confronted by Māori caregivers, the relationship (if any) between government funding and self- determination with koroua, kuia, their caregivers and the Māori health providers.
	B. To study the roles and obligations of Māori health agencies simply as funders and providers of the 'right services' in order to acknowledge that there is a problem of vulnerability in our communities and changing the extant practice (where possible).
	C. To provide a concept of wholeness that coalesces around a notion of emotional force, elemental stories, trust, devotion and 'service' in elderly care; in other words, to bring together Māori discourses and the 'scientific' management discourse.
Engagement	Ngaire Kerse was not directly engaged in research but enabled some high level contacts between Mere Kēpa & HRC/MOH; Mere Kēpa attends conferences as keynote speaker, networks through the industry, and mentors several students in the Lilacs NZ study.
Interim outcomes	The research helped build awareness of Māori elderly care issues, research capability and facilitated further investment in research from Ministry of Health by way of a long term cohort study of 600 Māori funded by MOH (Lilacs NZ); also continuing dialogue with BUPA, Age Concern to instil more Māori focus into their services.
Final outcomes to date	Ngaire Kerse practice improved research protocols for consulting with Māori; also influence on health which should lead to better outcomes. No substantial final outcomes at this stage, for example, improved outcomes for elderly Māori.

B.1.2 He Moemoea mō Ahuriri

Project	He Moemoea mō Ahuriri: A Vision Plan and Health Assessment for the Ahuriri Estuary
Researcher	Jamie Ataria, Manaaki Whenua Landcare Research Ltd
Responding stakeholder	Rangi Puna, Mana Ahuriri Incorporated Board Member
Research objectives	Project objectives: A. Continue to strengthen partnerships with Te Taiwhenua o Te Whanganui a Ōrotu, Ngāti Kahungunu Iwi Incorporation (NKII),
	Kaumātua Liaison Group (committee of Ngā Hapū o Te Whanganui a Ōrotu elders for the Waitangi Tribunal Report Claim 55), and research expertise from within Napier City and Hawke's Bay Regional Councils to ensure input from all parties with a vested interest in the management and health of the estuary, and to promote further opportunities for collaborative research ventures.
	B. Reviewing past and present literature to summarise:
	i. Māori values relating to the Ahuriri Estuary
	ii. The current management regime for the estuary
	iii. Existing water and sediment physico-chemical monitoring data
	iv. Flounder and cockle ecology and physiology
	C. Developing a 25-Year Living Document for the Ahuriri Estuary including:
	i. Assessment of historical uses and practices
	ii. Shared management options
	iii. Habitat and shellfish enhancement potential
	iv. An agreed approach for future subdivisions/development within the estuary catchment
	v. Strategies for storm water management
	D. Undertaking biophysical research to:
	i. Complete a fish survey inventory for the Ahuriri Estuary
	ii. Generate information on the reproductive health and condition status, and chemical residue body burden for the yellow bellied flounder and cockle and compare with reference site population.
	E. Engaging a local secondary school via:
	i. The part-time secondment of a senior science student
	ii. Guest lectures to the senior science students by members of the research team
	F. Conducting a hui involving tangata whenua, community groups, end-users, and other relevant stakeholders at the conclusion of the research project to disseminate the findings of the research.
Engagement	Rangi was directly engaged in the through the research process. He role involved assisting researchers understand the former geography

	of the Estuary and its fish, shellfish and other wildlife prior to the being uplifted by the Napier earth and pollution degradation from the Napier industrial estate, other run off and outlets to sea being blocked by roads.
Interim outcomes	Greater recognition by the Hawkes Bay Council of the pollution issues in resource management plans, and recognition of potential conservation and recreational values associated with improving the quality of the estuary system
Final outcomes to date	The use of riparian plantings to filter and clean water being flushed into the estuary from industry sites. There is now engagement around opening an inlet to the sea which is estimated to cost around \$2 - 5 million.

B.1.3 Essential Services for Isolated Communities - Whare U

Project	Whare Uku
Researcher	Dr Kepa Morgan, Faculty of Engineering, Civil & Environmental Engineering Auckland University
Responding stakeholders	Heeni Ahipara and Rueben Hoterere, Te Ahikaroa Trust
Other stakeholders	Paul Royal (Waimango)
	George Mansina (Otara)
Research objectives	The research set out to identify and develop a technically feasible stand-alone dwelling construction solution for Māori communities, paired with existing applications of the Uku (reciprocation of kind deeds) in building.
	The aim was to produce a synergistic result that offers the optimised combination of a pre-fabricated off-site and the on-site construction of Uku spaces for sleeping and living.
	The resulting conceptual designs will be trialled on developments in Ahipara but also potentially have applications in other contexts including disaster response and in international settings where the context of the challenge facing Māori relocating back to their ancestral lands is replicated.
Engagement	Dr Kepa sought out practical means to engage and transfer the building technology under development and selected Heeni and Rueben as parties due to building knowledge and community engagement. They helped construct the first pilot dwelling.
Interim outcomes	These include a pilot dwelling constructed on a Marae, getting acceptance for the new building techniques from Far North consenting authorities and establishing a Housing Trust targeting affordable housing for communities with partial funding from Housing New Zealand Social Housing Unit.
Final outcomes to date	The trust has commenced construction of three family homes on Māori land that are estimated to cost \$200,000 each, requiring a deposit and sweat equity from the owners. The trust now has 20 families on the waiting list and hence potential for a much wider roll out of the new building technology.

