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## Remote Sensing of Soil Moisture and the Dynamics of Soil–Vegetation Systems

Guest Editors:

**Dr. Ankur Srivastava**

UTS · Faculty of Science,  
University of Technology Sydney,  
Sydney, Australia

**Dr. Mauro Holzman**

1. Instituto de Hidrología de  
Llanuras “Dr. Eduardo J.  
Usunoff”, Buenos Aires, Argentina  
2. Faculty of Science, University  
of Technology Sydney, Sydney,  
NSW 2007, Australia

**Dr. Facundo Carmona**

Instituto de Hidrología de  
Llanuras Dr. Eduardo J. Usunoff,  
Universidad Nacional del Centro  
de la Provincia de Buenos Aires,  
Pinto 399, Tandil 7000, Argentina

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### Message from the Guest Editors

Dear Colleagues,

Soil moisture is a crucial factor influencing the water cycle and vegetation dynamics, especially in arid and semiarid ecosystems and rainfed crops, where hydric conditions determine much of the vegetation growth. The monitoring of this variable is key to understanding vegetation productivity and phenology, the impacts of climatic variability on vegetation and carbon uptake, among others. During the last several decades, significant progress has been made in estimating water availability for vegetation. Microwave bands can retrieve soil water content, while other methods that use thermal and/or reflectance data are more associated to evapotranspiration or vegetation condition. Despite these significant advances, it is still necessary to understand processes at different spatial and temporal scales that determine the vegetation water condition and dynamics. In this sense, although geostationary satellites have mostly been used in the past for meteorological studies, they have the capability to make significant contributions to soil–vegetation system monitoring.



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Dr., Flagstaff, AZ 86001, USA

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*Remote Sensing* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

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