



Introduction to NASA Resources for Climate Change Applications

September 29 & October 6, 2021

11:00-13:00 or 15:00-17:00 EDT (UTC-4)

Scientists use observations from the ground, air, and space, along with theoretical models and scenarios of future emissions, to monitor and study past, present, and future climate change. Climate data records provide evidence of climate change key indicators such as global land and ocean temperature increases; rising sea levels; ice loss at Earth's polar regions and in mountain glaciers; frequency and severity changes in extreme weather such as hurricanes, heatwaves, wildfires, droughts, floods, and precipitation; and cloud and vegetation cover changes, to name but a few. This climate information is a fundamental basis for mitigation, adaptation, and risk management planning in all parts of the world and across many elements of society and ecosystems.

This two-part, introductory webinar series will provide an overview of NASA resources for monitoring climate change and its impacts. The webinar will define the terminology and the role of Earth observations in climate change assessment, and then provide an overview of NASA climate models suitable for emissions policy, impacts, risk, and resilience applications.

Part 1: Climate Change Monitoring & Impacts Using Remote Sensing and Modeled Data

Speakers: Amita Mehta & Sean McCartney

- Introduction to the main components relevant to climate change decision making
- The role of Earth observations in climate change assessment
- Monitoring climate change impacts using NASA data

Part 2: Climate Change Future Scenarios, Impact Forecasting, and Adaptation

Speakers: Alex Ruane & Daniel Bader

- Climate simulation - overview of CMIP6 and NASA climate models
- Different types of climate information across time scales
- How climate projections and sectoral models (e.g., crop models) support adaptation planning
- Importance in recognizing uncertainty across models



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