



Regional Hydrological Processes in a Changing Climate

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Message from the Guest Editors

Hydrological processes, including rainfall, evaporation, transpiration, runoff and other water migration and transformation processes, are both indicators of the climate state and the most critical nexus of the energy and material cycle of the climate system.

In the context of climate warming, changes in hydrological processes have been reported in various regions of the world, but there is strong spatial heterogeneity in the direction, intensity, and frequency of changes. Some studies suggest that the area of arid zones will expand as climate change continues, and the frequency and intensity of extreme hydrological events tend to increase. These hydrological changes will inevitably affect human society, exacerbating heat waves, water scarcity, and flooding events, leading to reduced crop yields, thereby threatening human health and safety.

Therefore, we have organized this Special Issue to provide a platform for colleagues to exchange knowledge and advance the understanding of the mechanisms of hydrological process response to climate change. We welcome contributions from colleagues to share their latest research findings.





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Editor-in-Chief

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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!

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