

**PARALLEL SESSION A : BENEFITS OF DOWNSCALING
A3: FROM DATA TO INFORMATION - A DISTILLATION DILEMMA**

High-resolution (10km) ensemble regional climate projections for SE Asia

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To assist the government of Vietnam in its efforts to better understand the impacts of climate change and prioritise its adaptation measures, detailed climate change projections at 10 km resolution across Vietnam were produced for the High-resolution Climate Projections for Vietnam (HCPV) project. Six of the latest available global climate models (GCMs) from the Coupled Model Intercomparison Project Phase 5 were selected on the basis of their ability to realistically capture current climate and climate features such as El Niño-Southern Oscillation (ENSO). Using bias-corrected sea surface temperatures from the GCMs, global simulations were first made using the Conformal Cubic Atmospheric Model (CCAM). Then, two RCMs (CCAM and RegCM) were then used to further dynamically downscale the global data to produce high-resolution (10 km or 20 km) simulations for current and future climate. Simulations were performed for historical (1970-2005) and future (to 2099) time periods using two representative concentration pathways: RCP4.5 and 8.5.

The GCM selection process was done through both internal assessments of accuracy as well as international studies. The bias correction technique used in this study corrects both the monthly means, as well as interannual variability, in order to capture the magnitude and location of SST variability such as ENSO. The current climate is validated against both station and gridded datasets. The main results presented will focus on the projected changes in temperature and rainfall, as well as extremes. The key point the need for ensembles in order to capture the spread of the possible projections. For many variables, the ensemble projected changes spread across zero. For a few variables though, the changes by the end-of-the century show more one-sided changes.

Finally, the use of a risk-based approach to using the projections will be discussed. Although the projected changes may not be significant, the risk of the more extreme changes could have significant implications for adaptation planning.