Special Issue

Advances in Understanding Extreme Weather Events in the Anthropocene

Message from the Guest Editors

Understanding the dynamics behind these episodes is crucial for developing strategies to improve disaster preparedness and response, as well as mitigating their impacts on communities and ecosystems. *Atmosphere* is dedicating this Special Issue to publishing the latest studies in the context of extreme weather events as they relate to climate and weather variability. The main topics to be presented in this Special Issue include, but are not limited to:

- Flood, droughts, cold spells, heatwaves and climate studies;
- Severe weather: hailstorms, tornadoes, heavy rainfall and lightning;
- Polar lows, medicanes, tropical cyclones and torrential rains;
- Extreme wildfires, smoke aerosol emission, transport and impacts on atmosphere and air quality.
- Use of remote sensing and Earth observations (EOs) for studying extreme events;
- Modelling and forecasting extreme events;
- Impact of extreme weather on society and early warning systems.

We encourage contributions which present innovative research, reviews and case studies examining all aspects of extreme weather events, from observation to numerical modelling results that are useful for understanding these events.

Guest Editors

Dr. Flavio T. Couto

Dr. Stergios Kartsios

Dr. Ioannis Pytharoulis

Deadline for manuscript submissions

31 August 2025

Atmosphere

an Open Access Journal by MDPI

Impact Factor 2.3
CiteScore 4.9

mdpi.com/si/192281

Atmosphere
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
atmosphere@mdpi.com

mdpi.com/journal/atmosphere

Atmosphere

an Open Access Journal by MDPI

Impact Factor 2.3
CiteScore 4.9

mdpi.com/journal/atmosphere

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

Dr. Daniele Contini
Institute of Atmospheric Sciences and Climate (ISAC), National Research Council (CNR), Str. Prv. Lecce-Monteroni km 1.2, 73100 Lecce, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, GEOBASE, GeoRef, Inspec, CAPlus / SciFinder, Astrophysics Data System, and other databases.

Journal Rank:

CiteScore - Q2 (Environmental Science (miscellaneous))

MDPI