
In this issue

First up in this issue of *Science Review* is NZAS President Nicola Gaston's annual report at the 73rd Annual General Meeting in Wellington. In the report Nicola reconfirmed the Association's objective to advocate for science and scientists. In a number of incidents through the course of her inaugural year, the Association publicly supported the right of an individual scientist to speak out about a difficult issue, surveyed scientists throughout New Zealand on their views of the National Science Challenges, and asked their views on the proposed Code of Public Engagement which is being considered by the Royal Society of New Zealand.

Nicola also announced the Council's nominations of Dr Janet Grieve and Emeritus Professor David Penny for honorary membership which were accepted unanimously by the AGM.

In his third part on the Association's history, *Tackling issues and initiating public debate: New Zealand Association of Scientists 1974–91*,¹ Geoff Gregory highlighted the activity of the Association against the backdrop of Government and social changes in New Zealand between 1974 and 1991. Geoff commences his account with a quote from the 1978/79 President Dr Wren Green's keynote address at the 49th Congress of the Australian and New Zealand Association for the Advancement of Science, held in Auckland in February 1979,

... the Association's Council will be continuing its stated policies of tackling issues and initiating public debate in matters relating to science, scientists, and the social and environmental impacts of science.

Massey University's Mike Joy gives an account of the state of New Zealand's freshwater ecosystems in his article, *New Zealand's freshwater disaster*. The draining of 90 per cent of wetlands and the removal of a similar amount of indigenous vegetation cover since European settlement has meant a loss of crucial hydrologic and biological functions and thus placed much strain on the health of freshwater bodies.

Mike sees little abatement of the problem given present policies on intensification of agricultural production and the spread of urbanisation, but raises the hope of improvement through the involvement of Māori in freshwater management. The increasing economic value of tourism could also assist as with the improvement of water quality in Lake Taupo. He also suggests the possible role of 'closing the loop' on farms with regards to added animal and soil nutrients being cycled within the farming system. Examples of this approach are now occurring in the USA and Europe.

In their article *Participation in the Science Fair: A call for data*, Priscilla Wehi and her co-authors discuss the reasons for encouraging diversity in the participation in science. They also indicate that the recruitment and retention of talent for the scientific workforce needs to be socially inclusive to ensure the diverse talent is accessed.

The authors note the role of Annual Science Fairs in New Zealand in providing opportunities for school children to learn what science involves. However, they ask whether all children have the same opportunity to participate in this experience and what factors encourage or act as barriers to participation

In an attempt to determine this, they analyse data from the Otago Science Fair held in 2014 and associated information contained in the Ministry of Education databases. Arising from the analysis, the authors were able to determine some aspects of diversity but not the extent of the participation of Māori communities in science.

The authors urge all science fairs to record data on participation and achievement rates which will allow better identification of diversity issues both to improved scientific understanding among New Zealanders, and create a strong, diverse scientific workforce

R is a language and environment for statistical computing and graphics and provides a wide variety of statistical and graphical techniques. In 2011, author David Lillis introduced *Science Review* readers to R.² In this issue, David further explores R's analytics and graphical capability and shows how the emergence of additional software packages has made R a more powerful and versatile tool. In his paper he illustrates why R is the application of choice for many professional statisticians around the world.

Finally, we have the Association's Treasurer's Report for the 2013/14 financial year. The Treasurer notes that the Association remains in a healthy financial position with resources to run conferences and to support causes of relevance to the science community.

Allen Petrey
Editor

¹ Parts 1 and 2 were in *New Zealand Science Review* (2013) vol. 70(1):10–19; and 70(4): 65–76.

² Lillis, D. 2011. Use R for data analysis and research. *New Zealand Science Review* 68(2): 73–79.