B.1.4	Fostering	Te Pa	Harakeke
	· ooconing		

Project	Fostering Te Pa Harakeke: Advancing Healthy and Prosperous Families
Researcher	Professor Sir Mason Durie & Associate Professor Te Kani Kingi
Responding stakeholder	Lauren James, Manager, Māori Lakes District Health Board
Research objectives	This project considers a single research question. "What are the critical factors that enable Whanau to flourish?". By examining information gathered from two longitudinal studies - Growing-Up in New Zealand and Te Hoe Nuku Roa the question will be explored through six research themes:
	1. Identifying markers associated with 'flourishing whanau'
	2. Profiling the contemporary lives of Māori Whanau
	3. Investigating the cultural realities of Whanau in modern times
	4. Identifying the resources (cultural, social, economic) available to Whanau
	5. Exploring the challenges facing Whanau in 2025, and;
	6. Examining strategies that will enable Whanau to flourish.
	The research will be led by the Whanau Research Programme at Massey University in association with The Centre for Longitudinal Research at Auckland University.
Engagement	Lauren was engaged in the research process by way of attending a conference at which Te Kani presented.
Interim outcomes	The project is an early stage project. At this stage Lauren is engaged closely tracking and supporting the research and sees the potential for the research to deliver her much better markers or indicators of whanau health and well-being to inform DHB funding and interventions.
Final outcomes to date	N/A.

B.1.5 Te Ataakura

Project	Te Ataakura: Re-connecting Voyage Collections in Archives and Museums through the Creation of Digital Taonga
Researcher	Wayne Ngata
Responding stakeholder	Kelly Blackman, Te Aitanga a Hauiti Community/Marae Co-ordinator
Research objectives	Project objectives: 1. Produce and assemble a collection of digital taonga from voyages that visited Aotearoa between 1765 and 1840, and the artefacts they collected, with a particular focus on the Tairāwhiti region.
	2. Organize this material into collaboratively built digital research environments that will enable new research connections to be made, shedding light on the provenance of certain taonga and the circumstances of their acquisition.
	3. Explore the broader implications of these processes, in theory and in practice, in light of current debates about digitization e.g. in relation to issues of cultural and intellectual property, in particular through an international workshop to be held in Auckland.
	 Repatriate relevant research findings to Māori communities in ways that support iwi initiatives to reconnect with their taonga, now dispersed throughout the world.
	5. Build the results of this work back into the research, so that what present-day communities make of their taonga and their current location in museums is reflected in our outcomes.
	6. Disseminate the results of the research to a wide audience, through publications, digital resources, conferences and an exhibition, emphasizing the contemporary socio-cultural value of these 'artefacts of encounter' and the contributions they can make to community empowerment and development.
	7. Develop local knowledge and skills surrounding digitization processes, including locating primary source material, liaising with holding institutions, learning about scanning and 3D imaging technologies, developing protocols for access and usage in compliance with local and international regulations regarding copyright and reproduction rights, and producing digital resources for local audiences.
	8. Build iwi knowledge and skill pathways to establish and maintain relationships with academic, archival and museum institutions in New Zealand and internationally.
	9. Provide a case study of community engagement with digital media, that will be useful for similar projects internationally.
Engagement	Kelly was engaged early in the project. She acted to facilitate communication of the research with the community, including the Gisborne iwi Ngāi Tāmanuhiri. This was critical for not only building historical knowledge but also for confirmation and acceptance of the digital historical record being produced. Following on from the research Kelly acted as coordinator for the Transit of Venus celebrations programme for 2011-2012 organised with the Royal Society of NZ, the MacDiarmid Institute and Te Aitanga a Hauiti/Uawa community, which used Te Ataakura research outputs.
Interim outcomes	Te Ataakura recreated Taonga is digital format not only preserving them for future generations, but also making them more accessible to the community compared to say physical museum exhibitions. A

	related digital educational resource was created and produced by the group working with students from Tolaga Bay Area School & Kuranui. Te Ataakura also contributed to the Transit of Venus celebrations programme for 2011-2012 organised with the Royal Society of NZ, the MacDiarmid Institute and Te Aitanga a Hauiti/Uawa community.
Final outcomes to date	The main outcome to date is the enhancement of ICT educational capablity. Te Ataakura work led to developing an applied research technology relationship with Te Whare Wānanga o Awanuiārangi (Awanuiārangi) in 2013-2014. This has resulted in the installation of a dedicated ultrafast broadband link through the fibre optic network of which Awanuiārangi is a partner, that will allow Te Aitanga a Hauiti institutions and community to access dedicated internet services and learning at speed and in real time. This is being leveraged to support in the first instance; educational outcomes through the Tolaga Bay Area School/Kahukuranui, Te Aitanga a Hauiti Centre of Excellence 'Hooked Up To Achieve' and the Uawa Tiaki Tai (Tolaga Bay Surf Life Saving Centre) out of school learning hubs for NCEA learners.

