

DISCUSSION PAPER:  
ENHANCING RESEARCH  
OUTCOMES FROM  
AUSTRALIA'S REGIONAL,  
RURAL AND REMOTE  
UNIVERSITIES

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ACOLA acknowledges the Traditional Owners and custodians of the lands on which our company is located and where we conduct our business.

We pay our respects to Elders past, present and emerging.

# ENHANCING RESEARCH OUTCOMES FROM AUSTRALIA'S REGIONAL, RURAL AND REMOTE UNIVERSITIES

The Australian Government Department of Education has engaged the Australian Council of Learned Academies (ACOLA) to work with the regional, rural and remote (RRR) research sector to better understand the opportunities and barriers to improving research potential and outcomes at universities in RRR areas. The project forms a component of the department's focus on broader tertiary education outcomes and enhancing RRR communities. The project will culminate in a report that is due to be delivered to the Department of Education in February 2020.

This discussion paper has been developed to generate conversation around the key issues in enhancing research outcomes in RRR universities. The paper is based on findings from previous research, which are not necessarily the views of ACOLA and the project Expert Working Group (EWG). The EWG is seeking evidence, contrary views and new ideas from Australia's RRR research ecosystem that clarify and build on the summary of literature presented here.

## Defining regional, rural and remote universities

It is difficult to provide a rigid definition of RRR universities. Many universities in metropolitan areas have campuses in RRR areas. Several universities are located outside major capital cities but within commuting distance of them (subsequently referred to as peri-urban universities), and therefore have ready access to their infrastructure and population base. Other universities are based in rural regions far from major metropolitan areas, and even remote from any other population centre. It is important to recognise the geographic diversity of RRR universities (Appendix 1), and, therefore the diversity of issues facing them.

Generally speaking, universities in Australia's RRR areas tend to be smaller and younger than Group of Eight (Go8)<sup>1</sup> universities. Therefore, to properly examine the effects of regionality on research outcomes in RRR universities, it may be most useful to compare them with universities of similar size and age located in metropolitan areas.

The main focus of this project is on universities whose main campus is in an RRR area, although the project will also consider the issues that RRR campuses of metropolitan-headquartered universities face.

<sup>1</sup> The Group of Eight (Go8) comprises eight Australian universities – the University of Melbourne, the Australian National University, the University of Sydney, the University of Queensland, the University of Western Australia, the University of Adelaide, Monash University and UNSW Sydney.

## The value of universities in regional, rural and remote areas

RRR Australia plays a vital role in the economy and national identity. These areas are often diverse in their economies and demographics, and host some of Australia's largest export industries, including agriculture, mining and tourism. Universities in RRR areas play a key role in the education export industry, which is now the fourth largest export industry in Australia<sup>2</sup>, and contribute to research excellence and impact at a national and international level. They are often centres of engagement with national environmental treasures such as the Great Barrier Reef, tropical rainforests, and Kakadu National Park, and they play particularly important roles in engaging with Indigenous communities.

RRR universities and campuses are important service providers for their regions. They are significant financial and social institutions in the areas in which they operate, offering their communities educational, research, economic, cultural and social opportunities which otherwise may not be available within close proximity. RRR universities and campuses in northern Australia are in cities and towns of geopolitical importance because of their proximity to neighbouring countries such as Papua New Guinea, Timor Leste and Indonesia.

One study<sup>3</sup>, for example, found that in 2015, the six members of the Regional Universities Network (RUN)<sup>4</sup> delivered an additional AU\$1.7 billion in their communities through jobs and productivity, student and university spending, and research outcomes. Additionally, RUN universities contributed to industry through research and knowledge capital with an estimated direct value of AU\$179 million<sup>5</sup>. The study also notes that RUN universities have demonstrated sustained growth in research publications and income from higher degree research<sup>6</sup>. The RUN universities are a subset of all of Australia's RRR universities, however, this example demonstrates the value of universities in RRR areas more broadly. Another example is James Cook University, which is a member of the Innovative Research Universities and estimates that its economic impact on the Queensland economy in 2016 alone was AU\$827 million<sup>7</sup>.

In addition to economic benefits, universities can foster creativity in RRR areas. Access to knowledge and learning, the creative generation of ideas, and idea implementation underpins the success of RRR areas<sup>8</sup>. Other potential outcomes for RRR areas with universities include enhanced environmental sustainability, improved quality of life through provision of social, cultural, and sporting programs, improved healthcare services, community development, and enhanced potential for breaking cycles of disadvantage<sup>9</sup>. The research that RRR universities produce is important not only to the local region, but, as with research conducted at universities in metropolitan areas, improves knowledge nationally and internationally.

With growing urbanisation, universities in RRR areas present an opportunity to relieve some of the pressure on Australia's major cities by attracting a portion of the population to RRR areas. These universities play a vital role in RRR areas and are a key component of Australia's innovation ecosystem. Further harnessing the research potential of universities in RRR areas will benefit these areas and contribute to innovation nationally and internationally.

2 Department of Foreign Affairs and Trade (2018). Australia's top 10 goods and services exports and imports. Accessed on 15 August 2019 at <https://dfat.gov.au/trade/resources/trade-at-a-glance/Pages/top-goods-services.aspx>

3 Nous (2017). The economic impact of the Regional Universities Network. Report prepared for the Regional Universities Network.

