

Satellite Derived Annual PM2.5 Data Sets in Support of United Nations Sustainable Development Goals

Wednesdays, March 15-29, 2017

11:00 a.m. – 12:00 p.m. or 8:00 – 9:00 p.m. EDT (UTC-4)

Air pollution caused by particles with a diameter of 2.5 microns or less (PM2.5) can reduce visibility and adversely affect human health. As a result, the United Nations has addressed this type of pollution in the 2030 Agenda for Sustainable Development.

Recently, annual mean PM2.5 maps have been developed using MODIS, MISR, and SeaWiFS observations from 1998-2015 and have been used by organizations, such as the World Health Organization (WHO) and Greenpeace, to assess global air quality and health impacts. In this webinar, participants will learn how to use this database to analyze PM2.5 over cities using satellite observations. This training will cover accessing the data, analyzing long-term trends, and combining PM2.5 and population data sets to understand long-term exposure.

Session One: Sustainable Development Goals (SDGs) and Relevant Air Quality Observations

March 15, 2017

- The goals, targets, and indicators of the UN sustainable development goals
- Satellite observations of air quality that are used to calculate indicators 3.9.1 and 11.6.2
- How satellite observations can fill in the gaps
- Methodology and applications

Session Two: World Health Organization (WHO) PM_{2.5} Data Set

March 22, 2017

- PM2.5 estimates using satellite, surface, and model data sets for 2014, released by the WHO
- How the data applies to indicators 3.9.1 and 11.6.2
- Methodology, limitations, and data access

Session Three: Case Study Analysis

March 29, 2017

- Read and convert the 2014 WHO data for a region of interest
- Complete a mapping exercise
- Case study analysis on spatial pattern comparisons for different cities
- Learn to apply what has been learned to create a time series once more data becomes available