Project	Te Pae Tawhiti: Te Kura Roa (Otago)
Researcher	Associate Professors Poia Rewi and Rawinia Higgins
Responding stakeholder	Professor Piri Sciascia Pro-Vice Chancellor Māori, Victoria University. He is a member of the Advisory panel for Te Kura Roa and Pro-Vice Chancellor Māori at Victoria University. He is also the Chair of Te Māngai Pāho (Māori broadcasting funding agency) and has long been an advocate for Māori language issues.
Other stakeholders	Dr Katharina Ruckstuhl, Māori language stakeholder (Otago), University of Otago
	Mahina Melbourne, Manager Māori Language in Education, Ministry of Education (MOE)
	Pania Papa, Māori Language Consultant, Takatū Associates
	Tina Olsen-Ratana, Co-Chair Te Kōhanga Reo National Trust
	Mike Eru, CEO – Te Ataarangi
	John Bishara, CEO, Te Māngai Pāho
Research objectives	Project objectives:
	 To develop a programme of research for te reo Māori that can address the following research objectives (2-4 below).
	2. A study of the Māori language as a vehicle of worldview, getting to the heart of the language, understanding the true value of the language and how it can and is utilised to transform the experience and understanding of those who are exposed to it.
	 Increasing the number of people participating in, speaking and writing the Māori language.
	4. Increasing our understanding of fluency and the numbers of people achieving higher levels of fluency.
Engagement	While not engaged in undertaking the research Professor Sciascia was consulted and generally supported the research. The researchers engaged extensively around the country during the research in Hui and many other forums.
Interim outcomes	Professor Sciascia stressed the research provided and evidence base on which have well informed and reasoned discussions on the importance of te reo for cultural identify and how to progress te reo Māori issues, in particular how to widen the use of te reo.
Final outcomes to date	-

B.1.6 Te Pae Tawhiti: Te Kura Roa (Otago)

B.1.7 Kaupapa Māori Epidemiology in Health Research: Finding Our Own Standards

Project	Kaupapa Māori Epidemiology in Health Research: Finding Our Own Standards
Researcher	Dr Bridget Robson, Department Public Health, University of Otago
Responding stakeholder	Dr Paula Searle, Manager Māori Research & Māori Health, Ministry of Health
Research objectives	A. Assess the feasibility and implications of developing an indigenous standard population for age-standardisation techniques for use in comparing indigenous and non-indigenous population health outcomes.
	B. Assess the strengths and weaknesses of various methods of calculating confidence intervals for age-standardised rates and ratios for indigenous and non-indigenous populations.
	C. Consult and seek review, both nationally and internationally, about the development of an indigenous standard population.
	D. Develop case studies exploring the usefulness of an indigenous standard population.
Engagement	Bridget Robson initiated the move to replace to standardise statistics for the Māori population using results from that population rather than relying on the WHO approach. Some parts of MOH reluctant at first, but later adopted this for Māori-specific statistics. Not a 2 way involvement: Bridget advises MOH on how to use the Māori standard, rather than the MOH specifying what it needs.
Interim outcomes	The research adjusted an international process to the specifics of Māori population, reflecting its actual age profile. Now widely adopted and embedded in a range of Māori specific statistics, publications and policy work.
Final outcomes to date	Using indicators of health standardised to Māori population should improve the targeting and effectiveness of health measures towards them. No substantial final outcomes at this stage, for example, evident improved outcomes for elderly Māori.
B.1.8 Harvesting Fruits of Papatūānuku – a Kaitiaki Approach to Geothermal Development

Project	Harvesting fruits of Papatūānuku – a Kaitiaki Approach to Geothermal Development				
Researcher	Dr Dan Hikuroa				
Responding stakeholder	Colleen Skerrett, from the Kawerau A8D Trust working in collaboration with Innovations Development Group (Hawaii)				
Other key stakeholders	The Ngāti Tūwharetoa Settlement Trust Bay of Plenty				
Research objectives	This research project goal was to help facilitate and support Māori involvement in and into the geothermal energy industry. To achieve this the research aimed to lay the foundations for increased Māori participation in the geothermal industry by providing a template for development of the resource which takes into account Māori values				
	Key objectives were to:				
	 Determine relevant Kaitiaki principles and Mātauranga for geothermal development 				
	2. Integrate technical data with Kaitiaki principles and Mātauranga				
	3. Workshop draft Kaitiaki Geothermal Development Model				
	 Determine whose role is key to realising geothermal dreams of A8D Trust 				
	5. Produce a Kaitiaki Geothermal Development Model				
Engagement	Dan was engaged by the A8D Trust as a component of the overall research project, while working with Ngāti Tūwharetoa. The Trust had long term waste disposal and remediation problems as a result of past activity from wells operated by the Government putting sludge into a sacred spring. The Trust had received from the Crown geothermal wells (KA 24 and KA 22) as part of a settlement, and the Trust wanted to develop these with a generation power plant.				
	Colleen advised that the Trust saw a need to get resource consents for the development project consistent with Tikanga (cultural guidelines for living and interacting with others). She saw Dan's development of Kaitiaki (guardianship) principles as valuable to developing a robust basis for the Trust to manage the resource and geothermal assets in a manner consistent with Tikanga.				
	Engagement took the form of workshops, hui, working groups and students from The University of Auckland researching specific issues to 'decipher' scientific data and also to engage in the exploration of integrating Mātauranga and Tikanga with Science and regulation.				
Interim outcomes	Colleen outlined a variety of ways in which the research helped. It helped provide the framework for the Trust against which they could plan geothermal development, and negotiate consent conditions on discharge rights that were being reviewed. It also helped them set expectations in work undertaken by technical engineering advisors appointed to advise them on the development.				
Final outcomes to date	Made a critical contribution to gaining approval for resource consents required for a planned 20 a megawatt geothermal plant.				

