

Emission budgets and pathways to 1.5 degrees in the context of the global stocktake

Speaker: Professor Myles Allen

Chair: Ms. Kya Raina Lal

2.00-2.45pm, Sunday 12 November; UK Pavilion, Bonn Zone.

About the speaker

Myles Allen is Professor of Geosystem Science in the School of Geography and the Environment, University of Oxford and Head of the Climate Dynamics Group in the University's Department of Physics. Prof Allen has served on the Intergovernmental Panel on Climate Change (IPCC) as Lead Author since 1999, first drew attention to the importance of cumulative carbon dioxide emissions for determining global temperatures a decade ago, and was a co-author on a recent assessment of the carbon budget for climate change of 1.5°C, the topic of this seminar.

About the chair

Kya Raina Lal is Fijian lawyer holding a BA in Pacific Studies, LLB and LLM from the University of Auckland. Her work focuses on the legal implications of present and future climate change for the Pacific region. COP23 marks her fourth COP, where she predominantly follows Loss and Damage and Compliance issues.

Abstract

The 2015 Paris Agreement committed the world to “pursue efforts to limit the [global average] temperature increase to 1.5 degrees C above pre-industrial levels,” but is this an achievable goal? Even if greenhouse gas emission reductions begin immediately and reach net zero in the second half of this century, what is the probability that combined past and future emissions commit us to more than 1.5 degrees C of warming already? Prof Allen co-authored a recent paper “Emission budgets and pathways consistent with limiting warming to 1.5 degrees C” (Millar et al, Nature Geoscience, DOI: 10.1038/NGEO3031, 2017) that argued that, for some reasonable definitions of both pre-industrial and global average temperature, keeping warming likely below 1.5 degrees C is still possible, but only if emissions are reduced directly to zero over about 40 years, which implies substantially more ambitious and sustained reductions than indicated by current NDCs. Professor Allen will explain how (contrary to some media misreporting) this result is entirely consistent with core conclusions of the IPCC 5th Assessment Report and other more recent assessments of 1.5 degree C pathways such as the 2017 UNEP Emissions Gap Report. This is an opportunity to join an informal and interactive discussion of the science behind carbon budgets and different kinds of warming commitments. The Q&A will address the implications of overshooting the 1.5 degree goal for issues such as Loss and Damage, who determines when a global temperature level has been reached, and how that should be done.

Event webpage: <https://www.oxfordmartin.ox.ac.uk/event/2514>

Organisers: [Environmental Change Institute](#); [Oxford Martin School](#); [Oxford Climate Society](#).

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