

# **NEEDED: A TERTIARY INSTITUTE OF WATER AND ATMOSPHERIC RESEARCH**

Earl Bardsley,  
University of Waikato

The intimate physical linkage between the atmosphere and fresh water is recognized in the invariably enjoyable joint meetings we have from time to time with the Meteorological Society of New Zealand. As expected, the 2013 call for abstracts incorporates a wide range of suggested themes extending from weather forecasting to catchment management.

However, it is perhaps a reflection of our (entirely understandable) focus on the science of water and atmospheric processes that we seldom see a listed conference sub-theme along the lines of progressing matters at the higher levels. To be sure, such presentations are few. A notable exception was Jenny Webster-Brown's contribution at our Nelson conference last year, where she identified future problems in finding locally-sourced groundwater hydrologists due to minimal tertiary courses on offer at present.

In fact, this issue is just one facet of an educational problem for our subject in New Zealand universities. That is, a significant capture of Earth Sciences academic resources by the geological sciences. How many departments and professors of hydrology do you know of? We might also cynically question the extent to which the New Zealand taxpayer should be obligated to support the Australian mining industry through cross-Tasman export of geology graduates. However, we can focus instead on the more positive aspect of how we might progress water and atmospheric sciences.

In a sense, the geology departments of the nation's universities are the academic mirror of GNS. However, there is no corresponding mirror for NIWA. Probably the closest is the well-established coastal and marine programmes at universities such as Waikato and Auckland. However, the freshwater and atmospheric components of the Earth Sciences are scattered about in states of sub-critical numbers of human resources in various departments of physical geography, engineering, physics. There are no doubt a few others hidden away as well.

What is needed is some recognized tertiary centre of excellence covering the whole atmosphere / fresh water field. In short, a degree-granting Institute of Water and Atmospheric Research. And it needs to be real, as opposed to some little out-house and a web page which is pretty much all an individual university can contribute at present.

How might such an Institute work? Presently a case could be argued that the nation is not getting the best bang for its environmental buck when it comes to what we can put in front of our aspiring water / atmospheric students. We academics do of course interact to a degree with the CRI's to bring in some real-world dimension and outside specialty to our academic programmes, but there is a limit to how much goodwill we can reasonably hope for. With a specialised Institute of some standing, presumably it would be possible for NIWA scientists and others to have joint employment contracts and thus contribute some significant teaching segments.

Of course, the devil is always in the detail as to where the Institute might be located, how it might be funded, whether it should deal only with research students, and so on. If there was the will to make it happen, one option might be to look at Ruakura or Invermay (in association with Waikato or Otago Universities respectively), or perhaps the intended

agricultural research developments at Lincoln might incorporate an Institute of Water and Atmospheric Research as well.

The idea of a new Institute may or may not grab the imagination of conference attendees, but it will serve no harm to raise the concept for discussion before an opportune audience from both the water and atmospheric groupings. In submitting this abstract it was necessary of course to specify it as category "other" among the conference topics on offer. This was then specified to the conference organisers as "Future development". Time will tell whether or not this is wishful thinking.