Addressing Barriers to Awareness, Access and Analysis of Satellite Data for Air Quality and Health

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Improving access, analysis, and awareness of satellite data for air quality and health

13 May 2026

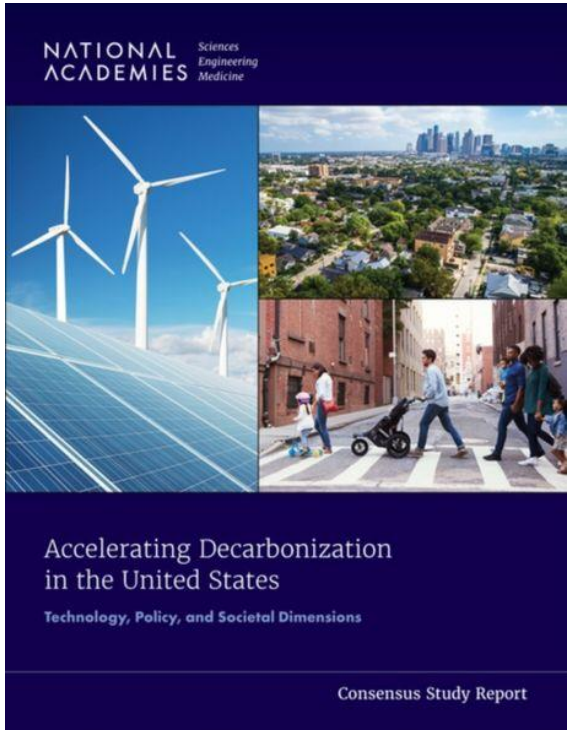
Protecting Our Health

Los Angeles Times Photographic Archive

2025 Los Angeles Fires. Allen J. Schaben / Los Angeles Times

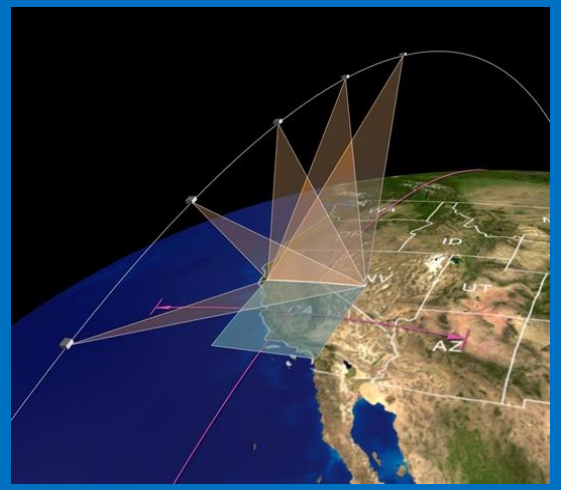
Health Benefits of Climate Mitigation

- Air quality improvements are immediate health benefit of decarbonization



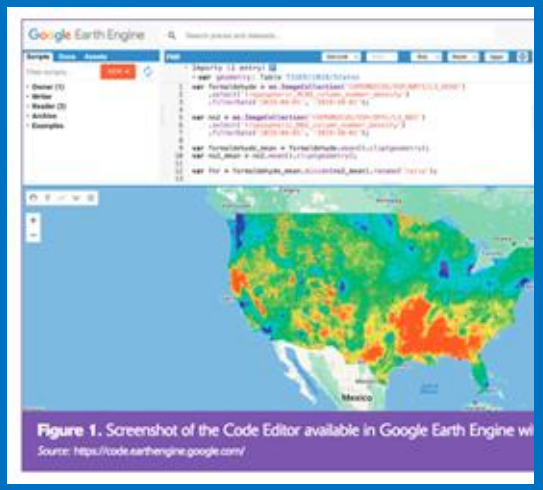
https://www.climatesolutionsforhealth.org/