4 The Regional Universities Network (RUN) is a network of seven universities based in regional Australia. Its members are: CQUniversity, Southern Cross University, Federation University Australia, Charles Sturt University, the University of New England, the University of Southern Queensland and University of the Sunshine Coast.

5 Nous (2017). The economic impact of the Regional Universities Network. Report prepared for the Regional Universities Network.

6 Nous (2017). The economic impact of the Regional Universities Network. Report prepared for the Regional Universities Network.

7 Western Research Institute (2018). James Cook University economic and human capital impact. Report prepared for James Cook University.

8 Garlick, S. (2003). Creative regional development: Knowledge-based associations between universities and their places. *Civic Engagement in Australia*, vol. 14, 2.

9 Regional Universities Network (2013). *Regional Universities Network: Engaging with regions, building a stronger nation. Volume 1 – Report*

## Research excellence in Australia's regional, rural and remote universities

Research excellence is a goal of all Australian universities. Measures of research excellence, such as publications in high-impact journals, citation rates and grant income, are considered indicators of success in ranking systems such as Excellence in Research for Australia (ERA) and international university ranking systems<sup>10</sup>. Reputation of research excellence helps universities attract higher degree by research (HDR) students, and it is often a key factor in attracting international students<sup>11</sup>. These measures are crucial to universities, as research income and HDR completions, along with industry engagement, drive the Australian Government's calculations for block grant allocations<sup>12</sup>. Low rankings in quality assessment measures can limit the ability of universities to build their reputations, attract high quality HDR students and research staff, and leverage collaboration and partnership opportunities with businesses and industry. In the 2019 research block grant allocations, of the 20 universities that received the most funding, only two (University of Newcastle and University of Wollongong) were located outside of a capital city<sup>13</sup>. Both of these universities are located close to Sydney and may be considered peri-urban.

As evidenced by the ERA 2018 assessment, Australia's regional universities excel (achieving the highest possible ERA rating of five) in a number of research areas (Appendix 2). Further, the number of ERA five results increased for some regional universities between 2015 and 2018 (Appendix 3). However, some universities in RRR areas have experienced a decline or stagnation in their research performance.

In addition to publication of research in high-impact journals, citation rates and grant income, research excellence can also be measured by impact. Impact occurs as a result of research translation, which is often the outcome of collaboration with industry and other non-academic groups. There is often an expectation that universities in RRR areas are closely embedded in their communities, and these universities therefore tend to have a high community impact compared to universities in metropolitan areas.

On average, universities in RRR areas receive proportionally more funding from industry sources than Go8 universities (23 percent for regional universities, compared to 13 percent for Go8 universities)<sup>14</sup>. While this previously would have put universities at a disadvantage in research block grant funding, the new arrangements introduced in 2017, which will take full effect in 2020, reward the higher rate of industry collaboration in the regions. Under the new arrangements, funding is allocated based on research income generated from both Australian competitive grants and from industry and other engagement, in addition to HDR completions.

Universities in RRR areas are vocal about strengthening their national and international competitiveness by strategically leveraging the distinctive characteristics of their regions to develop teaching and research programs, thereby enhancing the relevance and impact of their research to the local area<sup>15</sup>. This local focus does not necessarily limit the national and international significance of research conducted in RRR areas; some RRR universities are considered world leaders in particular disciplines. However, given limited resources, funding put towards community engagement may redirect funds away from internationally significant research in some cases. These pressures particularly concern universities in RRR areas, where there may be greater community expectation for the university to conduct applied research that meets local needs.

Based on 2018 ERA data, universities in RRR areas most commonly have research strengths in environmental sciences, mathematical sciences, earth sciences, agricultural and veterinary sciences, medical and health sciences and psychology. With some exceptions, these universities are typically less strong or below the

10 For example, the Academic Ranking of World Universities (ARWU). Methodology accessed on 29 August 2019 at <http://www.shanghairanking.com/ARWU-Methodology-2019.html>

11 Department of Education (2018). National regional, rural and remote education framing paper. Report prepared by the Regional Education Expert Advisory Group.

12 Department of Education (2019). Research block grants calculation methodology. Accessed on 29 August at <https://www.education.gov.au/research-block-grants-new-arrangements-allocation-calculation-methodology>

13 However, it should be noted that transitional arrangements are currently in place until 2020, whereby a university's funding is still linked to their funding under the pre-2017 funding allocation methods. Department of Education (2019). 2019 Research Block Grant Allocations. Accessed at <https://docs.education.gov.au/node/51901> on 13 August 2019.

14 'Regional universities' included in this analysis are: Charles Darwin University, Charles Sturt University, Federation University, James Cook University, Southern Cross University, University of Southern Queensland, University of Tasmania, and University of the Sunshine Coast; Department of Industry, Innovation and Science (2016). How regional universities drive regional innovation.

15 Regional Universities Network (2013). Regional Universities Network: Engaging with regions, building a stronger nation.

volume threshold in the arts, social sciences, economics, law, technology, and some other areas of science. It is possible that in some cases this reflects strategic decisions to move away from research and courses that are economically marginal in that area<sup>16</sup>.

The national research innovation system is strengthened by the development of niche areas of research strength in RRR universities, which address issues of national and global importance<sup>17</sup>. A 2016 report from the Department of Industry, Innovation and Science states that there is a growing desire for increased specialisation and differentiation of Australia's regional universities<sup>18</sup>. This narrowing of focus, however, has flow on effects for universities' educational offerings, and it is possible that a lack of breadth of courses may negatively impact on attracting students, and attracting and retaining academic and research staff. Causality may also flow the other way, with promising areas of research not pursued because a lack of student interest makes it difficult to attract a critical mass of staff.

