

Bureau of Meteorology

1. The contribution

- For an organization like the Bureau of Meteorology, the provision of skilled scientific and technical people is the most important contribution. In general, graduates from Australian universities are competitive with those from international institutions although, in our domain, the supply is not matching demand.
- There are barriers to Australian Research Council (ARC) supporting research training in climate change and earth systems science, principally because of the structure of the ARC grants. This limits the ability to cooperate (i.e. create opportunities for "on-the-job" research training). (The ARC is one of the Australian Government's key funding organizations for research.)
- We are fortunate in the area of earth systems science to have a high level of engagement between universities and our industry, in spite of the barriers. This has taken work on all sides.
- In the newest areas, like climate and water research, the broad distribution of expertise among the universities (many of which are below critical mass) and the emphasis on short-term incentives funding versus long-term strategic alignment introduces inefficiencies.
- The Bureau of Meteorology still does much of its own training (in its accredited training centre). The opportunities for outsourcing this have been examined almost every year but on each occasion the case for retaining in-house training has been overwhelming. It meets the Bureau's needs; the output from universities does not.

2. The challenges

- Most of these issues are not unique to research in universities.
- Mention has already been made of some barriers that limit opportunities that might be provided through collaboration with organizations like the Bureau of Meteorology. In the Bureau's experience, the Cooperative Research Centers have been arguably the most effective, in terms of collaboration, but not uniformly.
- Right across the science disciplines that concern the Bureau, the competition for talent is continually increasing and this is destined to continue. The mining and exploration industries have attracted a lot of good technical people (and are able to offer very good remuneration), and this is having secondary effects in marine science and elsewhere.
- Climate change and the environment, including water, issues are an "attraction" for graduates, much more so for the "Y" generation than before. Australia also retains attraction for many overseas graduates because of its environment, but has to compete with offers of more attractive wages in the US and Europe. As a consequence, the competitive advantage of Australia for eastern European, Chinese and Indian graduates has all but disappeared.
- In part, the Bureau's workforce is ageing because a number are choosing to remain active, often in roles that allow them to do research rather than administration. We are actively seeking older experts as well as trying to attract the young.