Source: NZIER

B.1.9 Commercial Feasibility of Using Mātauranga Māori-based Fish Traps to Eliminate Bycatch

Project	Commercial Feasibility of Using Mātauranga Māori-based Fish Traps to Eliminate Bycatch			
Researcher	Dr Shaun Ogilvie, Cawthron Institute			
Responding stakeholder	Glenice Paine, Chair, Te Ātiawa ki te Tauihu o Te Waka-ā-Māui			
Research objectives	This project investigated the commercial feasibility of using Mātauranga Māori-based fish traps to eliminate bycatch associated with commercial fishing. The goal was to raise the average trap revenue to at least \$34.40, the figure identified in a pre-cursor study as the breakeven value.			
	 Design and carry out sea trials to gather data on trap catch and bycatch rates using two trap designs and a range of soak times. 			
	Design and carry out further sea trials looking at aspects of fish behaviour around different trap designs.			
	Carry out revised trap design and operational parameter evaluation.			
	 Use collated data to run an economic simulation model to assess commercial economic feasibility of fish trapping. 			
Engagement	Glenice acted as a collaborator on the research programme, and a conduit between the Cawthron Institute and the Waikawa Fishing Company.			
	The Waikawa Fishing Company ran the sea trials, to compare trap designs and optimised operating parameters and soak times at sea.			
Interim outcomes	The primary users of this research are commercial fishing companies. There is a significant market premium for live fish.			
	The Waikawa Fishing Company has been able to use an alternative fishing methodology that is safer for the environment compared to conventional methods.			
	Glenice stressed that the environmental aspects of the trap are highly valued by Te Ātiawa people and in accord with their Tikanga. The Ministry for Primary Industries is now able to support new fishing practices that are environmentally sustainable.			
Final outcomes to date	In addition to the Waikawa Fishing Company, who has been able to use the new fishing methodology, the technology will be made available to other fishing companies over the coming years. This successful research helped facilitate further research investment with a new MBIE programme, worth \$8.9M over 6 years, aimed at revolutionising the scampi fishery. The scampi fishery has an estimated annual export value of \$200 million, well above its current \$25 million value according to Cawhron ³ .			

Source: NZIER

 $^{^{3}\} http://www.cawthron.org.nz/aquaculture/news/2014/new-research-advance-lucrative-scampi-fishery/$

B.1.10 Te Tupunga Māori Te Pae Tawhiti– Māori Economic Development

Project	Te Pae Tawhiti – Māori Economic Development Te Tupunga Māori					
Researcher	Distinguished Professor Graham Smith and Rāwinia Kāmau					
Responding stakeholder	Jody Hamilton, Ngāti Kahungunu advisor on economic development strategy					
Research objectives	The research aimed to harness the energy of the emerging Māori economy to the full benefit of iwi and Māori through analysing and assessing practices and strategies that will enable Māori economic self-development located in their own aspirations.					
	 To build an evidence base through the collation of existing information that will guide and inform the programme design. 					
	 To design a self-defined aspirational framework for Māori Economic Development through a process of strategic stakeholder engagement. 					
	 To explore the hypothesis that creativity and innovation are key enablers for increasing economic returns from Māori owned or controlled assets. 					
	 To design innovative models and scenarios to strategically inform Māori Economic Development. 					
	 To enhance understanding of context of Māori Economic Development nationally and internationally, informing through another indigenous perspective. 					
	 To create and deliver a futures framework that inspires and enables transformative change through a robust process of dissemination. 					
	 To support and develop a number of outstanding researchers in Māori Economic Development. 					
Engagement	In around 2007 Ngāti Kahungunu had a fisheries settlement and set up an asset holding company to manage it. In late 2011 they also set up an economic development Board.					
	Ngāti Kahungunu invited Graham Smith, Richard Jefferies (co-leader) and Rāwinia Kāmau to assist the Board with the economic development strategy. Aspirations were to create jobs and more asset wealth creation.					
	Discussions and meetings were with a wide range of entities in the Ngāti Kahungunu Iwi rohe. These include Rūnanga, Trusts, Incorporations, businesses and the Hawke's Bay Regional Council, Napier and Hastings Councils, and Business Hawke's Bay (Hawke's Bay business development agency).					
Interim outcomes	Shaped the development of a performance management framework used for the economic development strategy. This helped provide the confidence for the economic development Board to establish an economic development unit.					
	The Board also supported the establishment of Business Hawke's Bay and helped with attracting Icehouse business incubator into Hawkes Bay.					

		Ĺ
Final outcomes to date	At this earlier stage we are not aware as to whether there have been	l
	any impacts on job and wealth creation We the initiative has been	ĺ
	successful in helping the iwi involved development strategy around	
	creating wealth from settlements and this may have spill overs	ĺ
	learning that help iwi manage settlements.	
		1

Source: NZIER

Appendix C Potential international benchmarks programs

C.1 National Centre for Indigenous Studies

Established in 2005, the National Centre for Indigenous Studies (NCIS) promotes and initiates cross-disciplinary research and teaching in a wide range of areas of relevance to Indigenous Australians. NCIS staff and Higher Degree by Research (HDR) candidates are involved in a range of research projects across the field of Indigenous studies.