Barriers in Satellite Data Access and Analysis for Health and Air Quality



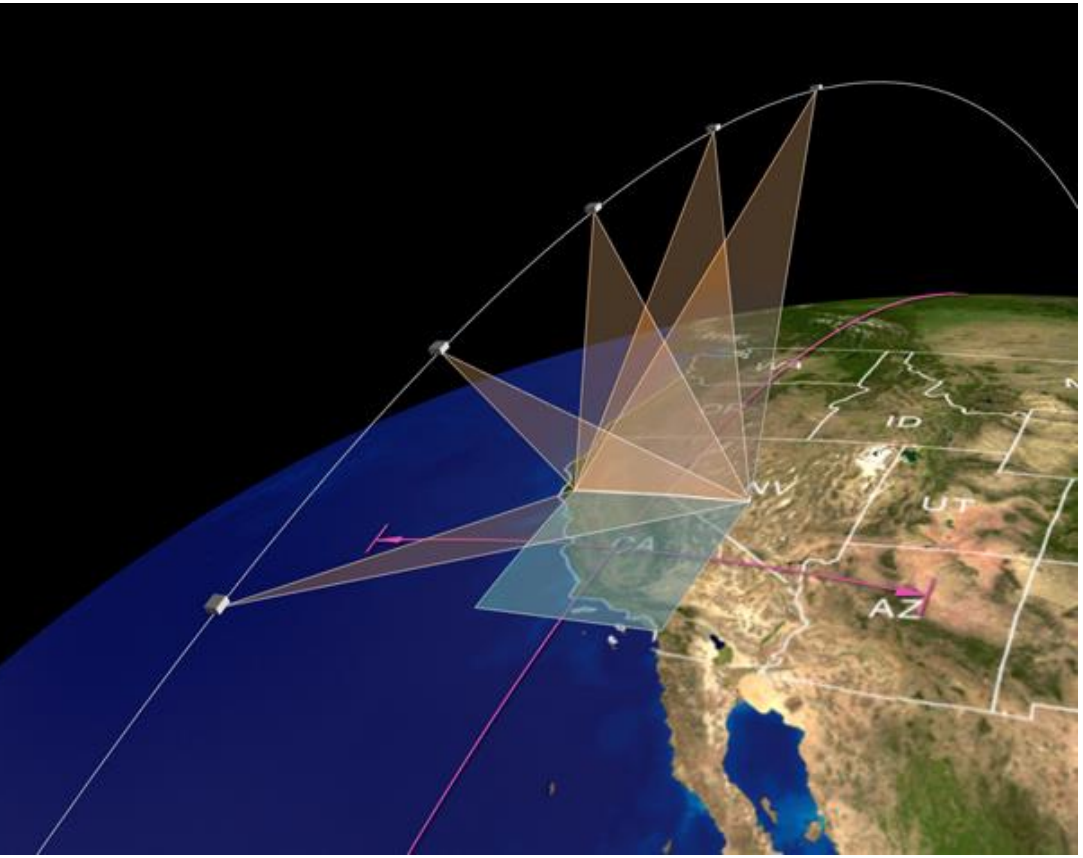
Spatial/Temporal Resolution, Column vs Surface, Cloud Cover