Narrowing of research focus often reflects specialisation in areas of regional relevance. However, it may also result in some regions lacking research outcomes in fields of significance to the area. This highlights the 'breadth versus depth' challenge universities in RRR are faced with in focusing their resources. Where universities choose to invest in certain research areas, they may improve their research excellence in those niches, but potentially lose breadth of research disciplines and educational offering.

**Question 1:** What does research success look like for universities in RRR areas?

**Question 2:** What role does research excellence play in the overall success of universities in RRR areas?

**Question 3:** What strategies have been implemented to boost research excellence in RRR universities? What has and has not worked?

**Question 4:** How can universities in RRR areas best address the 'breadth versus depth' challenge described above, with particular consideration to attracting and retaining high-calibre staff?

## Harnessing Australia's Indigenous research capability

Realising the full potential of Australia's innovation system will require harnessing knowledge across Australia's diverse population. Indigenous researchers have much to offer both the nation and their communities and are essential to 'Closing the Gap'.<sup>19</sup>

The Aboriginal and Torres Strait Islander population is less urbanised than other Australians, and many of the issues highlighted by, for example, initiatives such as Closing the Gap, are largely concentrated in RRR areas. Given that universities in RRR areas are often engaged with their local community, researchers at RRR universities are well positioned to work with Indigenous communities.

Much of Australia is subject to native title, some of it conservation land and coastal waters to which traditional owners have rights to be involved in management. Therefore, benefits to increasing Australia's Indigenous research workforce may include natural resource management, education, connecting to community aspiration, community health, and informing policy.

Retaining Indigenous Knowledge<sup>20</sup>, Indigenous researchers, Indigenous methods of research, and research involving Aboriginal and Torres Strait Islander communities is important to furthering Australia's research capacity and addressing national issues of disadvantage.

16 Winchester, H., Glenn, A., Thomas, P. & Cole, M. (2001). The role of universities in the regions. Report prepared for BHERT.

17 Innovative Research Universities (2017). Building regional research systems across Australia.

18 Department of Industry, Innovation and Science (2016). How regional universities drive regional innovation.

19 Closing the Gap aims to improve the lives of all Aboriginal and Torres Strait Islander Australians. <https://closingthegap.niaa.gov.au/>

20 Indigenous Knowledge may simply mean 'experience' of the world as an Indigenous person, it may mean historical understanding passed down from the Indigenous perspective, it may mean local knowledge, or community-based experience or traditional knowledge. From: Martin Nakata, Vicky Nakata, and Michael Chin, 'Approaches to the academic preparation and support of Australian Indigenous students for tertiary studies', *The Australian Journal of Indigenous Education*, vol. 37, pp. 137-145, 2008.

**Question 5:** What steps can be taken to increase the Aboriginal and Torres Strait Islander research workforce, and encourage research on Aboriginal and Torres Strait Islander communities and issues?

**Question 6:** How can universities in RRR areas better engage with local Indigenous communities through research?

## Barriers faced by universities in regional, rural and remote areas

Many of the issues that directly and indirectly impact on high quality research are well documented. These include the attraction and retention of internationally leading researchers; ageing and outdated physical infrastructure and equipment; reduced ability to cross-subsidise research from student fees (including international); and a reduced ability to attract private and other non-government forms of investment<sup>21</sup>.

Australia's highest-ranked research universities are located in metropolitan areas. Many of the universities outside of capital cities are relatively young, and as such, lack substantial endowments that more established universities may receive. It takes time to build a tradition in research and the infrastructure to support it, and newer universities often work with limited resources to build a national and international profile to compete with the status of older universities<sup>22</sup>.

There are a range of methodological issues with global university rankings, and these do not necessarily provide a reliable indicator of education or research impact at universities in RRR areas. However, these rankings affect student and academic perceptions of a university's quality, and they are known to play an important role in attracting research students and staff<sup>23</sup>.

The industry base in RRR areas is frequently small (both in the number and size of businesses), their immediate population catchment is limited, and the university may be limited in their capacity to provide broad enough academic offerings in areas relevant to the local community. Additionally, even where large companies work in RRR areas, they are rarely headquartered in these areas, making collaboration more challenging.

There are additional costs associated with delivering services outside of major population centres. This is particularly an issue in Australia, where distances between major city centres are much greater than those in most other countries. For individuals, this results in higher costs for attending meetings and conferences, and limited networking opportunities. Universities in RRR areas may find it more difficult to sustain relationships with state and federal governments that are typically based in metropolitan areas<sup>24</sup>. Additionally, the costs of construction are higher in RRR areas, and costs of service delivery are reported to be 30-40 percent higher on campuses in RRR areas compared to those in metropolitan areas<sup>25</sup>. There are also costs associated with operating multi-campus institutions, which most of the universities in RRR areas are.

**Question 7:** What barriers exist to universities in RRR areas improving their research outcomes?

**Question 8:** Are there perverse incentives that negatively impact research outcomes in RRR universities?

21 Winchester, H., Glenn, A., Thomas, P. & Cole, M. (2001). The role of universities in the regions. Report prepared for BHERT.

