Dear Reader,

The evidence base to underpin informed decisions on climate change continues to improve. In just the last few weeks came the news that the Antarctic ice sheet has lost a best estimate of 2.7 trillion tonnes of ice between 1992 and 2017, corresponding to an increase in mean sea level of 7.6mm (Nature vol. 558, pgs. 219–222) adding to the effects of the rapid breakdown of the Greenland ice sheets. Another study has identified how sea ice protects ice shelves in Antarctica from the damaging effects of large ocean waves (Nature vol. 558, pgs. 383–389) – a significant concern given that last year had the lowest sea ice extent ever measured in Antarctica. On the food security front, recent experiments confirm what has been known for over a decade: that increased atmospheric CO₂ levels reduce the nutritional value of major crops like rice through lowering of both protein and micro-nutrient concentrations (Science Advances vol. 4, no. 5, eaaq1012), a major concern for many people in developing countries. And just two days ago, the town of Quriyat in Oman suffered through the hottest 24-hour minimum temperature ever recorded of 42.6°C (see here).

However, the consistency of evidence on emerging climate change impacts is not being matched by either global or national emission-reductions. Nationally,
Australian emissions last year rose by 1.5% compared with the previous year (see here) whilst globally, the levelling off in carbon dioxide emissions from fossil fuels and industry in the past few years ended, with an increase of 2% in emissions in 2017 (see here). Hence, there is a growing gap between the emission reductions needed to meet the Paris Agreement goals in relation to global temperatures and actual emissions trajectories (see here). There is also a growing gap between public opinion and government action. For example, the Lowy Institute 2018 poll showed that 84% of Australians want the government to focus more on renewable energy and 59% of Australians see climate change as a serious and pressing problem requiring immediate steps in response. Climate change is the third highest ranked threat (see here).

The discussions in the lead up to the next UNFCCC Conference of Parties meeting in Katowice, Poland in December this year should be interesting.

Regards,

Professor Mark Howden
Director, Climate Change Institute

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**Events**

**The EU Circular Economy vision:**
A powerful force for climate action
Public lecture

**News**

ANU Climate Coaster Project
Visit the [website](#) to see Australian temperature data presented in a novel way.
Communities Transforming their World: Stories of Empowerment and Change
Seminar and panel discussion
Thurs 19 July, 6 - 7.30pm
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When Science Changes Society: When and How Research has Impact
Wed 8 August, 6 - 7.30pm
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New scholarship for Master of Energy Change
Applications now open
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Up in smoke: what did taxpayers get for the $2bn emissions fund?
Includes commentary from Dr Paul Burke,
The Guardian, 3 June
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2018 Negative Emissions Conference: Integrating Industry,
Technology and Society for Carbon Drawdown
30-31 October
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More news

Inspiring Energy
Profile of Dr Fiona Beck,
ANU Reporter, Vol. 49 No. 2
Read more

Australian National University Climate Change Institute data on Bathurst
Western Advocate, 25 May
Read article

ANU scientists boost NASA climate mission
Includes commentary from Prof Daniel Shaddock, SBS News, 23 May
Read article

Other news
How EVs will fast-track Australia's shift to 100% renewables, includes commentary from
Prof Andrew Blakers, Renew Economy, 25 May
Fact check: Does Australia have 3 weeks of petrol in reserve? Includes commentary from Associate Prof Llewelyn Hughes, ABC News, 24 May
New satellites with ANU laser technology launched into space, Includes commentary from Prof Daniel Shaddock and Dr Paul Tregoning, PACE, 24 May
ANU presents climate change in beer coaster and bracelet form, collaboration between the ANU CCI and the ANU School of Art and Design, SMH, 24 May
The impact of climate change on mental health is impossible to ignore, Prof Helen Berry, Carbon Brief, 16 April
Free green living website for Canberrans launched - new enterprise by Master of Energy Change student, Lily Dempster

Other events
Environment Institute of Australia & New Zealand (EIANZ) Climate Change Forum - 3 Oct, 9am-4pm
If you missed the Energy Change Institute Open Day, download presentations here.

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