Legal Requirements, Scientific Uncertainty

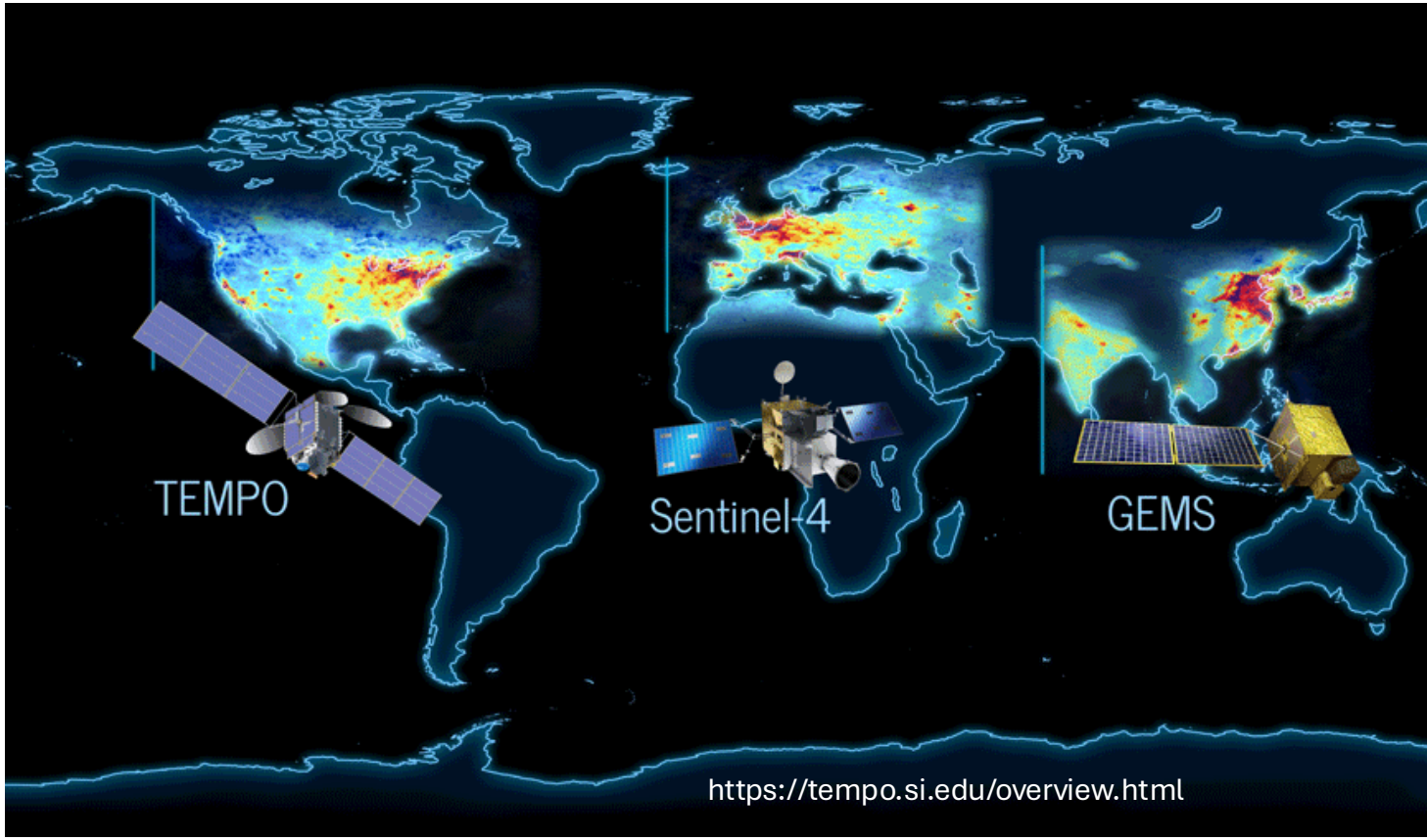


Time & Hardware Constraints, Data Format, User Confidence

Limitations and Advancements of Satellite Data



MAIA Mission. Will measure particle types, sizes, concentrations, and geolocation of atmospheric aerosols. Launch expected 2027



Global constellation of geostationary satellites

https://haqast.org/getting-started/

Legal Requirements & Scientific Uncertainty

Satellite Data
for Use in the
National Ambient Air Quality Standards Process

by Arlene Fiore, Jenny Bratburd, and Daegan Miller

JOURNAL OF THE AIR & WASTE MANAGEMENT ASSOCIATION
2025, VOL. 75, NO. 6, 429–463
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2025 A&WMA CRITICAL REVIEW

Satellite data to support air quality assessment and management

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ABSTRACT

Satellite data have long been recognized as valuable for air quality applications. These applications are in a stage of rapid growth: new geostationary satellites provide hourly or sub-hourly data; improvements in algorithms convert measured wavelengths into retrievals of atmospheric constituents; advances in machine learning support improved estimates of near-surface pollution; and growing interest among air quality managers has led to a range of new satellite data applications. Considering mainly activities in the United States under the Clean Air Act, we discuss proven applications relevant to air quality management, including: informing epidemiological studies and

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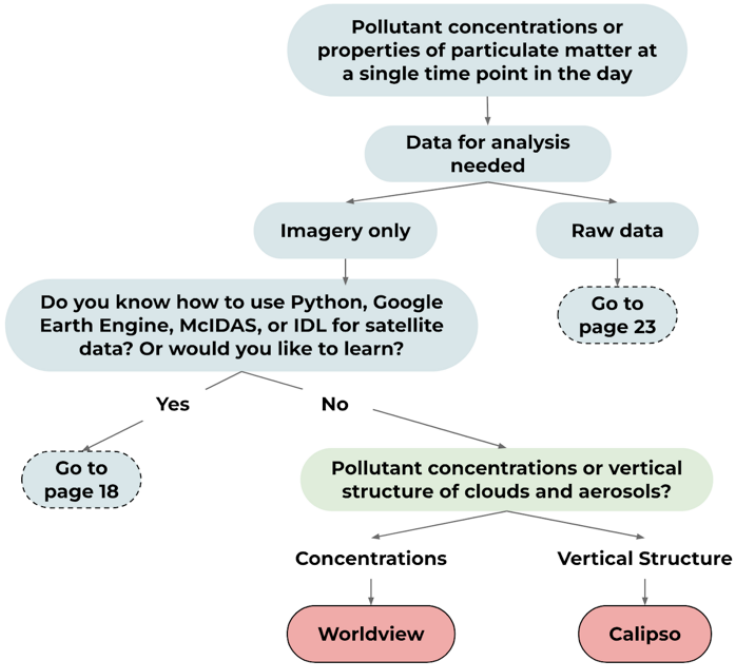
Resources for Capacity Building

