Australian Academy of Science | NATIONAL COMMITTEE FOR EARTH SCIENCES

Alarming decline in funding of tertiary geoscience departments across Australia

Members of the National Committee for Earth Sciences of the Australian Academy of Science are deeply concerned by the systematic reduction in staff members in geosciences departments over the last year in Australia. This reduction has occurred despite a massive upturn in mineral exploration expenditure resulting in increases in first-year enrolments in most universities.

The decline follows the pattern over the last 15 years, over which time staff numbers and student enrolments have been linked to the increasing expenditure by the minerals sector with a short time lag. Last year, student numbers enrolled in first-year courses in the Earth sciences increased in most universities. Over the same period, two Earth sciences departments have been closed down and many others have suffered from significant academic staff reduction. The levels of recent cuts are unprecedented. The Australian Geoscience Council (AGC) is equally alarmed by the recent trends of staff reduction.

The geosciences encompass a wide array of disciplines linked to the study of Earth (such as physics, chemistry, biology, mathematics, computing and geology,). It is through this integrative approach that we have built our present-day understanding of Earth's interior, and its surface, groundwater, oceans, atmosphere and cryosphere, as well as the processes that formed them.

The geosciences fundamentally underpin both the economic and social wellbeing of Australian society. More than most nations, Australia depends on geoscientific understanding for the charting of a prosperous future, given our economic reliance on the minerals industry. It will require low-carbon technology and the discovery of new mineral deposits. But the geosciences are equally important in many other areas of societal importance, including understanding the complexities of Earth's natural processes and contributing to solutions for many human-made problems such as issues related to climate variability, phenomena associated with geohazards such as earthquakes, extended drought and major flooding, as well as sea level rise. Our cultural heritage can also be better understood through geoscientific investigations, such as the dating and preservation of rock art as well as geoarchaeological investigations.

Hence, there is an urgent and important need to train the future generation of geoscientists in Australia to replenish the geoscience workforce. This country has enjoyed an exemplary reputation for excellence in teaching and research of many

geoscience disciplines. In the State of Australian University Research report (2018–2019)[1], six universities ranked 'well above world standard' and 12 'above world standard' in the broad category of Earth sciences.

The current reduction in geoscience funding and staff will severely affect our international competitiveness in this regard. The current reduction of staff numbers in tertiary institutions in Australia will lead to a critical loss of researchers and educators in the geosciences[2], which will in turn lead to a reduction in skilled geoscience graduates, the very workforce required to drive our exploration efforts. In addition, it is necessary to recognise that the geosciences fundamentally underpin the social wellbeing of Australian society.

The National Committee for Earth Sciences of the Australian Academy of Science calls upon universities, government and industry to work together to ensure adequate investment in training and research in the geosciences to meet the strategic goals already established in the 2018 Decadal plan for Australian Geoscience: Our Planet, Australia's Future. In addition, we seek that investment in teaching and research in the geosciences in Australia be immediately resumed, in order to achieve both the economic and social wellbeing of Australian society.

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[1] www.arc.gov.au/excellence-research-australia/era-reports
[2] National Committee for Earth Sciences (2018). *Our Planet, Australia's Future: A decadal plan for Australian geoscience 2018–27* (Australian Academy of Science)