C.1.1 Mission

- NCIS goals and purposes are to:
- promote the recognition of and respect for Indigenous knowledges, perspectives and experiences in law, Indigenous public policy, community and the public domain
- promote debate between Indigenous and non-Indigenous peoples, policymakers and researchers about our shared past, present and future, at the local, national and global level
- promote the participation of Indigenous people in research, education, teaching and learning at ANU
- establish a focal point for the co-ordination of Indigenous education and research across the ANU academic community, and develop collaborative initiatives that bring together ANU resources
- support the development of the knowledge, skill and capacities of Indigenous peoples and relevant organisations to build healthy, self-sustaining communities, clans, tribes and nations.

C.1.2 Governance

The National Centre for Indigenous Studies (NCIS) was established as a stand-alone Centre within the Australian National University (ANU).

The Centre's charter is for NCIS to be recognised as a leading academic institute for inter-disciplinary research in fields that are of relevance to Indigenous Australians, especially in relation to the enrichment of scholarly and public understandings of Australian Indigenous cultures and histories. NCIS works collaboratively with ANU research and teaching centres that are of relevance to Indigenous studies. These include the Centre for Aboriginal Economic Policy Research (CAEPR), the Australian Centre for Indigenous History, the School of Archaeology and Anthropology, and the School of Music.

C.1.3 Research

NCIS has five academic staff and eight adjunct scholars, all of whom have high-level expertise across Indigenous studies. Areas of expertise include:

- culture
- education & knowledge
- governance
- health
- heritage
- history
- human rights
- identity

- law
- Native Title
- policy
- remote Indigenous development
- repatriation
- representation
- social justice

These research priorities coincide with the Strategic Research Priorities nominated by the Australian Research Council.

C.2 The Indigenous Peoples' Health Research Centre (IPHRC)

Development of IPHRC and its programs began in 2002 when the majority-Indigenous board first convened. In 2007, IPHRC became one of nine Network Environments of Aboriginal Health Research (NEAHRs) funded by the Canadian Institutes of Health Research (CIHR) -Institute of Aboriginal Peoples' Health.

Mission

The mandate of IPHRC is to promote and nurture capacity for community generated health research among Indigenous Peoples. It pursues the creation of an ethical environment in research that supports community-based definitions and solutions to health.

Granting agencies support the IPHRC role of pursuing ethical research frameworks and the implementation of respectful methods for knowledge translation and transfer of health knowledge. This pursuit includes the acknowledgement of indigenous models and methods of health and the support required for the influence of governmental policies and practices in respect for indigenous health delivery and promotion.

C.2.1 Governance

An Executive Board reflects the partnership and Memorandum of Understanding between the University of Regina, University of Saskatchewan and the First Nations University of Canada. Each of these organisations is represented on the Board.

The governance model includes community members and our network of researchers working alongside the executive board.

C.2.2 Research Focus

Funding provided to IPHRC is primarily focused on building capacity in health research among Aboriginal people, communities and institutions through trainee support, and promoting research into areas of Aboriginal health:

- Indigenous identity, place and connectivity, and cultural/linguistic continuity, as they relate to health
- Mental health and addictions
- Complex interactions of factors
- Chronic disease

C.3 Indigenous Wellness Research Institute (IWRI) – National Centre of Excellence

The IWRI appear to be an umbrella organisation based out of Washington University. It aims to:

- marshal community, tribal, academic, and governmental resources toward innovative, culture-centered interdisciplinary, collaborative social and behavioral research and education.
- support the inherent rights of Indigenous peoples to achieve full and complete health and wellness by collaborating in decolonizing research and knowledge building and sharing.

IWRI is supported by funding from the National Institute of Minority Health and Health Disparities of the National Institutes of Health.

It contains several research centres including:

- Centre for Indigenous Health Research
- Centre for Indigenous Child and Family Research
- Research Centre of Excellence

According the IWRI there has been a Fulbright Fellowship visit to New Zealand supported by Ngā Pae o te Māramatanga .

C.3.1 Centre for Māori and Indigenous Governance

Te Mata Hautu Taketake - the Māori and Indigenous Governance Centre is a new research centre within Te Piringa - Faculty of Law at the University of Waikato.

C.3.2 Mission

The aims of the Centre are to:

- Meet currently unmet demands for cutting edge quality research on Māori governance best practice models
- Build a body of knowledge and wisdom to help improve Māori governance
- Report on Māori governance best practice models, practices and institutions
- Provide practical training for Māori and non-Māori who work in or with Māori governance organisations

- Learn from Indigenous governance experiences globally as well as sharing Māori successes
- Work with Māori to evaluate and report on their current governance effectiveness and enhancement for the future
- Seek collaborative research partnerships with Māori and other key stakeholders on Māori governance.

Our vision is to improve Māori governance generally, whether it concerns Māori trusts and incorporations, asset holding companies, iwi organisations, post-settlement governance entities, marae and hapu committees; and Indigenous peoples' organisations globally. The Centre will engage in collaborative research nationally and internationally by undertaking longitudinal research, in consultation and partnership with profit and non-profit Māori and Indigenous organisations.

