



# Monitoring Coastal and Estuarine Water Quality: Transitioning from MODIS to VIIRS

September 14, 16, & 21, 2021

11:00-12:30 EDT (English) or 16:00-17:30 EDT (Spanish)

Remote sensing observations from Aqua/MODIS have enabled us to monitor coastal and estuarine water quality since mid-2000. As MODIS nears the end of its mission, it is important to transition to VIIRS (first launched in 2011) to provide continuity with the MODIS instrument and add to the moderate-resolution, long-term data record of water quality monitoring in estuaries. This intermediate-level webinar will provide an overview of recent satellites and sensors used for extending the MODIS long-term water quality time series, specifically focusing on VIIRS image processing using the NASA Ocean Color software, SeaDAS. This webinar will point out similarities and differences between MODIS and VIIRS and demonstrate water quality monitoring procedures using these sensors in selected coastal and estuarine regions.

## Part 1: Overview of Remote Sensing Observations for Water Quality Monitoring in Estuaries

- Background information about estuaries and their water quality
- Introduction to recent satellites and sensors relevant for monitoring water quality
- Comparison of MODIS and VIIRS for water quality monitoring
- Demonstration of VIIRS data acquisition

## Part 2: Image Processing using SeaDAS

- Overview of Image Processing
- Demonstration of using SeaDAS/Ocean Color Science Software (OCSSW) for MODIS and VIIRS Image Processing in the Chesapeake Bay
- Overview of the NOAA Coast Watch Water Quality Product for Puerto Rico using VIIRS

## Part 3: Monitoring MODIS- and VIIRS-Based Water Quality in Selected Estuaries

Case Study Areas: 1) the Chesapeake Bay and 2) Río de la Plata

- Importance and ecosystems of the study areas
- Demonstration of water quality monitoring, including sea surface temperatures, chlorophyll-a concentration, and particulate organic carbon in the two estuaries



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