Introductory Webinar: Remote Sensing of Coastal Ecosystems

Tuesdays, August 25 - September 8, 2020

11:00-12:00 EDT (English) or 14:00-15:00 EDT (Spanish)

Remote sensing of coastal and marine ecosystems is particularly challenging. Up to 80% of the signal received by the sensors in orbit comes from the atmosphere. Additionally, the constituents of the water column (dissolved and suspended) attenuate most of the light either through absorption or scattering. When it comes to retrieving information from the ocean floor, even in the clearest waters, only less than 10% of the signal originates from it. Users, particularly those with little remote sensing experience, stand to benefit from this training covering some of the difficulties associated with remote sensing of coastal ecosystems, particularly beaches and benthic communities such as coral reefs and seagrass.

Part One: Overview of Coastal Ecosystems and Remote Sensing

- Introduction to coastal and marine ecosystems
- Overview of sensors for remote sensing of coastal areas
- Q&A

Part Two: Penetration of Light in the Water Column

- Apparent and inherent optical properties
- Field bio-optical measurements
- Water column corrections
- Deriving bathymetry and benthic characterization from multispectral data
- Validation and calibration of ocean color data
- Q&A

Part Three: Remote Sensing of Shorelines

- Geophysical components of shorelines
- The parts of a beach
- Field-based measurements in shorelines for image validation
- Image processing and analysis for shoreline characterization
- Q&A

ARSET empowers the global community through remote sensing training.

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