C.4 Māori/Indigenous Health Institute (MIHI), University of Otago

Established 2012 the institute's main activities include:

- Contributing to the development and implementation of the undergraduate medical curriculum
- Evaluation of Māori focused curriculum initiatives
- Contributing to both undergraduate and postgraduate health science papers
- Supporting Māori medical and other students, including through a Schoolwide professional development strand
- Supervision and mentoring of Māori researchers and non-Māori undertaking research alongside Māori participants. (This includes summer studentships, dissertations and theses.)
- Undertaking Māori-focused research, both university and community based
- Collaborating with other groups and Departments within the School to develop and implement research
- Contributing to the development/implementation and evaluation of Māori focused health programmes
- Providing advice and contributing to policy development within the school and university wide
- Working to support Iwi research development
- Working with Māori colleagues from other university-based health centres in research and teaching
- Contributing to National Māori health networks
- Contributing to local and national health committees and working groups
- International collaboration with indigenous health organisations from other countries

In addition to the above, all clinical staff within MIHI will continue to practise clinically within the community as part of their role with the institute.

C.5 Mira Szászy Research Centre for Māori and Pacific Economic Development

NZ's first dedicated Māori and Pacific research facility in business and economics, which aims to enhance the quality of life for Māori, Pacific and other indigenous peoples, their communities, small-to-medium enterprises and nations.

C.5.1 Research focus

- Researching economic development and its relationship to spiritual and cultural capital.
- Leadership in Māori and Pacific terms appropriate for business and economics.
- Collaborating with the Pacific Forum, the Pacific Business Trust and the New Zealand Pacific Business Council on research into Pacific economies, trade and business development.
- Yes we can! Future Proof the Pacific. Collaborating with the Pacific Forum member states on trade, economic development and business success.
- The Māori and Pacific four well-beings: spiritual, environmental, family-kinship, economic and business measures.
- Māori and Pacific eco-tourism cultural tourism and appropriate business models.
- Whānau Ora a Māori business model of the future.
- Multi-dimensional model of identity and cultural engagement.

Other activities include hosting The Aotearoa New Zealand Māori Business Leaders Awards and support of the Mana Programmes - recruitment, mentoring, study support and pastoral care programmes for all Māori and Pacific students at The University of Auckland Business School.

Appendix D Survey questionnaire

Questionnaire to evaluate and report the value of Nga Pae o te

To: All Ngå Pae o te Måramatanga past and present lead researchers (Principal investigators (Pis) and Project Leaders)

Re: Questionnaire to evaluate and report the value of Ng8 Pae o te M8ramatanga research and activities - essential to our future funding

Tēnā koutou katoa

1.

No doubt you are aware that Ng8 Pae o te M8ramatanga (NPM) is currently preparing a proposal for new investment in the centre for the period 2015-2020. As part of our case for funding we are undertaking a project concerning the value of the investment in NPM in the period 2002-2013. We seek your assistance to help us in this regard.

Of particular interest is 'research impact' which concerns the significance or influence of NPM funded research projects and programmes on others (individuals or organisations). 'Research impact' concerns how research outputs are used beyond research settings such as in product development (where those products are taken to market), influence upon public policy making and teaching. Of particular interest to NPM is the way in which our research outcomes are passed to our communities and positive change is catalysed and enabled. The purpose of NPM research is address needs and opportunities facing MBori communities leading to positive change and transformation.

The New Zealand Institute of Economic Research (NZIER) has been engaged to conduct a significant part of this analysis and the attached questionnaire forms part of the work that NZIER has been asked to complete.

We invite all our Lead Researchers/PIs to complete the questionnaire. It will take approximately 30 minutes to complete. YOUR RESPONSES WILL BE CONFIDENTIAL to the evaluating team, they are not going to be use to evaluate you as a researcher, rather they will be used to assess and report the impact and contribution of NPM's research programme. No signal responses will be published that enable identification of you as an individual. Questionnaire responses will be collated and analysed and a report will be prepared.

For this reason, the attached questionnaire commences with community and end user engagement. There is a section concerning co-funding which is a way of communicating the degree to which our research attracts the support and attention of others. Finally, part C discusses impacts and outcomes directly and there are prompts in the questions to assist you in thinking about the 'impact' of your research.

If you have more than one NPM funded project please complete this survey for EACH PROJECT SEPARATELY. If you you have multiple projects that are funded as programme of research, or a project that has been further funded or extended by NPM please answer as ONE PROJECT.

Please complete the questionnaire online (questionnaire below) by MONDAY 2 DECEMBER 2013

NOTE YOU CANNOT SAVE A SURVEY SESSION - you must complete the questionnaire in one session ensuring you submit the entire questionnaire completed. Therefore please ensure you have time to complete the questionnaire, or print out the question set and review before doing online.

If you have any questions or concerns regarding the questionnaire and this invitation please do not hesitate to contact Daniel Patrick, Executive Director (d.patrick@auckiand.ac.nz, 09 9239729) or Dan Hikuroa, Research Director (d.hikuroa@auckiand.ac.nz, 09 923 9026).

We appreciate your help with telling the story and showing the value of NPM research and activities.

Remember please answer all questions, reading the instructions and questions thoroughly before responding. If you are unable to answer a question please select 'Don't know' or if not applicable to you, your research, select 'N/A'.

