

Cameron Do (Bureau of Meteorology)

Session 4: Climate Hazards and Risk forecasts

Title: Developing a Tropical Cyclone Risk Assessment for Australia

Tropical cyclones (TCs) are natural hazards that pose a significant threat to Australia's population, infrastructure, and environment. This threat may grow under climate change as projections indicate continuing rises in sea level and increases in rainfall during TC events. This study assessed and mapped TC risk nationwide, focusing on the impacts on population and infrastructure from the TC-related hazards of wind, storm surges, flooding, and landslides. Risk maps were created at the Local Government Area level for all of Australia, using collated data on multiple hazards, exposure, and vulnerability. Further enhancement and validation of risk maps developed in this study will provide decision makers with the information needed to reduce TC risk through reducing vulnerability and building resilience, saving lives and protecting infrastructure.