NASA Earth Science Data for Water Resources Management

Objectives: To provide 1) information about availability and access to global freshwater data for applications in drought and agricultural management, flooding and reservoir management from NASA remote sensing observations and land-atmosphere models and 2) GIS-based analysis of regional water budget for applications in water resources management.

Total five webinar sessions (1-hour each) on October 13, 20, 27; November 3, 10, 2015

Week-1: Overview of NASA Satellite Missions and Land-Atmosphere Models Relevant
to Water Resources Management:

- *overview of NASA satellite missions useful for water resources observations*
- *overview of Global and North American Land Data Assimilation Models*
- *strengths and limitations of remote sensing- and model- based data*
- *examples of water resources data applications*

Week-2: Precipitation and Soil Moisture Data:

- *satellites/sensors and models for precipitation (rain and snow)*
- *satellites/sensors and models for soil moisture*
- *data access and applications*

Week-3: Run off /Streamflow and Reservoir Height Data:

- *run off and streamflow from hydrology and land-atmosphere models*
- *satellites/sensors for lake heights, data description*
- *data access and applications*

Week-4: Evapotranspiration and Ground Water Data:

- *ET based on water-balance and Energy-balance techniques*
- *satellite/sensor for ground water, data description*
- *data access and applications*

Week-5: Regional Water Budget Estimation and Water Resources Data Applications:

- *water budget estimation over selected watersheds/river basins/countries using Land Data Assimilation Model*
- *GIS-based analysis of water resources data applications*