In this issue

The *One World, One Health*[1] paradigm is a global initiative that acknowledges the health interdependence of humans, other animals, and ecosystems. However, despite this interdependence, communication shortfalls between professional disciplines have led to unnecessary health, environmental, and economic burdens. The organisations designed to protect health within each discipline often fail to communicate with one another about threats that are shared across disciplines

Hillery Harvey's paper *Building bridges to protect health* describes work under a 2010 Axford Fellowship in Public Policy centred on enhanced partnerships among humans, other animals, and ecosystem health sectors in New Zealand. The outcome of Hillery's project is a guide to help protect the health of New Zealand's people, production animals, wildlife, and environment by urging and guiding transdisciplinary interactions.

Land is a finite resource and its use affects the environment and the economy. However, despite its importance, decisions on land use are not always being made using science-informed policy. The paper by Alec Mackay *et al., Land: Competition for future use,* addresses this issue and was developed from information presented at the one-day 'Collision of Land Use Forum' held at Massey University in August 2010, and subsequent discussion.

Recommendations arising from that forum include the need to: establish a national Land Management Forum; review current guidelines for land use management; accommodate natural capital and ecosystem services considerations in land use management processes; educate decision makers at all levels of the importance of soil and land use to the economy and environment; and advocate for understanding of science and for its use as the basis for policy.

R is a language and environment for statistical computing and graphics and provides a wide variety of statistical and graphical techniques. Statistician and former NZAS president, David Lillis describes the advantages of using R in his paper *Use R for data analysis and research*.

David concludes that for many scientists and data analysts, mastery of R could be an investment for the future, particularly for those who are beginning their careers. The technology for handling scientific computation is advancing very quickly, and is a major impetus for scientific advance. Some level of mastery of R (or an equivalent such as Matlab or Python) has become, for many applications, essential for taking advantage of these developments. Spatial analysis, where R provides an integrated framework access across many different computer programs, is a good example.

Runninghot! 2010 was the third in the Runninghot! Series of conferences organised jointly by He Waka Tāngata and the Oxygen Group and supported by the former Ministry of Research, Science and Technology (MoRST). The conference built on the momentum established by the 2006 and 2008 events, and focused on realising the value of research for New Zealand. In their report on the 2010 conference Helen Bostock *et al.* indicate that it addressed the different forms of value that can be derived from current research, and identified practical ways of enhancing and realising the benefits of future research in New Zealand.

With the dissolution of MoRST the authors ask if the Runninghot! Series has been a useful 'experiment' and might prove a valuable resource for the new Ministry of Science and Innovation. In the belief that this is the case the organisers of this conference announced that there would be another in 2012 as it was an important event for young and mid-career researchers from different disciplines to interact and broaden their networks.

2011 marks the centenary of Marie Curie's second Nobel Prize. In their paper *Envisioning science: Marie Curie's journey from Poland to Paris,* Sue Odlin and Jean Fleming describe the pioneering spirit that gave Curie the drive to become one of the first women to gain an education, and qualifications, in the sciences.

The authors opine that Marie Curie is to be admired for her choice to both marry and continue her work and study. She combined the ultimate creativity of motherhood, mostly as a solo parent, with a lifetime of work which gained her two Nobel Prizes and other awards.

New Zealand's Crown research institutes were established in 1992 from the then Goverment-owned research agencies, the largest of which was the Department of Scientific and Industrial Research, established in 1926.

In October 2009, at the direction of the Prime Minister, the Minister of Research, Science and Technology established a taskforce to review the CRI model to ensure CRIs were effectively contributing to New Zealand's economic development. The report of the taskforce was released on 4 March 2010.

Towards the end of March 2011, the popular media started to carry stories about the possible establishment of three super-CRIs to replace the existing eight. When interviewed on the matter, the Minister said that while the CRI Taskforce report had said amalgamations were not the first priority, '…it became clear to some of the CRIs that there was a lot of overlap, and a couple actually approached me and said there were ways to deal with this…I thought we could either deal with the situation ad hoc or we could take a slightly more systemic approach to it.'[2]

In response NZAS said 'This smacks of a rush of blood to the head, after a decade and more of inaction…' and, '[r]ather than further cuts, the New Zealand science sector is in need of stability and the sense that there is some solid strategic view of the future.'[3]

By the end of April, Cabinet had indicated that amalgamation of the existing CRIs was not on its agenda at this time. Government, however, is still awaiting the outcome of its review of the high-value manufacturing sector, including its research agency Industrial Research Ltd.[4]

In 1992, Peter Pockley, Australia's most experienced science correspondent, qestioned the formation of the CRIs, initally in two letters to the editor of the then Wellington newspaper *The*

[1] *See http://www.onehealthinitiative.com/index.php*

[2] *See http://www.stuff.co.nz/national/politics/4870128/Merger-of-research-institutes-on-the-cards*

[3] *See http://www.scientists.org.nz/news/2011/04/more-uncertainty-for-cris-and-new-zealand-science*

[4] *See http://www.beehive.govt.nz/release/improving-rampd-support-high-tech-sector*

Dominion and later in an article in the journal *Public Sector*. The latter has been reproduced in full in this issue of *Science Review*, as it seemed that many of his independent observations on the dramatic science policy/practice division then being applied in New Zealand warranted revisiting in the light of the recently suggested futher reorganisations of the CRIs. In the note Peter has added to his 1992 article he says, *inter alia*

Such periodic tinkering with the support of science should be put to an acid test by the methods of the very discipline affected; viz. science itself. First, the original 'reformers' and their acolytes who enthusiastically implemented the expensive changes should be challenged to produce incontrovertible evidence of tangible, significant benefit by this time to New Zealand science and the nation at large. Then, the current crew should be put on notice of similar scrutiny to come.

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