22 OECD (2007). Higher education and regions: Globally competitive, locally engaged.

23 La Trobe University (2018). Research plan 2018-2022.

24 Winchester, H., Glenn, A., Thomas, P. & Cole, M. (2001). The role of universities in the regions. Report prepared for BHERT.

25 House of Representatives standing committee on primary industries and regional services (2000). Time running out: shaping regional Australia's future. Commonwealth of Australia, Canberra.

## Opportunities for increased research excellence

Several countries are strategically investing in research in regional areas through targeted funding, recognising the opportunity that innovation systems provide to RRR areas. Countries including Korea, Japan, Romania and Switzerland have established or invested in universities in regional areas, and they are using these institutions to revitalise the local area by attracting researchers and students and building local partnerships<sup>26,27</sup>. These strategies aim to link training and research with local needs and develop skill-based clusters outside of metropolitan areas.

Some of the world's top ranked universities are located in regional areas. While a number of factors complicate comparisons of regional universities internationally, universities such as Cornell and Dartmouth exemplify the role that regional universities can play in attracting people away from big cities. These long-established universities attracted students and researchers to their towns and helped grow the local economy and population over time, and they are now world leaders in research and education.

A number of opportunities for Australian universities in RRR areas to enhance their research excellence have already been identified. For example, a 2017 report from Innovative Research Universities (IRU)<sup>28</sup> makes the following recommendations to boost research in RRR areas:

- The National Research Infrastructure Roadmap should ensure that major research infrastructure developments are deployed across Australia with some elements based outside the major centres
- Innovation programs and incentives, including the Medical Research Future Fund, should be effective across Australia to reach as many Australians as possible
- The regional loading should include a research element to the calculation
- There should be targeted incentives to reward regional engagement with research and innovation needs
- Ensure community and education services are of a comparable standard across Australia
- Reverse the order of roll out of new services to start some in regional areas to alter the perception of being regularly last and create incentives to be in such regions
- Ensure knowledge infrastructure is part of comprehensive regional strategies.

**Question 9:** What opportunities exist for universities in RRR areas to pursue research excellence and impact?

**Question 10:** What are some examples of strong collaborations between industry and universities in RRR areas? What has and has not worked?

**Question 11:** How can government policy facilitate universities in RRR areas to boost their research excellence and impact?

26 OECD (2007). Higher education and regions: Globally competitive, locally engaged.

27 Kakuchi, S. (2017). Regional universities a new focus of research excellence. In: University World News. Accessed on 20 August 2019 at <https://www.universityworldnews.com/post.php?story=20170808134553924>

28 Innovative Research Universities is a coalition of seven universities: Charles Darwin University, Flinders University, Griffith University, James Cook University, La Trobe University, Murdoch University and Western Sydney University.



## Next steps

ACOLA and the EWG will be following up key areas of interest or gaps identified in submissions with targeted interviews. Information received during the dual phase consultation process will be combined with evidence-based research to inform a final report.

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## Appendix 1

### Attributes of some universities whose main campus is outside a major metropolitan area

University	Year established	Approximate # Students	Main Campus	# Campuses	Approx. city size, major campus	Nearest major metropolitan area	Distance to nearest major metropolitan area (km)	Classification
Bond University	1989	4000	Gold Coast	1	560000	Brisbane	95	Peri-urban
Central Queensland University	1967	18800	Rockhampton	10	80700	Brisbane	520	Remote regional
Charles Darwin University	2003	11000	Darwin	5	145900	Adelaide	3027	Remote regional
Charles Sturt University	1989	39000	Wagga Wagga	10	54000	Sydney	457	Regional
Federation University Australia	1994	13000	Ballarat	6	101600	Melbourne	117	Regional
James Cook University	1970	22000	Townsville	4	180300	Brisbane	1345	Remote regional
Newcastle University	1965	36448	Newcastle	6	450000	Sydney	159	Regional
Southern Cross University	1994	14400	Lismore	3	27600	Brisbane	209	Regional
University of New England	1938	21000	Armidale	4	31300	Brisbane	362	Regional
University of Southern Queensland	1967	26700	Toowoomba	3	135600	Brisbane	122	Regional
University of Tasmania	1890	34000	Hobart	5	220000	Melbourne	600	Remote regional
University of the Sunshine Coast	1994	10800	Sunshine Coast	4	350000	Brisbane	91	Peri-urban
Wollongong University	1951	30500	Wollongong	7	299200	Sydney	84	Peri-urban

## Appendix 2

### 2018 ERA rankings by research area for universities whose main campus is outside a major metropolitan area<sup>29</sup>

