Special Issue

Extreme Climate Events: Causes, Risk and Adaptation

Message from the Guest Editors

Global warming by anthropogenic activities has already increased the intensity, frequency, and spatial range of extreme climate events (e.g., droughts, heatwaves), which cause social and economic loss as well as population casualties. This Speical Issue seeks research papers with topics related to Extreme Climate Events, contributing to enhance the understanding of these disaster events' evolution mechanisms and impacts. The Issue can be divided into two themes:

Causes: the spatiotemporal change characteristics of extreme climate events; the influences of atmospheric circulation and land–atmosphere coupling on these climate events using advanced methods such as causality, model simulation, artificial intelligence.

Risk and Adaptation: the synthetic impacts of climate events with the function (Exposure, Hazard) or single factor results (e.g., Exposure to climate events) using meteorological observation, disease death and economic loss data.

Guest Editors

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Deadline for manuscript submissions

closed (31 July 2025)

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About the Journal

Message from the Editor-in-Chief

Continued developments in instrumentation and modeling have driven atmospheric science to become increasingly more complex with a deeper understanding of concepts, mechanisms, and interactions. This is the field that innovation built and it has led to a better appreciation for the complexity with atmosphere. Human life is intertwined in this complexity as we strive to better understand our atmosphere. Climate change is constantly stretching the limits of our thinking and forcing new ideas and concepts to be played out. Welcome to the Anthropocene!

Editor-in-Chief

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