

Urgent research needed on predicting future regional climate change, report demands

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Crucial research into the changing spatial patterns of future climate patterns is urgently needed, a new review article has concluded.

An international team of scientists has called for [climate experts](#) to give a greater focus to predicting regional [climate change](#) in the coming decades.

Much of the current research on future climate change has focused on global warming. However, much less is currently understood about how regional climate change will unfold.

The new, groundbreaking collaborative report suggests climate change at the regional scale could be much more diverse - with shifting rainfall patterns, changes in the frequency of storms and increases in the frequency of extreme events.

The international team of authors has reviewed the literature on [regional climate](#) change and has highlighted some of the different factors that can affect weather and climate.

In middle-latitudes, climate is largely determined by

highly variable weather in storm tracks and jet streams. These introduce considerable uncertainty into model projections of future change.

In the tropics, the atmosphere and ocean behave in concert, for example in the emerging El Niño event in the Pacific. There needs to be a focus on understanding that coupling and how it is impacted by climate change.

Their findings are published in the journal *Nature Climate Change*.

Professor Mat Collins from the University of Exeter's Mathematics department and one of the authors of the article said: "In the UK we are influenced by many different types of weather, from winter storms to summer heat waves. This makes it really difficult to predict how future climate change will play out.

"Planning by society to adapt to the impact of climate change requires information about the spatial variability of change. Much of this information is, as yet, unreliable.

There is an urgent need to provide quantitative but reliable information about spatial variability in future climate that is consistent with the global projections from models."

Provided by University of Exeter

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