

Remote Sensing of Precipitation: Opportunities for Improving Drought Monitoring

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Abstract

Reliable drought monitoring requires long-term and continuous precipitation data. High resolution satellite measurements provide valuable precipitation information on a quasi-global scale. However, their short length of records limit their applications to drought monitoring. In addition to this limitation, long-term low resolution satellite-based gauge-adjusted data sets are not available in near real-time for timely drought monitoring. This presentation offers an overview of the Precipitation Estimation from Remotely Sensed Information using Artificial Neural Networks (PERSIANN), which is a satellite-based precipitation retrieval algorithm that provides near real-time rainfall information. The presentation describes the opportunities for using satellite precipitation data sets for advancing drought monitoring. Furthermore, we provide an overview of the Global Integrated Drought Monitoring and Prediction System (GIDMaPS) which provides drought information using a combination of remote sensing observations and model simulations.