President's column

This year continues to see science, technology and wider research on disinformation play a prominent role in the successful, ongoing response to Covid-19. Accordingly, the New Zealander of the Year is Siouxsie Wiles, who may soon deserve a preemptive nomination for Science Communicator of the decade or century? And the Prime Minister's science prizes have recognised multiple efforts, mostly notably the Te Pūnaha Matatini team's impressive response to Covid-19 led by former NZAS President Shaun Hendy.

The fabulous and well-recognised successes hide the difficulty science and many scientists are facing in Aotearoa. Despite the sense that scientists stood up to combat Covid-19, the Government's Budget 2021 was disappointing for New Zealand's scientists. First and foremost, this was because there is no new funding visible, and there are slight post-stimulus declines in many areas. In nations like the United States where the post-truth policies allowed the pandemic to spin out of control, science is generating hope – starting with vaccine development – and financial recovery packages include big increases in science funding.

For our future science workforce, the least hopeful news has been the lack of support in the Government's 2021 Budget to continue the one-off Whitinga early career fellowships. This one-off package will help 30 researchers bridge from PhDs into careers, but will leave behind over 200 unsuccessful applicants. Certainly, there is no return to normal allowing full international travel for young scientists to be expected to work overseas post-PhD, and it appears we lack the data to track the severity of this problem and its long-term impacts.

In normal times we would likely laud the Budget's Antarctic investment in a Scott Base rebuild as a significant win for underpinning science infrastructure. The reality is that we are living through a time of considerable strain in universities, and there was no release from the Beehive about Research, Science and Innovation associated with the Budget or in the month preceding it. Meanwhile, the Association continues raise concerns following our detailed investigations of Massey University's plans to cut one-third of science staffing. And our most recent discovery, led by Councillor Lucy Stewart, has been that PhD student stipends have dropped well below minimum wage, so much so that students appear to be eligible for a considerable housing benefit.

We should ask why our sectors, particularly universities, haven't successfully argued for increases to their major research funds: Marsden, Performance Based Research Fund, and Centres of Research Excellence, or even just for more funding for fellowships. Let's make the collective effort to do better in Budget 2022, beginning now. Otherwise, we'll likely lament the lack of a science-led effort to build back better in years to come, if we continue to struggle to respond as fast as competitor nations to the need for investment and action on emerging needs such as climate change, water and health.

Given the situation, what's a scientist to do to find future purpose? I look to the more action-oriented appropriations for climate change and emissions research. Looking at detailed data that comes out with each budget, appropriations with 'climate change' or 'greenhous'" in the title are set to reach $60m this year, and those with 'climate change' in their scope are headed to $144m. Unusually, both have grown ahead of last year's Budgeted amount.

Keeping climate change responses on track may provide a role for scientists developing innovation and technology, but it seems important to note that innovation may need to proceed largely outside traditional science institutions. A fraction of the total is tagged as research, with $27m for agriculture and forestry, our main sources of emissions and sinks. That's down slightly from $36m being spent this year, an amount equal to nearly half the Marsden fund.

Looking ahead, the real money is for action: the Climate Change Minister announced another $20m to support policy, $300m to accelerate investment in low-carbon technology, and an estimate of $3b over five years recycling revenue from the Emissions Trading Scheme. Thus, there may be reasons to believe that Research and Development spending will increase. The question, after many years without a national scheme to support careers after PhDs, is whether we are building the science workforce needed to lead action and innovation.

It seems apparent that to justify further investment, given several reviews that appeared early last year, New Zealand needs to consider a major renewal of our science system as we promoted in the last issue of this publication and have recently pushed out publicly. Let's imagine the drive toward the actions and innovation that New Zealand and its politicians want to invest in. What does this look like? We call for open discussion that engages through and beyond our status quo institutions, comparison to international examples, and a vision for stability, equity, diversity, and manaakitanga in a future for the creative science that New Zealand deserves.

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