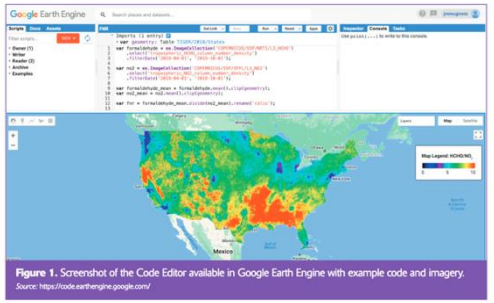
Short Explainers

https://haqast.org/getting-started/

Satellite Data Flowchart



Training/Tutorials



https://haqast.org/data-and-tools

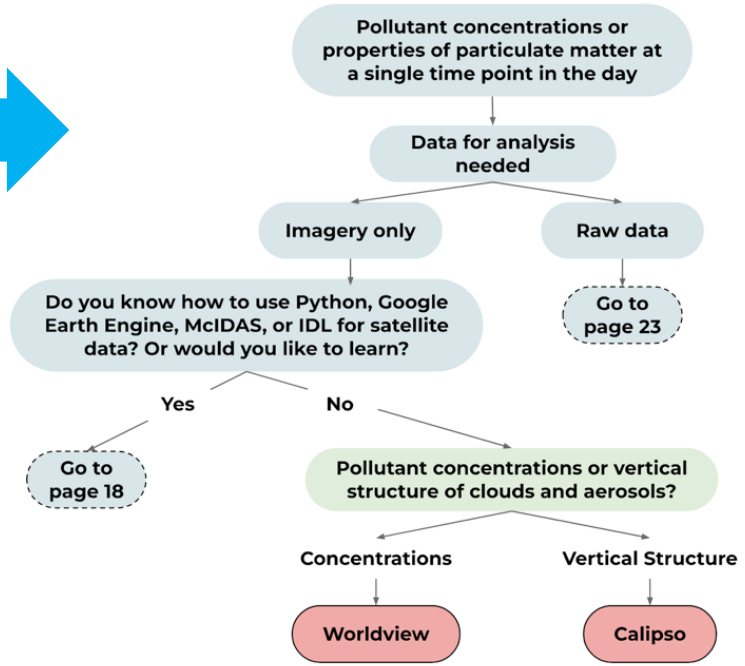
Resources for Capacity Building

Short Explainers

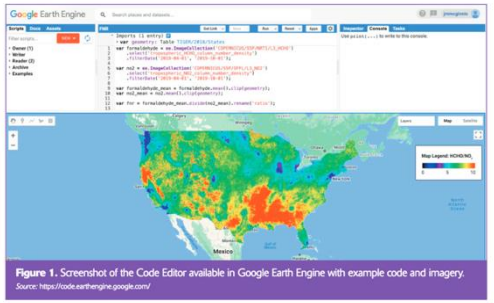
The Four Things to Know about Satellite Data for Air Quality Management

Satellite Data for Use in the National Ambient Air Quality Standards Process

Satellite Data Flowchart



Training/Tutorials



https://haqast.org/getting-started/

https://haqast.org/data-and-tools

Research-Informed Policy

- Data for improved decision-making depends on
  - Trust & understanding
- Trust & understanding built through
  - Repeated interactions
  - Listening
  - Networks and relationships

Jesse Marquez (1951 – 2025)
Coalition for Safe Environment
PC: Los Angeles Times

Opportunities to Engage!

- HAQAST website
  - haqast.org
- HAQAST Meetings
- Mailing List
  https://explore.wisc.edu/haqastlanding
- LinkedIn
  https://www.linkedin.com/company/nasa-health-and-air-quality-applied-sciences-team