

Action on climate change is missing from the Universities Accord Interim Report

From: Richard Heller, Stephen Leeder, Tamson Pietsch, Lauren Rickards, David Shearman
(alphabetical: see affiliations at end of document)

Executive summary

We respond to the Interim Report of the Accord by proposing that the Final Report should add a section that recognises the importance of university reform including a commitment to reduce the impact of the sector on climate.

The Accord Discussion Paper states:

'Australia needs the expertise, innovation and combined impact of higher education providers to help lead efforts to ameliorate and collectively adapt to climate change and the development of more resilient and sustainable solutions. Our exports and energy sources are also moving over time to more sustainable and renewable options. Higher education providers are looked to as leaders, educators, and exemplars in making these changes'
(Section 2.5).

However, climate change is only mentioned three times in the Interim Report of the Accord. There is no mention of other related terms such as carbon footprint or greenhouse gas emissions and the Report contains no proposal that university reform should focus on, or even include, reducing the sector's carbon footprint. This is a major omission.

To remedy this, we propose the Accord Final Report should recommend:

- The higher education sector develop and agree on ways to make accurate and comprehensive measurements of its carbon emissions, and publish annual emission reports including a league table of carbon footprints of individual universities.
- Each university develop and implement a cross-university initiative designed to enable Australia's universities to collectively reduce their emissions as rapidly as possible. This could be enabled by mirroring the UK Tertiary Education Sector's path to Net Zero recommendation, whereby Australia should establish a sector-wide *'Decarbonisation Institute for the tertiary education sector to support the implementation of a low-carbon energy transition'*.
- The federal government and sector work together to lift climate change capabilities and action among the university workforce and graduates to amplify their ability to catalyse such action in other sectors. This might include the collaborative development and dissemination of an online course for students in all faculties.
- The higher education sector recognises and actively reduces its vulnerability and exposure to climate change disruptions and stresses by developing a joint approach to monitoring impacts and climate change adaptation.
- The sector improves the positive influence of its climate change research by establishing a more coordinated approach, including embedding climate change in funding mechanisms and re-establishing the National Climate Change Adaptation Research Facility.

Background

The background to our proposal is as follows:

- There is a general acceptance nationally, globally and including the higher education sector of the urgent need to reduce the emission of greenhouse gases and the impacts of climate change.

- The higher education sector itself has a serious carbon footprint and is poorly prepared for escalating climate change risks and impacts.
- The higher education sector has a responsibility to take a leadership role in advocating for, educating about, and researching on, major societal challenges including climate change.
- The Universities Accord offers an opportunity to propose reforms to amplify the current approach to climate change in the sector, however the Interim Report is silent on the issue of climate change.

The Accord Discussion Paper states:

'Australia needs the expertise, innovation and combined impact of higher education providers to help lead efforts to ameliorate and collectively adapt to climate change and the development of more resilient and sustainable solutions. Our exports and energy sources are also moving over time to more sustainable and renewable options. Higher education providers are looked to as leaders, educators, and exemplars in making these changes' (Section 2.5).

However, climate change is only mentioned three times in the Interim Report of the Accord. There is no mention of other related terms such as carbon footprint or greenhouse gas emissions and the Report contains no proposal that university reform should focus on, or even include, reducing the sector's carbon footprint. This is a major omission.

The article (written by two of us, LR and TP) *Climate change is the most important mission for universities of the 21st century*¹ makes a strong case for universities to take a leadership role: "They must become public good, mission-driven organisations devoted to rapidly progressing human understanding and action on the largest threat there has ever been..." It outlines several local and global initiatives to encourage universities to collaborate to tackle climate change that Australia could follow.

We do appreciate that the overall contribution of the sector to greenhouse gas emissions is relatively low, with estimates at 2-3% of national emissions². A recent UK report, Accelerating towards Net Zero, estimated the contribution to be 2.4%³; however, the same report suggested that this represents an underestimate by a similar amount due to emissions arising from financial investments such as in the fossil fuel industries. Without accurate and comprehensive measurements, see below, we do not know the true contribution of the sector.

The estimates also do not fully account for the role of international students who have a high carbon footprint from travel (maybe with their families) to their country of study where they usually also are exposed to a higher per capita emissions environment than in their home country⁴⁵. Around a third of all university students and one half of all master's students in Australia

¹ Climate change is the most important mission for universities of the 21st century.

