

## Forum

# New Zealand's Performance Based Research Funding (PBRF) model undermines Maori research

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The Performance Based Research Funding (PBRF) model was instigated in 2002 to increase “the quality of research through peer assessment and performance indicators” in New Zealand (Ministry of Education 2002: 17). It is used to allocate funding between universities, departments and researchers according to the putative quality and quantity of their research outputs over the preceding 6 years. PBRF is expected to incentivise improved research excellence and efficiency, and allow government to invest research funds where greatest returns will result. This is potentially a huge gain for Māori. However, “by changing the conditions of knowledge production, research assessment exercises may also alter the shape and direction of disciplines by diverting and channelling researchers’ intellectual attention and political engagement, influencing what they study, how they do it, and how they report and write” (Middleton 2009: 194). Indeed, universities repeatedly encourage researchers to focus on activities that will improve their PBRF rankings. We believe that an unintended consequence of PBRF is the creation of significant barriers to increasing the volume, scope and quality of environmental research for Māori.

We are a group of Māori and Pākehā researchers that are ‘PBRF eligible’ (we would say ‘PBRF vulnerable’) that seek to help realise the government’s *Vision Mātauranga* to ‘unlock the innovation potential of Māori knowledge, resources and people’ (MoRST 2005). We do not speak for Māori. Rather we speak as scholars that wish to use Māori values and processes in the way we discover or co-produce knowledge in the ways described by Smith (1999), Harmsworth (2001), Allen et al. (2009 this issue), and Moller et al. (2009).

We have identified 14 problems that stem from the PBRF process, including its definitions of quality science, who gets to decide, inequity between career stages and gender, and the way PBRF is administered.

(1) PBRF discourages long-term research, just as did the Research Assessment Exercise, the United Kingdom’s equivalent scheme (Elton 2000). It took the *Kia Mau te Tīti Mo Ake Tōnu Atū* researchers and community nearly a decade to build a fully trusted relationship and the research progressed much more slowly than ‘normal’ science (Moller et al. 2009). This slower

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pace was needed to ensure that the co-production of knowledge was ethical, accurate, authentic, trusted and used. PBRF discourages researchers from engaging in such cross-cultural processes because they are expected to have published at least four papers of international excellence standard (“nominated research outputs”) over 6 years, which encourages a fast turn-around of research processes.

(2) PBRF disadvantages practical and applied disciplines, just as the Research Assessment Exercise did in the United Kingdom (see references in Middleton 2009). Many of the pressing needs of Māori Sustainable Development and sustainable lifestyles require attention on applied research problems (Harmsworth 2001).

(3) PBRF makes it harder to transfer control of the research process to local Māori communities (which is an important way to ‘unlock innovation potential’) because of mounting pressure through each 6-year assessment period for the researchers (not the community-research partners) to produce predictable outputs. Unfortunately this forces a focus on end-products rather than on the quality of the process itself.

(4) PBRF chooses predominantly outputs, not outcomes, to measure excellence. Researchers engaged with Māori can proffer evidence of ‘peer esteem’ and ‘contributions to the research environment’ and community capacity building which might include evaluation and support for improved cross-cultural research process, but 70% of the grade allocated to the researcher is based on (up to 34) research outputs. Of these outputs, the greatest value is given to peer-reviewed articles in international journals, and they are judged on quality according to narrow and traditional academic criteria rather than relevance to local communities or other stakeholders. This potentially exacerbates the ever-decreasing relevance of universities to *Te Ao Māori* (the Māori world) and discourages research with Māori that aims at excellent outcomes.

(5) PBRF rates outputs that are ‘quality assured’, but Māori community ‘peer review’ is not considered as constituting quality assurance in all but the Māori assessment panel (see point 12 below). Instead of incorporating the ‘*kanohi ki te kanohi*’ (‘face-to-face’) and holistic evaluation sought by Māori (Smith 1999; Allen et al. 2009 this issue; Moller et al. 2009), PBRF evidence must be provided by the researcher in written form on a website, and is evaluated in absentia by strangers. A mere 1024 characters are allocated for the researcher to explain why each Nominated Research Output (NRO) is one of the researcher’s most important four outputs from the last 6 years. It may be impractical to do the evaluation face-to-face, but nevertheless this is not the normal way that quality of research would be assessed by a participating Māori community.

