



Caribbean Center  
for Rising Seas

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**RISING  
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Space Administration



# Satellite Observations for Analyzing Natural Hazards on Small Island Nations

August 18, 24, & 26, 2021

11:00-13:00 EDT (English) or 15:00-17:00 EDT (Spanish)

This three-part training series will focus on small island nations while introducing the data, methods, and tools useful for monitoring natural hazards. Case studies will be used to demonstrate methodologies applying satellite and model data and open access tools to analyze storm impacts, sea level rise, and landslides on small island nations.

## Part 1: Assessing Pre- and Post-Storm Impacts

This session will provide an overview of disasters related to storms, flooding, tides, and sea level rise, and their impacts in small island nations (local perspective will be provided for the Caribbean). It will also cover the use of optical and radar data to assess pre- and post-storm conditions in the Caribbean. An end-to-end case study will be presented using GEE to show pre- and post-storm conditions. In addition, population density, infrastructure, and land cover maps will be used to identify areas most impacted by storm events.

## Part 2: Assessing Sea Level Rise at the Regional to Local Scale Using Earth Observations

This session will describe how satellite data, including altimetry and the Earth's gravity field, can show how melting ice sheets and glaciers, changes in land water storage, steric sea level, tides, storm surges, and ocean waves all contribute to global sea level rise. In addition, it will also describe the datasets and tools available to better understand and monitor sea level change at regional and local scales.

## Part 3: Assessing Landslide Hazards Before and During an Event

This session will describe how IMERG and other data are used before and during storm events to predict landslides on small island nations. The session will cover the disaster life cycle in context of landslides and provide an overview of NASA activities and tools used to assess landslide hazards on small island nations.



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