<https://theconversation.com/climate-change-is-the-most-important-mission-for-universities-of-the-21st-century-139214>

² Education and climate change: The critical role of adaptation investments.

<https://blogs.worldbank.org/developmenttalk/education-and-climate-change-critical-role-adaptation-investments>

³ Analysis reveals scale of tertiary education's carbon emissions. <https://climate.leeds.ac.uk/news/analysis-reveals-scale-of-tertiary-educations-carbon-emissions/>

⁴ Impact on carbon emissions of online study for a cohort of overseas students: A retrospective cohort study. <https://doi.org/10.12688/f1000research.55156.5>

⁵ The sustainability of international higher education: Student mobility and global climate change <https://doi.org/10.1016/j.jclepro.2019.01.291>

are international – so this is a potentially very important contribution to the carbon emissions of the sector.

A move towards online education also offers potential to reduce carbon emissions, and we cannot find consideration in detail by any of the collaborative initiatives among universities and guides for their approach to climate change. A study in the UK estimates that online learning led to carbon reductions of 83 per cent when compared with campus-based learning⁶. Major reform of the sector via a pivot to online learning has been proposed⁷.

Measurement

Measurement is a key issue we wish to highlight. There is considerable variation between universities in their reported emissions and major differences in the methods used by even those universities who do measure their carbon footprint – leading to a call for standardised measurements⁸.

A Standardised Carbon Emissions Framework has been developed for the higher education sector in the UK to measure and report on their progress towards achieving net zero⁹. This includes modelling of the change required in each of the major areas of the built environment, travel and transport and the supply chain. It estimates that around 80% of the total UK tertiary education sector's carbon footprint comes from three main areas: travel, including by staff and students to study on campus and academic staff to conferences accounting for 24% of the total, the built environment at 19% and the supply chain at 36% of the total. We recommend a similar approach for the Australian higher education sector modelling each of the potential change scenarios.

Climate change adaptation requires careful monitoring of impacts as they emerge. At present there is no framework or facility for monitoring these in the higher education sector, undermining the ability to understand how climate change is unfolding and to adjust adaptation approaches accordingly. A national approach is needed to capture changes across scales and accelerate learning across institutions.

Examples of the current university approach

Many individual or groups of universities have published commitments to act on climate change. This is a great start, but they vary in their approach and most universities do not publish timetabled targets or yet incorporate important aspects such as Scope 3 emissions. Net Zero on Campus¹⁰ was launched in April 2023 by an international consortium (including from Australia). Their guide includes several principles, but has been criticised¹¹ for missing any mention of the move to online education or of international students or of the need for accurate and standardised measurements to monitor change and make comparisons. People and Planet¹² is a student network in the UK campaigning for social and environmental justice. They rank UK universities according to various criteria of environmental and ethical performance.

⁶ Design of higher education teaching models and carbon impacts. <https://doi.org/10.1108/IJSHE-06-2013-0065>

⁷ Reforming higher education to sustain planetary health. [https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196\(22\)00216-9/fulltext](https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(22)00216-9/fulltext)

⁸ Carbon footprint in Higher Education Institutions: a literature review and prospects for future research <https://link.springer.com/article/10.1007/s10098-021-02180-2>

⁹ Standardised Carbon Emissions Framework (SCEF). <https://www.eauc.org.uk/scef>

¹⁰ Net Zero on Campus. <https://www.unsdsn.org/net-zero-on-campus>

¹¹ Critical Reflection: Net Zero on Campus and the Need for Real Change. <https://www.unsdsn.org/critical-reflection-net-zero-on-campus-and-the-need-for-real-change>

¹² How sustainable is your university? <https://peopleandplanet.org/university-league>

The global Climate Action Network for International Educators (CANIE)¹³ whose Accord contains 70 actions under the headings of leadership and influencing, emissions accounting and reduction, travel, facilities, operations and procurement, and climate education. The International Education Sustainability Group¹⁴, with seven Australian universities as foundation members, offers the Climate Action Barometer for International Education benchmarking tool¹⁵ as a service for other universities to ‘track and measure their performance to help them make the changes the world needs and students demand’.

