



Insights into Australia's future climate from new global climate modelling

Wednesday 20 May 2020, 11.30–12.30 (AEST)

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Global climate models are one of our key tools for understanding the climate system and for projecting likely changes to our future climate. Climate models are constantly being developed to simulate the world with more realism and to include more components of the Earth system, such as cloud cover, sea ice and convection.

Every six to seven years new climate model simulations from across the world are submitted to the international Coupled Model Intercomparison Project (CMIP). This project ensures the climate model simulations are standardised, comparable and publicly available for use by the global research community to investigate the past, present and future climate, and for use in global assessments, such as reports by the Intergovernmental Panel on Climate Change (IPCC).

Results from the current round of cutting-edge global climate models under the sixth phase of CMIP (CMIP6) are hot off the press. These models will be assessed in the IPCC Sixth Assessment Report next year and will be an important new resource for Australian climate research and services for the coming years. So, what do they say for Australia?

The Earth Systems and Climate Change Hub has a key role in assessing the new model simulations from CMIP6 and planning how Australia can make best use of them for climate projections of our region. Researchers under the Hub have already begun to analyse the modelling results, including the new opportunities CMIP6 offers to explore the future through a new set of socio-economic, as well as physical, scenarios.

In this webinar, Sugata Narsey (Bureau of Meteorology) and Michael Grose (CSIRO) will summarise and highlight the Hub's analysis and studies of the CMIP6 climate model simulations just released. Sugata and Michael will provide a general overview of CMIP6 **model performance and climate change projections for Australia**, with a special focus on a set of new models with high climate sensitivity and hotter temperature projections. They will also take a detailed look at one of the biggest remaining questions about the effect of climate change on Australia – **what will happen to rainfall in the north?**



Michael Grose is a research scientist at CSIRO, working on regional climate change processes, attribution and projections. He has a strong interest in climate research and communication on topics with impact, acting as lead author on the IPCC Sixth Assessment Report and the biannual Australian State of the Climate reports.



Sugata Narsey is a research scientist at the Bureau of Meteorology, working on topics in climate change, variability and extremes with a focus on the dynamics of rainfall.

Michael and Sugata contribute to the Earth Systems and Climate Change Hub **Project 5.3: Regional climate change projections science and delivery**.

The Earth Systems and Climate Change Hub science webinars are open to the research community and anyone interested in finding out more about the Hub's research (noting that the content may assume some understanding of climate change science and the fields being discussed).