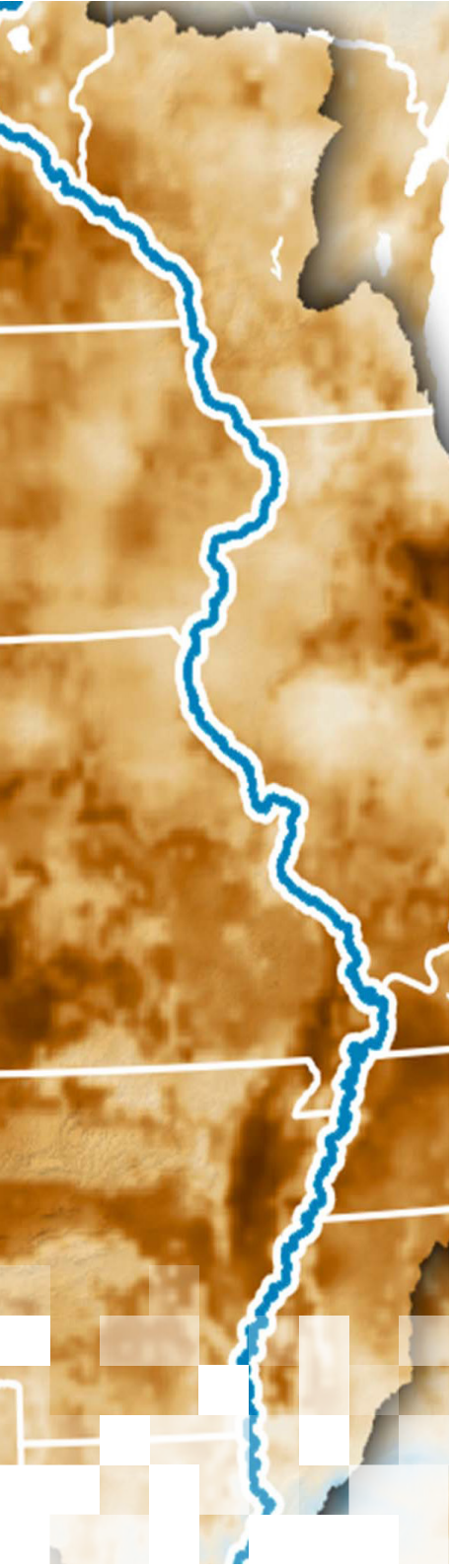


National Aeronautics and
Space Administration

Drought Monitoring, Prediction, and Projection using NASA Earth System Data

July 23, 25, 30 & August 01, 2024

10:00-12:00 EDT (UTC-4) or 14:00-16:00 EdT (UTC-4)

This four-part advanced training will build upon previous ARSET trainings and provide hands-on data analysis for monitoring different types of drought (meteorological, hydrological, and agricultural). Moreover, the training will include drought prediction analysis on sub-seasonal to seasonal (S2S) time scales and climate change projection analysis of drought conditions.

Part 1: Overview of Drought Monitoring Data and Tools using Earth Observations

ARSET Trainers: Amita Mehta, Sean McCartney

Guest Instructors: Kelsey Satalino (CIRES/NOAA/NIDIS), Steve Ansari (NOAA), Brad Pugh (NOAA-NWS)

- Identify Earth observation data sets and tools for both global and regional short term drought monitoring
- Explore regional drought monitoring tools for analyzing drought conditions in the US
- Calculate drought indices for a selected time and region of interested using Google Earth Engine

Part 2: Drought Prediction using NASA Sub-seasonal to Seasonal (S2S) Predictions

ARSET Trainers: Amita Mehta, Sean McCartney

Guest Speaker: Andrea Molod (GMAO)

- Recognize functionality of NASA's sub-seasonal to seasonal (S2S) forecast system and data
- Assess evolving drought conditions using given S2S temperature and precipitation prediction data in QGIS for a region of interest

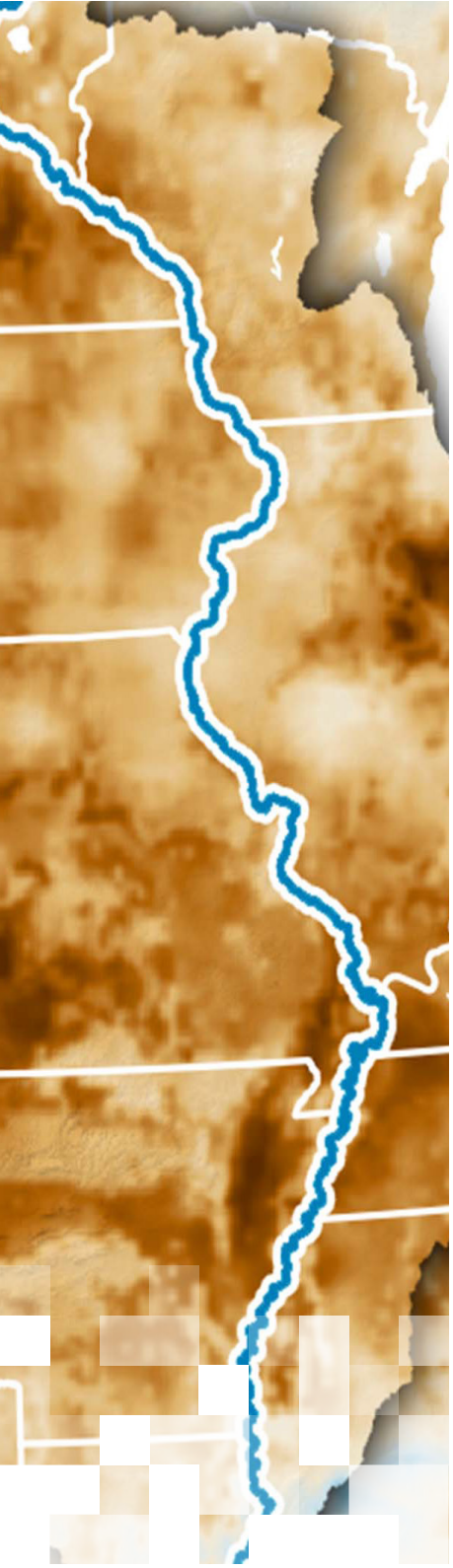
Part 3: Climate Change Projections and Droughts

ARSET Trainer: Amita Mehta

- Recognize functionality of NEX-GDDP-CMIP6 climate projection dataset
- Access NEX-GDDP CMIP-6 climate change projections to assess long term drought conditions for a region of interest

ARSET empowers the global community through remote sensing training.

appliedsciences.nasa.gov/arset



National Aeronautics and
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Part 4: Demonstration of Regional Drought Monitoring Tools

ARSET Trainer: Amita Mehta, Erika Podest

Guest Instructor: Amber McCullum (WWAO), Reetam Majumder (NC State University)

- Identify regional drought projects with NASA's Western Water Applications Office
- Explore how the WWAO-developed Navajo Nation Drought Severity Evaluation Tool (DSET) is used to calculate drought metrics and vegetation health anomalies
- Explore Sustainable Forest Management and Information System (SFMIS) in Google Earth Engine to assess impact of drought on land cover change

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