



**MASSEY UNIVERSITY**  
COLLEGE OF SCIENCES  
TE WĀHANGA PŪTAIAO

March 16, 2022

**Te Ara Paerangi - Future Pathways Submission**

I am writing as a Professor of Chemistry at Massey University. I have in excess of 25 years' experience in the New Zealand science system as both a student and academic. This includes being an applicant to funding schemes such as the Marsden Fund, Catalyst Fund and Smart Ideas, and as a Principal Investigator with the MacDiarmid Institute for Advanced Materials and Nanotechnology.

I welcome the opportunity to provide a series of suggestions concerning the science system in New Zealand:

**(i) NZ should develop a system to the Canada Research Chairs.**

Citing their website "In 2000, the Government of Canada created a permanent program to establish 2,285 research professorships—Canada Research Chairs—in eligible degree-granting institutions across the country. The programme stands at the centre of a national strategy to make Canada one of the world's top countries in research and development. It invests approximately \$311 million per year to attract and retain a diverse cadre of world-class researchers, to reinforce academic research and training excellence."

Essentially, the scheme supports excellent researchers with long-term funding to support their research and training opportunities.

**(ii) The Marsden Fund should receive greater financial support.**

The Marsden Fund is highly esteemed by the scientific community in part because it produces the best outcomes in terms of research progress, publications and researcher training. However, it is woefully underfunded and success rates of below 10% are common. Therefore, it should be funded more generously, even if this means a reallocation of funds away from investments that are larger but do not perform as well.

**(iii) The National Science Challenges should be discontinued.**

This funding scheme was created in a really odd way, does not have buy-in from a large segment of the science community. It also suffers from high administrative costs since each challenge has a separate – and burdensome – management structure. Consequently, less money is available for research itself). It should be discontinued and the funding reallocated to the Marsden Fund portfolio.

**(iv) Reports of funded research should be made publicly accessible.**

It is often difficult or impossible to find out (a) who was awarded funding, and (b) what the outcomes of the funding were. Since grant recipients are mandated to write reports on their grants, this latter point would be easily remedied by making the final reports of all grants accessible on the MBIE website.

**(v) Lottery systems should be implemented to award grants.**

The Health Research Council uses a lottery to allocate some of its research funding. This concept should be applied more broadly, for example to the second round of the Marsden Fund and Smart Ideas programmes. This would both speed up the process to make it more responsive and allow researchers to move forward more rapidly with their ideas. It would also acknowledge the fact that grant proposals that reach this stage cannot be differentiated on any sound basis.

Yours faithfully,

A handwritten signature in black ink that reads "SGTelfer". The letters are cursive and somewhat stylized, with the "S" and "G" being particularly large and connected.

Shane G. Telfer

*Professor of Chemistry*