(6) Researchers are instructed to nominate sole authored papers whenever possible, as these are generally more highly valued in the PBRF system. Cross-cultural research is often trans-disciplinary and so demands team work. Outputs will be most reliable and energised when the knowledge of all contributors is acknowledged and respected by co-authorship. An important part of the capacity building process is to encourage engagement by Māori in all stages of the research, including publication of the research and its presentation at hui and conferences. Co-authorship in the Māori community is celebrated as in the *whakatauki* (proverb) “*Tāu rourou; tāku rourou*—your contribution; my contribution; brings a satisfaction to the people”. Sole authorship is sometimes seen as *whakahīhī* (prideful to the point of being cheeky).

(7) Researchers are instructed to nominate outputs published in international journals with ‘high impact ratings’ based on citation rates. The main audience for most cross-cultural environmental research is local. That is where it gets its motivation, relevance, application and strength, especially if traditional ecological knowledge is involved in co-production of the new knowledge (Berkes 2009 this issue; Robson et al. 2009 this issue). International level journals

invariably attract more citations than local journals, quite independently of the excellence of the science described. Many of us believe that whether a journal is published ‘overseas’ (i.e., published offshore) is a poor predictor of quality. Many New Zealand journals contribute to international debate and meta-analysis as well as serving local audiences (just as is happening in this Forum on cross-cultural environmental research and management). Favouring international journals above local ones will inevitably reward generic (non-place-based research) above applied local research.

(8) Encouraging publication in international journals makes it harder for place-based and applied scholarship. Referees and editors of international journals have often rejected our papers simply because the prime audience is not general enough. This leads to New Zealand authors trying to reframe the place-based knowledge to illustrate theoretical constructs that were never part of the design of the study in the first place. If a Māori-oriented paper is accepted for publication overseas, much of the restricted paper word limit must be expended in getting international readers into the New Zealand and Te Ao Māori context.

(9) Participation in the PBRF process requires considerable attention to self promotion—something which is contrary to the values held by certain sectors of the academy, e.g., younger academics, women, Māori and Pasifika.

(10) PBRF evaluation disadvantages young establishing academics (Adams 2008). Thankfully there is a rapidly growing cohort of Māori university researchers (Walker in press), but this also means that a higher proportion of them are at early career stage, especially within Māori & Pacific Studies departments, and thereby they are collectively more likely to be awarded low scores.

(11) The PBRF system also does not fairly allow for researchers who have *whānau* (family) commitments; the system is primarily designed around full-time academics. Those caring for *tamariki* (children)—often women—face the double challenge of establishing a career whilst caring for whānau. There is an adjustment of expected number of outputs for part time work, but not in their ‘quality’. We are aware of written complaints lodged by women about lack of due adjustment for time out for child-rearing, but complainants were not even informed whether their concern was forwarded to TEC, let alone if a re-evaluation occurred. Organisational strategies to increase fairness (e.g., policies on equal opportunity, childcare support, etc.) have increased the number of Pākehā women in institutions, but have done little, if anything, for ‘coloured women’ (Jones 1998). Māori women are even more under-represented in science than are Māori men (McKinley 2003). We are concerned the PBRF system places further impediments to increasing participation by Māori women in science; we need more role models and more environmental research conducted from the perspective of Māori women.

(12) PBRF evaluation processes include an option to be evaluated by the ‘Māori Knowledge & Development panel’ (hereafter, the ‘Māori panel’) and thereby can include more culturally based peer review processes. This helps leaven some of the above risks but then immediately constrains the applicant into being considered part of ‘Humanities’ scholarship, a category mainly designed for traditional scholarship about issues of Māori culture, language, arts, etc. This inequity sends a fundamental message that Māori research is simply studying Māori themselves, not about studying all aspects of life and the universe in a Māori way. One potentially serious consequence of ignoring the scientific research associated with Māori knowledge is that the university and department employing the scholar will receive half of the PBRF grant money (Table 1). This situation suggests universities have ring-fenced Māori scholarship within the humanities thereby awarding less funds to Māori science even though scientific research is acknowledged as being twice as expensive as scholarship in humanities (per researcher).

**Table 1** Relative weighting and funding for different subject areas according to a scholar's Performance Based Research Funding (PBRF) ranking (A, B, C or research inactive). Table shows approximate funding awarded to a scholar's university over the 6 years following the 2006 PBRF assessment round.