Institution	01 Mathematical Sciences	0101 Pure Mathematics	0102 Applied Mathematics	0103 Numerical and Computational Mathematics	0104 Statistics	0105 Mathematical Physics	0199 Other Mathematical Sciences	02 Physical Sciences	0201 Astronomical and Space Sciences	0202 Atomic, Molecular, Nuclear, Particle and Plasma Physics	0203 Classical Physics	0204 Condensed Matter Physics	0205 Optical Physics	0206 Quantum Physics	0299 Other Physical Sciences	03 Chemical Sciences	0301 Analytical Chemistry	0302 Inorganic Chemistry	0303 Macromolecular and Materials Chemistry	0304 Medicinal and Biomolecular Chemistry	0305 Organic Chemistry	0306 Physical Chemistry (Incl. Structural)	0307 Theoretical and Computational Chemistry	0399 Other Chemical Sciences
Batchelor Institute of Indigenous Tertiary Education	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bond University	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Central Queensland University	5	n/a	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Charles Darwin University	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Charles Sturt University	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Edith Cowan University	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Federation University Australia	3	3	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
James Cook University	4	n/a	3	n/a	n/a	n/a	n/a	3	n/a	n/a	4	n/a	n/a	n/a	n/a	4	n/a	4	n/a	n/a	5	n/a	n/a	n/a
Southern Cross University	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
The University of New England	5	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	n/a	n/a	5	n/a	n/a	n/a	n/a	n/a
The University of Newcastle	4	4	5	n/a	5	n/a	n/a	5	5	n/a	n/a	4	n/a	n/a	5	4	n/a	n/a	5	3	n/a	5	n/a	n/a
University of Southern Queensland	4	n/a	n/a	5	n/a	n/a	n/a	5	5	n/a	n/a	n/a	n/a	n/a	n/a	5	n/a	5	5	n/a	n/a	n/a	n/a	n/a
University of Tasmania	3	n/a	4	n/a	3	n/a	n/a	3	4	n/a	n/a	n/a	n/a	n/a	n/a	3	5	5	n/a	n/a	3	n/a	n/a	n/a
University of the Sunshine Coast	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
University of Wollongong	4	4	5	n/a	5	n/a	n/a	5	n/a	1	n/a	5	3	n/a	5	5	5	5	5	5	5	5	n/a	n/a

<sup>29</sup> Australian Research Council (2015). Excellence in Research Australia 2018 National Report. Note these figures do not take the volume of research outputs above the low volume threshold into account.

Institution	04 Earth Sciences	0401 Atmospheric Sciences	Geochemistry	0403 Geology	0404 Geophysics	0405 Oceanography	0406 Physical Geography and Environmental Geoscience	0499 Other Earth Sciences	05 Environmental Sciences	0501 Ecological Applications	0502 Environmental Science and Management	0503 Soil Sciences	0599 Other Environmental Sciences	06 Biological Sciences	0601 Biochemistry and Cell Biology	0602 Ecology	0603 Evolutionary Biology	0604 Genetics	0605 Microbiology	0606 Physiology	0607 Plant Biology	0608 Zoology	0699 Other Biological Sciences
Batchelor Institute of Indigenous Tertiary Education	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bond University	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Central Queensland University	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	3	3	n/a	n/a	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	n/a
Charles Darwin University	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	4	5	n/a	n/a	4	n/a	5	n/a	n/a	n/a	n/a	n/a	4	n/a
Charles Sturt University	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	n/a	4	n/a	n/a	2	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Edith Cowan University	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5	n/a	5	n/a	n/a	4	4	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Federation University Australia	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5	n/a	5	n/a	n/a	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
James Cook University	4	n/a	4	5	n/a	n/a	4	n/a	5	5	5	n/a	n/a	5	3	5	4	n/a	3	n/a	5	4	n/a
Southern Cross University	5	n/a	5	n/a	n/a	5	n/a	n/a	4	n/a	5	4	n/a	4	n/a	5	n/a	n/a	n/a	n/a	n/a	5	n/a
The University of New England	4	n/a	n/a	5	n/a	n/a	n/a	n/a	5	n/a	5	5	n/a	4	n/a	5	5	5	n/a	n/a	n/a	5	n/a
The University of Newcastle	4	n/a	n/a	4	n/a	n/a	5	n/a	5	n/a	5	n/a	n/a	5	5	n/a	n/a	5	5	5	5	5	n/a
University of Southern Queensland	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	n/a	5	n/a	n/a	3	n/a	n/a	n/a	n/a	5	n/a	2	n/a	n/a
University of Tasmania	5	n/a	4	5	5	5	4	n/a	5	5	5	n/a	n/a	5	n/a	5	5	n/a	n/a	n/a	5	5	n/a
University of the Sunshine Coast	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5	5	5	n/a	n/a	4	n/a	5	n/a	n/a	n/a	n/a	n/a	5	n/a
University of Wollongong	4	5	4	5	n/a	n/a	4	n/a	4	n/a	5	n/a	n/a	4	5	5	n/a	n/a	n/a	n/a	5	n/a	n/a

