筑波大学
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EME International Seminar Series



Water Vulnerability under Environmental Change: From the Tibetan Plateau to the Globe

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https://www.geog.ox.ac.uk/staff/xli.html

Abstract: Climate change and human activities are reshaping the terrestrial water cycle, altering how much water is stored on land and how it moves through river basins. These changes pose growing challenges to sustainable water supply and hydroclimatic risk management, particularly in regions where ground-based observations remain sparse. This seminar will illustrate how satellite Earth observations, AI-enabled modelling, and hydrologic process analysis can be integrated to quantify and understand changes in terrestrial water storage and runoff, drawing on research from the Tibetan Plateau and extending to the global scale. It will also examine water vulnerability arising from compound limitations in both water storage and runoff, highlighting their complementary roles as the buffering and renewable components of water availability. Together, these studies advance understanding of hydrologic responses to environmental change across scales, offering new insights for sustainable water management and climate adaptation.

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Degree Program in Engineering Mechanics and Energy

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