Action to reduce climate change risks and impacts is increasing but a recent assessment suggests that only 4/44 universities in Australia have climate change adaptation plans, some of these are out of date and none consider all relevant risks¹⁶. As a result, universities are very poorly prepared for the additional financial, logistical and social complexities and costs of climate change. ANU, University of Queensland, University of Tasmania, University of New England and Southern Cross University are among those campuses have been significantly physically affected by climate-related events over the last decade, including indirect effects such as SCU Lismore campus accommodating a displaced primary school, pointing to the way universities are inseparable from wider effects on communities. In addition, many of the risks higher education faces are collective (e.g. delays to and loss of industry funding, decreased capacity for peer review) and cannot be addressed at the university scale. Without rapid adaptation, higher education will not have the capacity to reduce its greenhouse gas emissions or assist others in addressing climate change.

Education and research

While universities may include courses on climate change in their curricula, they are often patchy and restricted to those disciplines such as science and engineering¹⁷. The federal government and sector should work together to lift climate change capabilities and action among the university workforce and graduates to amplify their ability to catalyse such action in other sectors. This might include the collaborative development and dissemination of an online course for students in all faculties. There is interest among educators such as by a collective of Australian academics working in climate change education¹⁸. As well as educating the students themselves, young people who use and dominate much of social media might be able to act as sustainability advocates¹⁹. A relevant example comes from India, where their University Grants Commission has stipulated that all students will now have to study climate change²⁰. Of relevance to another response to the Interim Report of the Accord by two of us (RH and SL: The Distributed and Networked University Collaboration), is that this requirement will be supported by resources posted on the Indian Education Ministry’s free e-learning portal ‘SWAYAM’.

Climate change injects uncertainty into all domains, generating enormous research needs. Although many universities have active research programmes relevant to climate change, too

¹³ Climate Action Network for International Educators – CANIE. <https://canie.org/the-canie-accord/canie-accord-documents/canie-accord-web>

¹⁴ The International Education Sustainability Group. <https://ie-sg.org/>

¹⁵ Climate Action Barometer for International Education. <https://ie-sg.org/cabie/>

¹⁶ Denham, D. and Rickards, L. (2022) Climate change adaptation of Australia’s universities. Unpublished report.

¹⁷ Climate change: Why higher education matters? <https://doi.org/10.1016/j.scitotenv.2023.164819>

¹⁸ The Climate Change Education Network. <https://climatechangeeducation.net.au/>

¹⁹ Youth Advocacy and Digital Media. <https://had-int.org/youth-advocacy-and-digital-media/>

²⁰ All students must study climate change, sustainability. <https://www.universityworldnews.com/post.php?story=2023080211544678>

many areas remain unaddressed and the positive impact of existing research is undermined by the lack of coordination across them. We encourage research funding bodies such as the ARC, NHMHRC and MRFF to focus strongly on public good, cross-disciplinary climate change research, for an equivalent of the National Climate Change Adaptation Research Facility (NCCARF) to be re-established and for private industry to be incentivised to invest in and collaborate on substantial climate change research.

What do we propose?

The Final Report of the Universities Accord should recommend:

- The higher education sector develop and agree on ways to make accurate and comprehensive measurements of its carbon emissions, and publish annual emission reports including a league table of carbon footprints of individual universities
- Each university develop and implement a cross-university initiative designed to enable Australia's universities to collectively reduce their emissions as rapidly as possible. This could be enabled by mirroring the UK Tertiary Education Sector's path to Net Zero recommendation, whereby Australia should establish a sector-wide '*Decarbonisation Institute for the tertiary education sector to support the implementation of a low-carbon energy transition*'.
- The federal government and sector work together to lift climate change capabilities and action among the university workforce and graduates to amplify their ability to catalyse such action in other sectors. This might include the collaborative development and dissemination of an online course for students in all faculties.
- The higher education sector recognises and actively reduces its vulnerability and exposure to climate change disruptions and stresses by developing a joint approach to monitoring impacts and climate change adaptation.
- The sector improves the positive influence of its climate change research by establishing a more coordinated approach, including embedding climate change in funding mechanisms and re-establishing the National Climate Change Adaptation Research Facility.

Authors of this submission are, in alphabetical order):

Richard Heller, Emeritus Professor of Medicine, University of Newcastle, Australia and of Public Health, University of Manchester, UK.

Stephen Leeder, Emeritus Professor of Public Health and Community Medicine, University of Sydney.

Tamson Pietsch, Associate Professor, Social and Political Sciences, University of Technology Sydney.

Lauren Rickards, Professor of Climate Change Adaptation, La Trobe University.

David Shearman, Emeritus Professor of Medicine, Adelaide University