Special Issue

Spatial and Temporal Variability in Drought: Exploring Regional Drought Indicators and Indices

Message from the Guest Editors

Drought is a complex and multifaceted natural phenomenon with profound implications for ecosystems, agriculture, water resources, and society. This Special Issue aims to advance the understanding of drought variability by examining regional perspectives using various assessment, monitoring, and forecasting techniques. Advanced methodologies such as remote sensing, climate modeling, machine learning, and statistical approaches enhance the accuracy and applicability of drought analysis. The key areas of focus will include the development and application of drought indices such as the Standardized Precipitation Index (SPI), Palmer Drought Severity Index (PDSI), and Soil Moisture Index (SMI). Additionally, this Special Issue will highlight regional case studies illustrating localized drought dynamics, explore the role of climate variability in drought shifts, and showcase advancements in data-driven drought risk assessment. Furthermore, research on developing robust drought early warning systems and adaptive management strategies is essential for effective drought preparedness and response.

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Deadline for manuscript submissions

30 September 2026

Atmosphere

an Open Access Journal by MDPI

Impact Factor 2.3
CiteScore 4.9

mdpi.com/si/236084

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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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