Ngā mihi Ngā Pae o te Māramatanga

1. Please indicate the title of your research project?

REMEMBER: If you have more than one NPM funded project please complete this survey for EACH PROJECT SEPARATELY. If you you have multiple projects that are funded as programme of research, or a project that has been further funded or extended by NPM please answer as ONE PROJECT.

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2. Community Engagement Part ONE

This first section is about engagement, the level and nature of involvement of communities in your research. Please
remember to answer all questions relating to your research project or programme supported and funded by NPM.
2. To what extent has engagement with community (local community, people of the
community and/or lwi) shaped the research questions addressed by your programme?
Major
Moderate
Minor
Not at all
3. Did the community with whom you worked approach you to undertake the research?
○ No
4. Do you have a whakapapa relationship with that community?
⊖ Yes
○ No
5. To what extent has engagement with community been important for the on-going
development and direction of your research?
O Major
O Moderate
Minor
Not at all

Questionnaire to evaluate and report the value of Nga Pae o te
3. Community Engagement Part TWO
You answered POSITIVELY (major, moderate, or minor) to the question "Has engagement with community been important for the on-going development and direction of your research?". Please tell us some more about your engagement with community groups.
6. Has community engagement involved: CO-OPTING STAKEHOLDERS INTO A DECISION PROCESS?
7. Has community engagement involved: FORMAL COOPERATION BETWEEN RESEARCH BODIES?
Ves No
8. Please estimate the proportion of project time spent on ENGAGING WITH STAKEHOLDERS TO GATHER INFORMATION:
0<10%
0 10<20%
0 30<40%
↓ 40<50% ↓ 50<60%
0 60<70% 70<80%
0 /0-50% 0 80<90%
90<100%

Questionnaire to evaluate and report the value of N	ga Pae o te
9. Please estimate the proportion of project time spent on INF	DRMING
STAKEHOLDERS OF RESULTS AND IMPLICATIONS:	
0<10%	
0 10<20%	
20<30%	
30<40%	
40<50%	
50<60%	
60<70%	
0 70<80%	
80<90%	
0 90<100%	
10. Has community engagement involved: OTHER ENGAGEM	ENT (hot specified above)
O №	
If yes please specify the other type of community engagement you undertook:	*
	¥

4. Community Engagement Part THREE

How much are you or were you engaged with the following groups to deliver or ensure the outcome of your research? (please answer each question)

11. Which of the following stakeholder groups did you most engage with in delivering or ensuring the outcome of your research? Select one:

Community groups or individuals

Iwi authorities

C Local government

Central government

National industry or businesses

Non-government organisations/trusts

Other (please specify)

12. Please estimate what proportion of project time was spent engaging with all stakeholders in delivering or ensuring the outcome of your research. (please estimate a percentage) e.g. 30%

Percentage effort:

13. Please estimate the level of engagement work spent with other bodies to deliver or ensure the outcome of your research on a scale of 1-10 where 1 indicates no engagement and 10 indicates most of your engagement work.

	1	2	3	4	5	6	7	8	9	10
Community groups or Individuals	0	0	0	0	0	0	0	0	0	0
Iwi authorities	0	0	0	0	0	0	0	0	0	0
Local government	0	0	0	0	0	0	0	0	0	0
Central government	0	0	0	0	0	0	0	0	0	\circ
National Industry or businesses	0	$^{\circ}$	\circ	0	$^{\circ}$	\circ	\circ	0	$^{\circ}$	$^{\circ}$
Non-government organisations/trusts	0	Ο	0	0	0	Ο	0	0	0	0
Other groups/entities (please specify)	0	0	0	0	0	0	0	0	0	0
Other (please specify if yo	u selected of	her as a ch	lice above							

5. B. Support and Co-Funding

This second section is about the support and co-funding you have received for your NPM projects.

14. In the course of your Ngā Pae o te Māramatanga research programme/project have you received co-funding, financial support or in-kind support in addition to NPM support and funding to undertake this project?



uestionnaire to ev	aluate and re	port the value of Nga	a Pae o te
6. Support and Co-F	unding OUTSI	DE of Ngã Pae o te Mār	amatanga.
		port you have received outside of	-
-	-	cial support from sources	-
please provide the app	proximate amour	t committed over the life o	of your project.
NZD (approximate value is fine)			
16. Please select below	w all source/s of	co-funding or financial su	pport from sources
other than NPM (you m	ay have more th	ian one source, please sel	ect all that apply):
University or tertiary institution	,		
Tribal authority or Iwi			
M8orl Trust Fund			
Community fund			
Private business or individual			
Government ministry or agend	cy .		
Scholarship fund			
Other (please specify)			
-		ncial support has come fro	-
or tertiary institution c	ouid you please	name this/these organisat	ion/s (list all that apply)
		×	
18. Where you have re	ceived funding	through grants, excluding	support you received
from NPM, what is the	ir principal purp	ose?	
	Mostly	Partly	N/A
General research support	0	0	0
Support for publication of results	0	0	0
Support for individuals' qualifications (e.g. PhD etc)	0	0	0
Support for internship or similar work experience	0	0	0
Other	0	0	0
If you answered other please specif	y the other funding purpos	e	

Questionnaire to evaluate and rep	port the value of Nga Pae o te
19. Are you being sponsored (in kind or	financially) by a partner entity to transfer the
results of your research?	
() Yes	
č	
○ №	
If yes, please specify sponsor and contribution	

