

What is the Climate and Ecological Emergency?

In 2009, the Stockholm Resilience Centre proposed a framework known as the 'Planetary Boundaries'. The framework sets out nine biophysical boundaries that are crucial for Earth to continue functioning as a system. The biophysical boundaries that have been identified include biosphere integrity (biodiversity); climate change; land-system change; and the shift in nutrient cycles (e.g. the nitrogen cycle). A full description of each boundary can be viewed [here](#). The most recent update to the Planetary Boundaries in 2015 showed that society's activities have pushed climate change, biodiversity loss, shifts in nutrient cycles, and land use into unprecedented territory. We are altering our planet at an unprecedented rate, to the extent that many scientists are now referring to our post-industrial world as the 'Anthropocene'. These transformations are incompatible with the long-term future of human society and life for many other species on earth.

According to leading climate scientists, the world has limited time to set itself on a different course ([IPCC, 2018](#)). It is for this reason that many institutions, including ARU, have declared a Climate Emergency. We are already feeling the impacts of a world that has been heated to 1.1 degrees above pre-industrial levels. Wildfires, heatwaves, droughts, flooding, winter storms, and hurricanes are all increasing in strength and frequency. In 2020, the annual record for the number of major storms forming in the Atlantic was broken ([Milman, 2020](#)).

Nature is essential for everything that we do, including providing food, energy, medicines, and for supporting our physical and mental wellbeing, and maintaining culture. Biodiversity – the diversity within species, between species and of ecosystems – is declining faster than at any time in human history. We are threatening more species with global extinction than ever before ([IPBES, 2019](#)). It is for this reason that many people are also calling for institutions to declare an Ecological Emergency.

Recommendations for further reading:

- Berners-Lee, M. (2013). *The Burning Question: We Can't Burn Half the World's Coal, Oil, and Gas. So How Do We Quit?* London: Profile Books
- Klein, N. (2019). *On Fire: The Burning Case for a Green New Deal*. London: Allen Lane
- Kolbert, E. (2014). *The Sixth Extinction: An Unnatural History*. London: Bloomsbury Publishing
- Wallace-Wells, D. (2019). *The Uninhabitable Earth*. London: Allen Lane

References:

[Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, \(2019\), Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Available from: https://ipbes.net/sites/default/files/inline/files/ipbes_global_assessment_report_summary_for_policymakers.pdf](https://ipbes.net/sites/default/files/inline/files/ipbes_global_assessment_report_summary_for_policymakers.pdf)

[Intergovernmental Panel on Climate Change, \(2018\), An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty \(Summary for policy makers\). Available from: https://www.ipcc.ch/sr15/chapter/spm/](https://www.ipcc.ch/sr15/chapter/spm/)

[Milman, O. \(2020\), 'Devastating 2020 Atlantic hurricane season breaks all records', Guardian, 10.11.2020. Available at: https://www.theguardian.com/world/2020/nov/10/devastating-2020-atlantic-hurricane-season-breaks-all-records](https://www.theguardian.com/world/2020/nov/10/devastating-2020-atlantic-hurricane-season-breaks-all-records)