

## **The International Soil Moisture Network - Latest Advancements and Future Prospects**

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In 2009, the International Soil Moisture Network (ISMN; <https://ismn.geo.tuwien.ac.at/>) was initiated in the first place as a platform to support calibration and validation of soil moisture products from remote sensing and land surface models. The ISMN collects and harmonizes ground-based soil moisture data sets from a large variety of individually operating networks and makes them available through a centralized data portal. Meanwhile, the ISMN contains more than 6000 soil moisture data sets from almost 1500 sites, distributed among 37 networks worldwide. The steadily increasing number of organizations voluntarily contributing to the ISMN, and the rapidly increasing number of studies based on the network show that the portal has been successful in reaching its primary goal to promote easy data accessibility to a wide variety of users. Recently, several updates of the

system were performed to keep up with the increasing data amount and traffic, and to meet the requirements of many advanced users. Many datasets from operational networks (e.g., SCAN, the US Climate Reference Network, COSMOS, and ARM) are now assimilated and processed in the ISMN on a fully automated basis in near-real time. In addition, a new enhanced quality control system is currently being implemented. Also, the representativeness and suitability of the single sites for coarse scale soil moisture products was investigated. The presentation gives an overview of these recent developments, presents some examples of important scientific results based on the ISMN, and sketches an outlook for mid- to long-term operation.