

Special Issue

Evapotranspiration and Climate Change

Message from the Guest Editors

Evapotranspiration (ET) determines water and energy exchanges in the land-vegetation-atmosphere continuum. ET represents a key variable in several water balance models and decision support systems. Understanding its role and quantifying it both at adequate spatial and temporal scales is crucial for climate change studies and for applied research and planning of water resources. Physically based formulations are strongly recommended to compute reference evapotranspiration (ET₀). Anyway, due to unavailability of input data, simplified formulations are often used, that could lead to strong biased evaluations. ET₀ is expected to increase in a warming climate, but uncertainties on the (especially future) variations of solar radiation flux, air humidity and wind, lead to uncertainties in both magnitude and sign of ET₀. On the other hand, radiative, energy and water surface balances are strongly coupled, and several feedbacks between processes (both positive and negative) exist which are difficult to predict. We invite you to submit your research in this issue, focusing on evaluation of evapotranspiration past and future trends, across different spatial and temporal scales.

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Deadline for manuscript submissions

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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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