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## **Introduction to Using the VIC Model with NASA Earth Observations**

Thursdays, February 15 – March 1, 2018  
09:00 – 10:00 or 18:00 – 19:00 EST (UTC-5)

Hydrologic modelling is useful for flood, drought, and water resources management. The Variable Infiltration Capacity (VIC) Model uses inputs to better understand hydrological processes in near real-time. Many of the inputs are available from NASA remote sensing and Earth system models, allowing the model to provide soil moisture, evapotranspiration and runoff as outputs. Together with precipitation data, these outputs provide quantitative assessment of a regional water budget. This introductory training will include an overview of the model, sources of satellite-derived input data, and implementation of the model.

### **Session One: Introduction to the VIC Hydrological Model**

February 15, 2018

This session will cover an introduction to the Variable Infiltration Capacity (VIC) model, including an overview of VIC modules, computer hardware and software requirements, and an overview of inputs and outputs.

### **Session Two: Overview of Remote Sensing-Based Input Data for VIC**

February 22, 2018

This session will go over the data preparation necessary, using the Mekong River Basin as an example. The session will also include a review of data sources, including MERRA temperature and winds; TRMM/GPM precipitation; SRTM terrain; and MODIS land cover, albedo, and leaf area index.

### **Session Three: Overview of VIC Implementation in a River Basin**

March 1, 2018

This session will focus on implementing the VIC model, using the Mekong River Basin as an example. This will include calibration and validation, analysis of outputs, examples of applications, and a discussion on the advantages and limitations of VIC.