



IAG and the US National Center for Atmospheric Research (NCAR) release new findings about the future of tropical cyclone activity along Australia's east coast

The research examines the variability and future changes in regional tropical cyclone behaviour for the Queensland to New South Wales regions

Tropical cyclones will become more intense and impact larger areas of Australia's east coast according to new research co-authored by General Insurer IAG's Natural Perils team in partnership with NCAR.

The latest research findings, published in the *Journal of Weather and Climate Extremes*, indicate that the frequency of Queensland tropical cyclones will remain highly variable between each decade, however the intensity of these systems will become more severe.

The research concurs with recent observations that there has been a decline in cyclone activity since the 1980s and indicates the decline will continue for another decade. While this outlook sounds optimistic, the modelling concerningly revealed that cyclone frequency will likely rebound towards the end of the century.

The research further indicated that tropical cyclones will typically maintain their severe intensity for longer periods of time and, double the area of land in cyclone areas along the east coast could be impacted by Category 5 cyclones and triple the area of land will experience extreme rainfall before the end of the century.

Tropical cyclones are intense low pressure systems that form over warm tropical waters and are typically the most damaging type of cyclone to affect Australia.

IAG Executive Manager Natural Perils & Atmospheric Scientist Mark Leplastrier said:

"We have a vested interest in analysing current climate risks so we can better prepare our communities for the impacts of severe weather in the future. We know that tropical cyclones have the potential to cause serious damage, particularly in areas that have not been built to withstand such extreme conditions.

"Through this research, we now understand that the expanding footprint of future cyclones will see large populated areas across Southeast Queensland and Northern New South Wales vulnerable to the impacts of destructive winds and inland flooding," Mr Leplastrier added.

The research recommends building codes evolve to include consideration of climate change trends to account for the change in tropical cyclone intensity in the future.

An opportunity presents itself for greater investment in mitigation initiatives and IAG advocates for the strengthening of building codes and land use planning so communities can withstand the impacts of cyclones and are better protected before disaster strikes.

IAG has worked closely with NCAR for almost a decade, having published two editions of its Severe Weather in a Changing Climate report in November 2019 and September 2020, which outline predictions on future extreme weather events based on a range of warming global temperature scenarios.

IAG and NCAR's latest research around tropical cyclone behaviour uses a robust method of modelling and next generation techniques to better examine future trends.

The general insurer is dedicated to researching the impacts of cyclones across Australia and provides support to the James Cook University (JCU) Cyclone Testing Station in addition to the Insurance Council of Australia's (ICA) Climate Change Action Committee to produce its Tropical Cyclones and Future Risks report. IAG further supports the ongoing program of work investigating resilient aspects of properties such as the North Queensland Strata Title Inspection Program and QLD Government Housing Resilience Scheme.

To help Australians prepare for cyclones, IAG has developed a Tropical Cyclone Fact Sheet featuring important information and advice for making homes more resilient.

About NCAR

The US National Center for Atmospheric Research (NCAR) was established by the National Science Foundation in 1960 to provide the university community with world-class facilities and services that were beyond the reach of any individual institution.

NCAR's researchers and engineers work with community collaborators and private and public partnerships to ensure they meet the demands of today's greatest scientific challenges. NCAR scientists also delve into fundamental research questions, producing a wealth of scientific publications that help lead the way for the broader science community.

NCAR is managed by the University Corporation for Atmospheric Research (UCAR), a non-profit consortium of more than 120 colleges and universities.

About IAG

IAG is the parent company of a general insurance group with operations in Australia and New Zealand. IAG's main businesses underwrite over \$12.5 billion of insurance premium per annum under many leading brands, including: NRMA Insurance, RACV (under a distribution agreement with RACV), CGU, SGIO, SGIC and WFI (Australia); and NZI, State, AMI and Lumley (New Zealand). For further information, please visit www.iag.com.au.

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