Institution	07 Agricultural and Veterinary Sciences	0701 Agriculture, Land and Farm Management	0702 Animal Production	0703 Crop and Pasture Production	0704 Fisheries Sciences	0705 Forestry Sciences	0706 Horticultural Production	0707 Veterinary Sciences	0799 Other Agricultural and Veterinary Sciences	09 Engineering	0901 Aerospace Engineering	0902 Automotive Engineering	0903 Biomedical Engineering	0904 Chemical Engineering	0905 Civil Engineering	0906 Electrical and Electronic Engineering	0907 Environmental Engineering	0908 Food Sciences	0909 Geomatic Engineering	0910 Manufacturing Engineering	0911 Maritime Engineering	0912 Materials Engineering	0913 Mechanical Engineering	0914 Resources Engineering and Extractive Metallurgy	0915 Interdisciplinary Engineering	0999 Other Engineering
Batchelor Institute of Indigenous Tertiary Education	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bond University	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Central Queensland University	4	4	n/a	n/a	n/a	n/a	5	n/a	n/a	4	n/a	n/a	n/a	n/a	n/a	5	n/a	n/a	n/a	n/a	n/a	5	n/a	n/a	n/a	n/a
Charles Darwin University	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Charles Sturt University	4	n/a	3	n/a	n/a	n/a	5	4	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Edith Cowan University	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	n/a	n/a	n/a	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5	n/a	n/a	n/a	n/a
Federation University Australia	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
James Cook University	4	n/a	n/a	n/a	5	n/a	n/a	4	n/a	3	n/a	n/a	n/a	n/a	2	4	n/a	n/a	n/a	n/a	n/a	4	n/a	n/a	n/a	n/a
Southern Cross University	5	n/a	n/a	5	5	5	n/a	n/a	n/a	4	n/a	n/a	n/a	n/a	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5	n/a	n/a	n/a
The University of New England	5	5	5	n/a	n/a	n/a	n/a	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
The University of Newcastle	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	n/a	n/a	n/a	n/a	5	5	n/a	n/a	n/a	n/a	n/a	5	5	1	n/a	n/a
University of Southern Queensland	4	5	n/a	5	n/a	n/a	n/a	n/a	n/a	4	n/a	n/a	n/a	n/a	2	2	n/a	n/a	n/a	3	n/a	5	n/a	n/a	n/a	n/a
University of Tasmania	5	5	n/a	4	5	4	5	n/a	n/a	3	n/a	n/a	n/a	n/a	4	5	n/a	3	n/a	n/a	4	n/a	n/a	n/a	n/a	n/a
University of the Sunshine Coast	5	n/a	n/a	n/a	5	5	5	5	n/a	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	n/a	n/a	n/a	n/a
University of Wollongong	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	n/a	n/a	n/a	2	4	4	5	n/a	n/a	3	n/a	5	4	4	4	n/a

Institution	11 Medical and Health Sciences	1101 Medical Biochemistry and Metabolomics	1102 Cardiorespiratory Medicine and Haematology	1103 Clinical Sciences	1104 Complementary and Alternative Medicine	1105 Dentistry	1106 Human Movement and Sports Science	1107 Immunology	1108 Medical Microbiology	1109 Neurosciences	1110 Nursing	1111 Nutrition and Dietetics	1112 Oncology and Carcinogenesis	1113 Ophthalmology and Optometry	1114 Paediatrics and Reproductive Medicine	1115 Pharmacology and Pharmaceutical Sciences	1116 Medical Physiology	1117 Public Health and Health Services	1199 Other Medical and Health Sciences	17 Psychology and Cognitive Sciences	1701 Psychology	1702 Cognitive Sciences	1799 Other Psychology and Cognitive Sciences
Batchelor Institute of Indigenous Tertiary Education	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bond University	4	n/a	n/a	4	n/a	n/a	3	n/a	n/a	n/a	n/a	3	n/a	n/a	n/a	n/a	n/a	5	n/a	2	2	n/a	n/a
Central Queensland University	3	n/a	n/a	n/a	n/a	n/a	3	n/a	n/a	n/a	4	n/a	n/a	n/a	n/a	n/a	n/a	4	n/a	4	4	n/a	5
Charles Darwin University	5	n/a	n/a	5	n/a	n/a	n/a	n/a	4	n/a	n/a	n/a	n/a	n/a	4	n/a	n/a	4	n/a	n/a	n/a	n/a	n/a
Charles Sturt University	2	n/a	1	2	n/a	n/a	2	n/a	n/a	n/a	3	n/a	n/a	n/a	n/a	1	n/a	1	n/a	1	1	n/a	n/a
Edith Cowan University	4	n/a	n/a	5	n/a	n/a	3	n/a	n/a	5	4	4	4	n/a	n/a	n/a	n/a	2	n/a	2	2	n/a	n/a
Federation University Australia	4	n/a	n/a	5	n/a	n/a	5	n/a	n/a	n/a	5	n/a	n/a	n/a	n/a	n/a	n/a	1	n/a	3	3	n/a	n/a
James Cook University	4	4	4	3	n/a	n/a	3	4	5	4	3	n/a	4	n/a	n/a	n/a	n/a	4	n/a	1	1	n/a	n/a
Southern Cross University	4	n/a	n/a	n/a	5	n/a	4	n/a	n/a	n/a	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
The University of New England	4	n/a	n/a	n/a	n/a	n/a	5	n/a	n/a	n/a	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	5	n/a	n/a
The University of Newcastle	4	n/a	5	3	n/a	n/a	5	5	n/a	5	5	5	5	n/a	5	5	5	4	5	5	5	5	n/a
University of Southern Queensland	5	n/a	n/a	5	n/a	n/a	5	n/a	n/a	n/a	3	5	n/a	n/a	n/a	n/a	n/a	5	n/a	4	5	n/a	n/a
University of Tasmania	4	n/a	3	4	n/a	n/a	5	n/a	n/a	5	4	3	5	5	n/a	4	n/a	3	n/a	4	4	5	n/a
University of the Sunshine Coast	3	n/a	n/a	2	n/a	n/a	3	n/a	3	5	5	n/a	n/a	n/a	n/a	n/a	n/a	1	n/a	4	4	n/a	n/a
University of Wollongong	4	n/a	n/a	4	n/a	n/a	4	n/a	n/a	5	5	4	n/a	n/a	n/a	5	n/a	3	n/a	3	4	2	n/a

