



# Monitoring and Predicting Floods Using Earth Observations for Planning and Preparedness

June 18, 23, & 25, 2026

Session A: 11:00 - 12:30 EDT (UTC-4)

Session B: 14:00 - 15:30 EDT (UTC-4)

Among all natural disasters worldwide, floods result in exceptionally high fatalities and cause billions of dollars in damage to infrastructure and economies. While near-real-time information on flood intensity and extent is crucial for planning rescue and relief operations, advance flood prediction can significantly improve preparedness and response planning. Remote sensing observations and Earth system models, combined with hydrologic models, support both flood monitoring and prediction efforts. This three-part training will provide an overview and demonstration of flood monitoring tools based on remotely sensed optical observations, NASA near real-time Global Flood Product, and Observational Products for End-users from Remote Sensing Analysis (OPERA). Additionally, the training will introduce a streamflow prediction tool, the Group on Earth Observations Global Water Sustainability (GEOGLOWS) model, which provides global, historical, and 15-day streamflow predictions. Participants will be guided through hands-on exercises to access and visualize selected flood data.

## Part 1: Overview of Global Flood Product Derived from NASA Optical observations

ARSET Trainer: Amita Mehta

Guest Instructor: Dan Slayback

- Introduction
- Overview of NASA Global Flood Product
- Access and Visualize Global Flood Products
- Summary and Q&A

## Part 2: Overview of Monitoring Floods using OPERA Surface Water Extent based on Optical and SAR Observations

ARSET Trainer: Amita Mehta

Guest Instructor: Renato Frasson

- Introduction
- Overview of OPERA Dynamic Surface Water Data Product
- Visualize Dynamic Surface Water from Optical and SAR Imagery
- Summary and Q&A

## Part 3: Overview of GEOGLOWS for Monitoring and Predicting Flood Risk

ARSET Trainer: Amita Mehta

Guest Instructor: Rachel Huber Magoffin & Riley Hales

- Introduction to GEOGLOWS
- Access Streamflow Data Using GEOGLOWS Hydroviewer
- Summary and Q&A



ARSET empowers the global community through remote sensing training.