



Advanced Webinar: Using Earth Observations to Monitor Water Budgets for River Basin Management II

July 21, 28, and August 4, 2020

10:00-12:00 ET or 16:00-18:00 ET (UTC-4)

Rivers are a major source of freshwater. They support aquatic and terrestrial ecosystems, provide transportation, generate hydropower, and when treated, provide drinking and agricultural water. Estimating and monitoring water budgets within a river basin is required for sustainable management of water resources and flooding within watersheds. This advanced-level webinar series will focus on the use of NASA Earth observations and Earth system-modeled data for estimating water budgets in river basins.

Past ARSET trainings on monitoring water budgets for river basins focused on data sources relevant for river basin monitoring and management, and provided case studies for estimating the water budget of a watershed using remote sensing products. This advanced webinar will include lectures and hands-on exercises for participants to estimate water budgets for a given river basin.

Part 1: Review and Access of Earth Observations and Earth System-Modeled Data for River Basin Monitoring and Management

This session will provide an overview of data sources relevant for estimating water budgets for a river basin. There will be a demonstration and guided exercise to download water budget component data to estimate the water budget of a given watershed using remote sensing products.

Part 2: Water Budget Estimation using Remote Sensing Observations

This session will include a demonstration and step-by-step exercise to estimate an integrated water budget over a river basin using Integrated Multi-satellite Retrievals for Global Precipitation Measurement (IMERG) precipitation data, Atmosphere Land Exchange Inverse (ALEXI) evapotranspiration data, and Gravity Recovery and Climate Experiment (GRACE) terrestrial water storage data, all analyzed with QGIS.

Part 3: Water Budget Estimation using Global Land Data Assimilation Model

The final session will include a demonstration and step-by-step exercise to estimate water budgets at sub-watershed level within a river basin using water budget components from the latest version of Global Land Data Assimilation System (GLDAS v2.2), which includes assimilation of ground water data.



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