Institution	08 Information and Computing Sciences	0801 Artificial Intelligence and Image Processing	0802 Computation Theory and Mathematics	0803 Computer Software	0804 Data Format	0805 Distributed Computing	0806 Information Systems	0807 Library and Information Studies	0899 Other Information and Computing Sciences	10 Technology	1001 Agricultural Biotechnology	1002 Environmental Biotechnology	1003 Industrial Biotechnology	1004 Medical Biotechnology	1005 Communications Technologies	1006 Computer Hardware	1007 Nanotechnology	1099 Other Technology	12 Built Environment and Design	1201 Architecture	1202 Building	1203 Design Practice and Management	1204 Engineering Design	1205 Urban and Regional Planning	1299 Other Built Environment and Design
Batchelor Institute of Indigenous Tertiary Education	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bond University	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	2	n/a	n/a	n/a	n/a
Central Queensland University	3	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Charles Darwin University	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Charles Sturt University	3	3	n/a	2	n/a	1	2	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Edith Cowan University	2	3	n/a	2	n/a	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Federation University Australia	3	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
James Cook University	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Southern Cross University	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
The University of New England	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
The University of Newcastle	3	3	2	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	3	2	n/a	n/a	n/a	n/a
University of Southern Queensland	3	n/a	n/a	n/a	n/a	n/a	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
University of Tasmania	2	3	n/a	n/a	n/a	2	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	3	n/a	n/a	n/a	n/a	n/a
University of the Sunshine Coast	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
University of Wollongong	4	4	n/a	3	5	n/a	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Institution	13 Education	1301 Education Systems	1302 Curriculum and Pedagogy	1303 Specialist Studies in Education	1399 Other Education	14 Economics	1401 Economic Theory	1402 Applied Economics	1403 Econometrics	1499 Other Economics	15 Commerce, Management, Tourism and Services	1501 Accounting, Auditing and Accountability	1502 Banking, Finance and Investment	1503 Business and Management	1504 Commercial Services	1505 Marketing	1506 Tourism	1507 Transportation and Freight Services	1599 Other Commerce, Management, Tourism and Services
Batchelor Institute of Indigenous Tertiary Education	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bond University	1	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	3	n/a	n/a	n/a	n/a	n/a
Central Queensland University	2	1	n/a	3	n/a	2	n/a	2	n/a	n/a	2	n/a	2	n/a	n/a	2	2	n/a	n/a
Charles Darwin University	2	n/a	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Charles Sturt University	3	3	4	2	n/a	2	n/a	2	n/a	n/a	2	n/a	2	n/a	3	n/a	n/a	n/a	n/a
Edith Cowan University	2	n/a	2	2	n/a	2	n/a	n/a	n/a	n/a	2	n/a	2	n/a	n/a	n/a	3	n/a	n/a
Federation University Australia	2	3	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a
James Cook University	3	2	2	3	n/a	2	n/a	2	n/a	n/a	2	n/a	2	n/a	n/a	3	3	n/a	n/a
Southern Cross University	2	2	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	2	n/a	n/a	n/a	3	n/a	n/a
The University of New England	3	3	3	3	n/a	2	n/a	2	n/a	n/a	1	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a
The University of Newcastle	3	n/a	3	3	n/a	2	n/a	2	n/a	n/a	3	n/a	3	n/a	4	n/a	n/a	n/a	n/a
University of Southern Queensland	2	2	2	2	n/a	2	n/a	2	n/a	n/a	2	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a
University of Tasmania	3	3	3	3	n/a	3	n/a	3	n/a	n/a	2	n/a	2	n/a	3	n/a	n/a	n/a	n/a
University of the Sunshine Coast	2	n/a	2	2	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a
University of Wollongong	3	n/a	3	4	n/a	3	n/a	3	n/a	n/a	2	3	2	n/a	3	n/a	n/a	n/a	n/a



Institution	16 Studies in Human Society	1601 Anthropology	1602 Criminology	1603 Demography	1604 Human Geography	1605 Policy and Administration	1606 Political Science	1607 Social Work	1608 Sociology	1699 Other Studies in Human Society	18 Law and Legal Studies	1801 Law	1802 Maori Law	1899 Other Law and Legal Studies	19 Studies in Creative Arts and Writing	1901 Art Theory and Criticism	1902 Film, Television and Digital Media	1903 Journalism and Professional Writing	1904 Performing Arts and Creative Writing	1905 Visual Arts and Crafts	1999 Other Studies in Creative Arts and Writing		
Batchelor Institute of Indigenous Tertiary Education	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Bond University	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Central Queensland University	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a
Charles Darwin University	2	n/a	n/a	n/a	2	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Charles Sturt University	3	n/a	3	n/a	n/a	n/a	2	2	3	n/a	2	n/a	n/a	n/a	2	n/a	n/a	n/a	2	2	n/a	n/a	n/a
Edith Cowan University	2	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	n/a	3	2	n/a	n/a	n/a
Federation University Australia	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
James Cook University	3	3	3	n/a	3	n/a	n/a	2	3	n/a	3	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Southern Cross University	2	n/a	n/a	n/a	n/a	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a
The University of New England	3	n/a	n/a	n/a	4	3	n/a	n/a	3	n/a	3	n/a	n/a	n/a	2	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a
The University of Newcastle	3	n/a	n/a	n/a	4	3	2	3	3	n/a	3	n/a	n/a	n/a	3	2	2	n/a	3	n/a	n/a	n/a	n/a
University of Southern Queensland	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
University of Tasmania	3	n/a	3	n/a	3	3	3	n/a	4	n/a	4	4	n/a	n/a	3	n/a	n/a	n/a	3	3	n/a	n/a	n/a
University of the Sunshine Coast	3	n/a	3	n/a	3	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a
University of Wollongong	3	n/a	n/a	n/a	4	n/a	2	n/a	4	n/a	4	4	n/a	n/a	3	n/a	n/a	n/a	3	4	n/a	n/a	n/a