Questionnaire to evaluate and report the value of Nga Pae o te
7. Ngā Pae o te Māramatanga Research Support
This section is for describing Ngā Pae o te Māramatanga research support.
20. Please indicate all source/s of in-kind support you have received for your NPM research by selecting them below (you may select more than one source):
University or polytechnic
Tribal authority or Iwi
Māori Trust Fund
Community fund
Private businesses or individuals
Government ministry or agency
NA
Other (please specify)
21. Where you have indicated that IN-KIND support has come from another university
or tertiary institution could you please name this/these organisation/s (list all that apply)
22. If your project DID receive IN-KIND support what was the nature of IN-KIND support
provided? (Please select all that apply)
use of facilities
staff time
other
If other, please specify nature of support
23. Where the in-kind support involved contributions of staff time, how much time has
been committed over the life of your research programme or projects?
Please estimate the amount of IN-KIND support provided in total work days.
Time (days):
24. Did you subcontract work from another university or tertiary institution in the
course of your research?
⊖ Yes
○ No

Questionnaire to evaluate and report the value of Nga Pae o te 25. Where you subcontracted work from another university or tertiary institution in the course of your research, could you please name the institutions? (list all that apply) * ٣

8. Impacts and outcomes

This third and final section is regarding the impact and contribution of your research. Please answer all questions as best you can in relation to your project or programme

26. Has your research been an important input into supporting or facilitating improved practices, processes and policies? Please select all that apply below:

	Yes	No	Don't know
practices	0	0	0
processes	0	0	0
policies	Õ	Ō	Ō

9. Research Impact: Practices, processes or policies.

27. Where your research has made a contribution to improvements in practices, processes or policies, please indicate any areas in which this happened by selecting them below (you may select more than one area). If this question does not apply in the case of your project please select N/A:

Environmental quality
Social housing for Māori
Education and training (including broader public education)
Use of natural resources
Employment or opportunities for Māori
Commercial opportunities for Māori
Health and wellbeing of Māori
Strengthening family mana
28. Where your research has made a contribution to improvements in practices,
processes or policies, please indicate the kind of organisation/s you influenced (you
may select more than one). If this question does not apply in the case of your project
please select N/A:
Regional council
Tribal authority or Iwi
Industry or private business
Central government
Central government Local authority
Local authority

Questionnaire to evaluate and report the value of Nga Pae o te
10. Research Project Dissemination
29. Has your research project or results been discussed through any of the following communication channels (you may select more than one):
National television station news report or interviews
National radio station news report or interviews
Local radio station news report or interviews
Board or tribal council meetings
Local government council meetings
Newspapers or magazines
Websites and other new media
30. Have you had invitation/s to present to any of the following organisations/groups?
(please select all that apply)
Regional council
Tribal authority or lwi
Industry or private business
Central government
Local authority
Internationally
Academic organisation (e.g. seminar or conference presentation)

11. Research Impact: Project/product development 31. Has your research programme or project been involved in the development of new or improved products? \vec{hest}{No} 32. Has your research programme or project been involved in the development of new or improved services? \vec{hest}{No} 33. If your research project or programme has been involved in the development of new or improved products please specify the new/improved product or services below 34. What stage of development is the product? (If more than one product is being developed please answer for the product? (If more than one product is being developed please answer for the product? (If more than one product is being developed please answer for the product? (If more than one product is being developed please answer for the product? (If more than one product is being developed please answer for the product? (If more than one product is being developed please answer for the product which accounts for most of your time). \vec{onmercialization} \vec{onmercialization} \vec{onmercialization} \vec{onmercialization}	Questionnaire to	evaluate and report the value of Nga Pae o te
or improved products? Ves No 32. Has your research programme or project been involved in the development of new or improved services? Ves No 33. If your research project or programme has been involved in the development of ne or improved products please specify the new/improved product or services below 4. What stage of development is the product? (If more than one product is being developed please answer for the product which accounts for most of your time). concept plot product being assessed early commercialisation commercialisation	11. Research Imp	pact: Project/product development
or improved services? Yes No 33. If your research project or programme has been involved in the development of ne or improved products please specify the new/improved product or services below 34. What stage of development is the product? (If more than one product is being developed please answer for the product which accounts for most of your time). concept pliot product being assessed carity commercialisation commercialisation 	or improved produ	
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developed please answer for the product which accounts for most of your time).		
concept pliot product being assessed early commercialisation commercialisation		
	pilot product being asse early commercialisation commercialisation	

uestionnaire to e	valuate and re	eport the va	lue of Nga Pa	ae o te
2. Research Impa	ct: Project/rese	arch outcom	les	
	,,			
35. Please tell us wh	at you believe the	impacts of yo	ur research were	e by briefly writing
all impacts below:				
		*		
		*		
36. What was the val	ue of being part o		work?	
		*		
		Ψ.		
37. Is there anything	else you would li	ke to tell us? If	so please inclu	de here:
		*		
		*		
hank you for your time completing	ig this questionnaire – and y	our continued support	of Ngã Pae o te Māramat	anga.
Please ensure you submit the que			vill be then redirected to a	fresh impact survey that you
an complete or any other NPM fi	inded projects you have und	iertaken.		