Applications of Remote Sensing-Based Evapotranspiration Data Products for Agricultural & Water Resource Management

Wednesdays, June 1, 8 & 15, 2022

11:00-12:30 or 16:00-17:30 EDT (UTC-4)

Evapotranspiration (ET) is the process by which the land surface returns water to the atmosphere in the form of moisture. ET is a very important part of the water cycle in the Earth system. It is the sum of evaporation from bare soil and transpiration from vegetation. For a given watershed, the supply of water from precipitation, surface and groundwater can be depleted via ET. Therefore, estimating the amount of ET is crucial for calculating the overall water budget and for effective water management. Since ET indicates loss of moisture from the soil and vegetation, monitoring ET on agricultural fields helps with crop irrigation activities and water conservation.

This 3-part webinar series focuses on introducing newly available ET products derived from remote sensing observations. It will specifically cover a web portal called OpenET (https://openetdata.org/), which includes ET products estimated by using six models as well as Landsat satellite observations. These ET products cover the western United States. In addition, information about global ET products derived from ECOsystem Spaceborne Thermal Radiometer Experiment on the Space Station (ECOSTRESS) will also be covered. The webinar series will provide details about OpenET and ECOSTRESS ET products, demonstrations and hands-on exercises for data access and analysis, and examples of applications of the data.

Part 1: Introduction to OpenET

- Background, methodologies, and validation of various ET products
- Applications of ET for water resources and agricultural management
- Demonstration of OpenET data portal for data access and visualization

Part 2: Introduction to ECOSTRESS ET

- Background of the ECOSTRESS mission
- ECOSTRESS ET products
- Demonstration of ECOSTRESS ET data access and visualization

Part 3: Data Access and Application of ET products

- Demonstration of using ET for water balance assessment at the watershed level
- Hands on exercise to download and compare the OpenET and ECOSTRESS ET products at farm to watershed scales

ARSET empowers the global community through remote sensing training.

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