

Project Title: Model intercomparison for extremes precipitation

Project Details

This project intercompares multiple model output including Narclim and the global convection permitting models, and others that will be available

Simulated precipitation will be compared against station data at different temporal scales (hourly, daily, monthly) and regions of interest (e.g., Sydney, Suva (Fiji))

The teams will perform analysis around seasonal and diurnal cycles of extreme precipitation.

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Project Description

Background:

The project aims to explore how convection permitting and non-convection permitting models compare with observed extreme precipitation. The participants will use a range of metrics to perform this evaluation.

Primary research question:

How well do convection-permitting models represent extreme precipitation compared to non-convection-permitting models?

Primary output:

A comparison of different model simulations to observed precipitation

Secondary outputs:

Figures and scripts

Methodology

Statistical analysis including quantile mapping, pdfs applied to seasonal cycles, daily and monthly precipitation timeseries from stations and models

Datasets:

Precipitation from model simulations

Station data (Sydney archive and Fiji archive) will be provided by the leaders

Potentially BARRA-R2 (available on Gadi)

Methods:

It would be very helpful if the CMS team could provide examples of Jupyter notebooks that show how we can regrid from HEALPix into regular grid or data loading and common post-processing