

Science Funding in New Zealand

The system of funding scientific research in New Zealand was without doubt the most stressful aspect of my research on truffles and other edible mycorrhizal mushrooms when I worked in the public sector. This will be *fully* outlined another day but the highlight was certainly the discontinuation of public funding for research on truffles the year after we produced the first commercial harvest in the Southern Hemisphere in 1997. So I think I am entitled to have my tuppence worth of input into the debate that is currently intensifying in New Zealand.

A competitive system has been used for the allocation of state sector funding in New Zealand since the late 1980s (Innovation Dynamics 2005; MoRST 1998-99). The reasons given for the introduction of this system have been discussed and summarised by Doug Edmeades (2004, 2006) derived from the Beattie Report (1986), Arbuckle Report (1988) and Hanzard (CRI Act:1st, 2nd and 3rd Readings, and the Report from the Education and Science Committee). These were:

1. Improved efficiency - remove duplication of research, large bureaucracy, inability to 'retire' old or ineffective staff.
2. Improved accountability - inability to control outcomes using the input lever.
3. Improved flexibility - science was captured by the science providers and the Public Finance Act restricted the mechanisms by which industry could be involved.
4. Improved alignment - better match with government policy and with industry.
5. End of uncertainty and instability in the science sector.
6. Improved technology transfer - i.e. better linkage between science and industry.

This led to the establishment of the Crown Research Institutes (CRIs) that were expected to be commercially viable companies and compete for public and private sector research contracts (Ministry of Research, Science & Technology 2002). Funding is administered by the Foundation for Research Science & Technology (Andrew Fletcher Consulting 2006; Ministry of Research, Science & Technology 2002), policy is set by the Ministry of Research, Science & Technology but is monitored by Treasury (The Treasury 2006).

The following 20 years saw various modifications to the scheme that were detailed by the Ministry of Research, Science & Technology. Some examples are:

1998 The foresight project - towards a knowledge [based] society (www.morst.govt.nz/Documents/publications/discussions/MoRST-Building-Tomorrows-Success.pdf)

1998-99. Setting the scene. *17*. Report of the Ministry of Research Science and Technology. Pp. 21-22 (<http://www.morst.govt.nz/Documents/publications/annualreport/MoRST-Annual-Report-1998-1999.pdf>)

2000 Igniting the future - Strategic direction 2000-2003 (www.morst.govt.nz/publications/corporate-reports/igniting-the-future/)

2005 Picking up the pace - intervention rationales for outcomes in research, science and technology (www.morst.govt.nz/Documents/work/pace/Pace-Anchor-Paper-December-2005.pdf)

2006 Roadmaps for science (www.morst.govt.nz/current-work/roadmaps/faq/)

2007 Futurewatch (www.morst.govt.nz/current-work/futurewatch/)

2008 Advanced skills action plan (www.morst.govt.nz/about/consultations/asap/)

2008 Changes to negotiated investment (www.morst.govt.nz/Documents/publications/funding/MoRST-Treasury-Stable-Funding-Decision-2008.pdf)

However, generally funding was rarely for more than 1 to 3 years and redundancies were not uncommon with the most publicised the sacking of 48 HortResearch CRI staff in 2002 and 70 in Industrial Research Limited CRI in 2006 (Lancashire 2006, 2007).

To say that the system had its critics would be a gross understatement. The New Zealand Association of Scientists document "There is a better way" (2005), Doug Edmeades' article "Is the commercial model appropriate for science?" (2004), James Watson's paper "The road ahead" (2005), and John Lancashire's article "Can the New Zealand science system be saved?" (2007) covered the concerns of many scientists. A discussion document commissioned by MoRST from MDL (2005) showed that it too was not without concern for the effects the system was having on some scientists.

In 2007 an OECD report voiced diplomatically muted concerns which was followed by a more critical appraisal by the Public Services Association (2007). A comment from AgResearch (2007), one of the CRIs, was also critical of the system, "New Zealand persists in the view that head-on competition between research institutions, and between these institutions and universities, is the only way that scientists will be compelled to perform." Very recently criticism of the system reached a head when a panel of eminent scientists (National Science Panel) working under the banner of the Royal Society of New Zealand published "A science manifesto: or plan for the recovery of New Zealand science". This was endorsed by 2500 staff in the CRIs and the New Zealand Association of Scientists (2008) and put into context by the Listener article "Science solutions" (3 May 2008).

The question now on every scientist's lips is will the system pay attention to the growing dissatisfaction, if there will be changes announced in May's Budget, and if so whether they will be cosmetic and irrelevant or innovative and inspired.

To come: The effect on scientists, Issues faced by management

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