Institution	20 Language, Communication and Culture	2001 Communication and Media Studies	2002 Cultural Studies	2003 Language Studies	2004 Linguistics	2005 Literary Studies	2099 Other Language, Communication and Culture	21 History and Archaeology	2101 Archaeology	2102 Curatorial and Related Studies	2103 Historical Studies	2199 Other History and Archaeology	22 Philosophy and Religious Studies	2201 Applied Ethics	2202 History and Philosophy of Specific Fields	2203 Philosophy	2204 Religion and Religious Studies	2299 Other Philosophy and Religious Studies
Batchelor Institute of Indigenous Tertiary Education	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bond University	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Central Queensland University	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Charles Darwin University	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Charles Sturt University	2	2	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	2	n/a	3	4	n/a	3	2	n/a
Edith Cowan University	3	3	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Federation University Australia	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a
James Cook University	3	n/a	n/a	n/a	4	2	n/a	4	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Southern Cross University	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
The University of New England	2	n/a	n/a	n/a	3	3	n/a	3	3	n/a	3	n/a	3	n/a	n/a	3	n/a	n/a
The University of Newcastle	3	n/a	n/a	n/a	3	3	n/a	4	n/a	n/a	4	n/a	3	n/a	n/a	n/a	2	n/a
University of Southern Queensland	2	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a
University of Tasmania	3	4	n/a	n/a	n/a	3	n/a	4	n/a	n/a	4	n/a	3	n/a	n/a	3	n/a	n/a
University of the Sunshine Coast	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
University of Wollongong	4	3	3	n/a	n/a	4	n/a	4	5	n/a	4	n/a	3	n/a	n/a	4	n/a	n/a

## Appendix 3 Difference in ERA ranking between 2015 and 2018 for universities with their main campus outside a major metropolitan area\*<sup>30</sup>

Institution	01 Mathematical Sciences	02 Physical Sciences	03 Chemical Sciences	04 Earth Sciences	05 Environmental Sciences	06 Biological Sciences	07 Agricultural and Veterinary Sciences	08 Information and Computing Sciences	09 Engineering	10 Technology	11 Medical and Health Sciences	12 Built Environment and Design	13 Education	14 Economics	15 Commerce, Management, Tourism and Services	16 Studies in Human Society	17 Psychology and Cognitive Sciences	18 Law and Legal Studies	19 Studies in Creative Arts and Writing	20 Language, Communication and Culture	21 History and Archaeology	22 Philosophy and Religious Studies
Batchelor Institute of Indigenous Tertiary Education	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bond University	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	0	0	n/a	-1	0	1	0	n/a	n/a	n/a	n/a
Central Queensland University	0	n/a	n/a	n/a	-1	1	0	1	1	n/a	-1	n/a	0	0	1	0	0	n/a	0	n/a	n/a	n/a
Charles Darwin University	n/a	n/a	n/a	n/a	0	1	1	1	0	n/a	0	n/a	0	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a
Charles Sturt University	n/a	n/a	n/a	n/a	0	0	1	1	-1	n/a	0	n/a	0	0	0	1	0	n/a	1	0	0	0
Federation University Australia	0	n/a	n/a	-1	4	n/a	n/a	0	0	n/a	1	n/a	0	n/a	0	0	1	n/a	1	n/a	-1	n/a
James Cook University	n/a	0	1	0	0	1	1	0	0	n/a	1	n/a	0	0	0	0	0	0	0	0	0	n/a
Southern Cross University	n/a	n/a	n/a	1	0	1	0	n/a	1	n/a	0	n/a	-1	n/a	0	-1	n/a	n/a	0	n/a	n/a	n/a
University of New England	1	n/a	0	0	1	0	0	n/a	n/a	n/a	0	n/a	0	0	0	0	1	0	-1	-1	0	0
University of Newcastle	0	2	0	0	3	1	n/a	0	0	n/a	0	0	0	0	0	0	1	0	0	0	0	0
University of Southern Queensland	1	2	n/a	n/a	0	n/a	1	1	1	n/a	1	n/a	0	0	0	0	n/a	0	0	0	-1	n/a
University of Tasmania	0	0	-1	1	1	1	1	0	0	n/a	0	0	0	0	0	0	1	0	0	0	0	0
University of the Sunshine Coast	n/a	n/a	n/a	n/a	1	0	1	n/a	1	n/a	0	n/a	0	n/a	0	1	1	n/a	0	n/a	n/a	n/a
University of Wollongong	0	2	0	0	1	1	n/a	1	0	n/a	n/a	n/a	0	0	0	-1	0	0	0	0	0	0

\*Figures were calculated by subtracting the 2015 ERA ranking from the 2018 ERA ranking for each field of research. Note these figures do not take the volume of research outputs above the low volume threshold into account.

<sup>30</sup> Australian Research Council (2015). Excellence in Research Australia 2015 National Report.; Australian Research Council (2018). Excellence in Research Australia 2018 National Report.



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