Subject area	Weighting*	PBRF grade for scholar			Research inactive
		A	B	C	
Māori knowledge and development, law, humanities, business studies	1.0	\$204,966 <sup>†</sup>	\$122,980	\$40,993	\$0
Sciences, IT, nursing, sport and visual arts, theatre, media	2.0	\$409,932	\$245,959	\$81,986	\$0
Engineering, applied sciences, clinical medicine, veterinary science	2.5	\$512,415	\$307,449	\$102,483	\$0

\*The relative weightings of different groups of subject areas are based on table 8.2 of Tertiary Education Commission (2007).

<sup>†</sup>Each figure is calculated as the New Zealand dollar values awarded to the University of Otago in 2008 multiplied by six to estimate the total amount received for the assessment period. The government adjusts the base amount awarded each year so this total is approximate only.

In reality the types of research processes advocated by Smith (1999), Harmsworth (2001), Allen et al. (2009) and Moller et al. (2009) are slower and much more expensive in time and travel than science done without cultural referencing, so why should it receive only half the amount of resourcing?

(13) Having completed their 'Evidence Portfolio' (EP), researchers are assessed by a panel and allocated a grading of A, B, C or as 'research inactive'. They can opt to have their EP cross-referred to one or more secondary panels including the Māori panel (TEC 2005: 155). The EP is then decided by the primary panel after receiving an evaluation by the Māori panel. This simply opens the scholar to a double jeopardy because the types of criteria for judging excellent process and performance in the Māori panel are so very different from those in the science panels. Space and criteria for asserting the quality of the nominated research outputs are so restricted that it is practically impossible to please one set of criteria without failing at the other. Nor is there a transparent process for how the separate evaluations of the Māori and other panel will be melded. Are the scores averaged? Or is the highest of either used? Or the lowest? It is clear that the primary subject panel makes the decision on the final mark without further discussion with cross-referenced one. A difference of one mark on the grade transitions has potentially huge implications for the revenue they will attract to the university (Table 1). Faced with a double jeopardy of being evaluated by two very different sets of indicators of excellence, we expect most science researchers that work with Māori will elect for evaluation by the science disciplinary panel alone.

(14) Although most of the PBRF allocation to the universities is apportioned by the 'evidence portfolios' submitted by its researchers, additional funds are allocated according to 'External Revenue' levels earned by their academics. Securing long-term research funds for *Vision Mātauranga* science is extremely difficult (Moller et al. 2009: 235), and the penalty is then compounded by subsequent reduced PBRF allocation from ER.

One of our Māori authors summed up his overall concern about PBRF thus: "the inherent competitive nature of PBRF marginalises both our tikanga, and our growth". While our focus here has mainly been on unintended consequences for Māori research, we suspect that many of the same challenges will hamper other placed-based, applied, transdisciplinary and

especially participatory action research investigations that are not overtly Māori or involving indigenous knowledge. The varied applications of place-based knowledge illustrated by this Forum suggest that modification of the PBRF processes would be immensely valuable for both *Vision Mātauranga* and other scholarship.

We contend that many of the above problems and disincentives to do research in a Māori way could easily be alleviated if (a) scholars were permitted to be evaluated either by the quality criteria of the Māori or by other subject panels, while their emoluments were awarded according to their subject area (e.g., biological science); if (b) a broader and more pluralistic approach was taken for judging the quality of all scholarship; if (c) an over-arching panel was convened to assess excellence in Māori terms for all disciplines; if (d) the moderation steps were adjusted to ensure that scholars nominating to be cross-referred to the Māori panel are not jeopardised by having to target the EP to meet two sets of peer evaluation criteria; if (e) more transparent ways of adjusting for early career and part-time status were instigated; and if (d) international research and publication was not considered to be more excellent than local research (citation and journal ratings should be abandoned as an indicator of quality).

We wish to make our stance absolutely clear—we are not arguing that the funding of internationally relevant studies is unimportant. Our argument is simply that this should not marginalise research that deals with issues that are of primary relevance to New Zealand, and the Crown's Treaty of Waitangi partner in particular. The scientific and cultural benefits of working with indigenous knowledge (e.g., Berkes 2009; Robson et al. 2009), and application of that research, demands that the researchers are accountable on the local *marae* (traditional Māori meeting place) as well as to international journal review editors and academics.

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