



Advances in Meteorology

Special Issue on  
**Hydrological Hazards in a Changing Environment:  
Early Warning, Forecasting, and Impact Assessment**

# CALL FOR PAPERS

Hydrological hazards of various types present myriad technical and public policies challenges worldwide and are defined as extreme events associated with water occurrence, movement, and distribution. Specifically, hydrological hazards include flooding and related events (e.g., landslides and river scour and deposition) and droughts. Hydrological hazards and their impacts are associated with climate variability, demographic trends, land cover change, and other causative factors and could be exasperated by global climate change. The increase in greenhouse gases in the atmosphere will continue leading to global warming and an intensification of the hydrological cycle, making hydrological extreme studies more complex and more challenging.

Because of immense impacts of hydrological hazards on society and its economies, it is important to consider novel approaches, techniques, or methods for the prediction, prevention, and mitigation of hydrological extremes. Given the complexity of the nonstationary hydrometeorological and hydroclimatological processes, it is critical to utilize the recent technological developments and scientific knowledge to improve our understanding of hydrological hazards and our ability to cope with droughts and floods.

We invite investigators to contribute their original research articles as well as review articles focused on various types of droughts (e.g. hydrologic, meteorological, and agricultural) and various types of flooding (e.g. riverine, coastal, snowmelt-driven, rainfall-based, and ice-jam floods). Applications or enhancements of emerging technologies, such as remote sensing, data analytics, hydroinformatics, and climate informatics, are encouraged. A particular focus will be given to research dealing with the nonstationary nature of hydrological extremes which results from the changes in hydrologic systems around the world.

Potential topics include, but are not limited to:

- ▶ Methodologies for the prediction and prevention of hydrological extremes
- ▶ Early warning and forecasting systems for hydrological extremes
- ▶ Strategies for reducing the vulnerability to hydrological extremes
- ▶ Flood/drought frequency analysis
- ▶ Regional flood/drought analysis
- ▶ Effects of climate change and land-use/land-cover change: detection and attribution
- ▶ Structural and nonstructural mitigation of hydrological extremes
- ▶ Case studies in different parts of the world
- ▶ Emerging technologies in data analysis, hydroinformatics, and climate informatics

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/amete/ewfi/>.

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