

National Aeronautics and
Space Administration



NASA's New COVID-19 Data Pathfinder

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NASA's ES Data Pathfinders



Pathfinders are data product selection guides focused on a science discipline or application areas. They help users find, visualize and use the data.

They provide direct links to commonly-used datasets and data products from NASA's Earth science data collections.

They include links to tools that help the user use the data.

[Pathfinders Overview](#)[Agriculture and Water Resources Data Pathfinder](#)[Biological Diversity and Ecological Forecasting Data Pathfinder](#)[COVID-19 Data Pathfinder](#)[Health and Air Quality Data Pathfinder](#)[Water Quality Data Pathfinder](#)[Wildfires Data Pathfinder](#)

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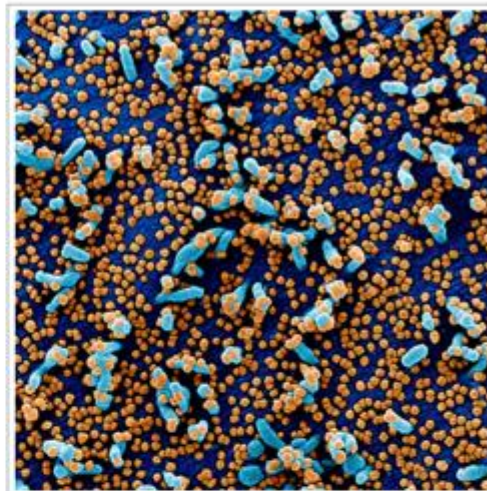
In January 2020, the World Health Organization (WHO) began investigating a cluster of medical cases caused by a new strain of the severe acute respiratory syndrome (SARS) coronavirus, SARS-CoV-2. SARS-CoV-2 causes the disease COVID-19, which has spread rapidly throughout the world. Scientists know very little about it.

Researchers across the globe are studying the novel virus to discover the key forces in the virus' spread. In addition, remote sensing scientists are looking at the potential changes in the environment due to the change in human behavior — quarantine and stay-at-home measures.

Satellites cannot detect the spread of the disease from space, but they can measure changes in Earth's environment due to changes in human behavior. NASA and other federal agencies use satellite and airborne data to assess regional and global environmental, economic, and societal impacts of the COVID-19 pandemic. (See the [Rapid Response and Novel Research in Earth Science funding solicitation](#).) In addition, because of long-term data collection, historical remote sensing data provide more spatially and temporally complete data records, such as measurements of precipitation, temperature, and humidity, which provide baselines for historical comparisons, when looking at potential seasonality trends.

This data pathfinder provides links to datasets that can be used to research changing environmental impacts from modified human behavior patterns, the possibility of seasonal trends in virus transmission, and water availability.

- [Find Environmental Impacts Data](#)
- [Find Seasonality Data](#)
- [Find Water Availability Data](#)



Colorized scanning electron micrograph of a VERO E6 cell (blue) heavily infected with SARS-COV-2 virus particles (orange), isolated from a patient sample. Image captured and color-enhanced at the National Institute of Allergy and Infectious Diseases Integrated Research Facility in Fort Detrick, Maryland. Credit: NIAID

New to using NASA Earth data? This pathfinder is designed to help guide you through the process of selecting and using applicable datasets, with guidance on resolutions and direct links to the data sources.

After getting started here, there are numerous NASA resources that can help develop your skills further. If you are new to remote sensing, check out [What is Remote Sensing?](#) or view the Applied Remote Sensing Training on [Fundamentals of Remote Sensing](#).

[About the Data](#)[Use the Data](#)[Benefits and Limitations of Remote Sensing Data](#)

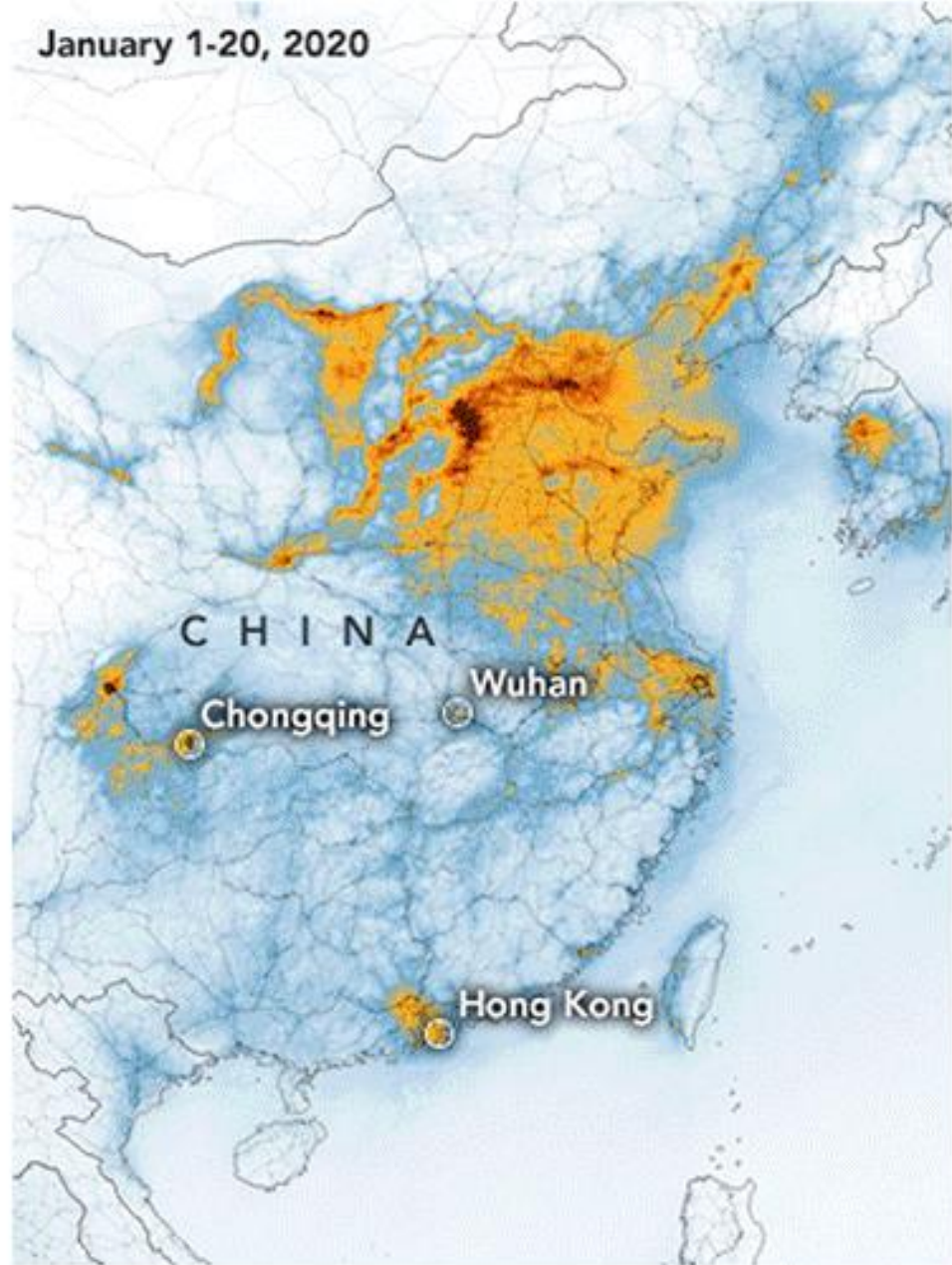
COVID-19 Data Pathfinder

3 Primary Sections:

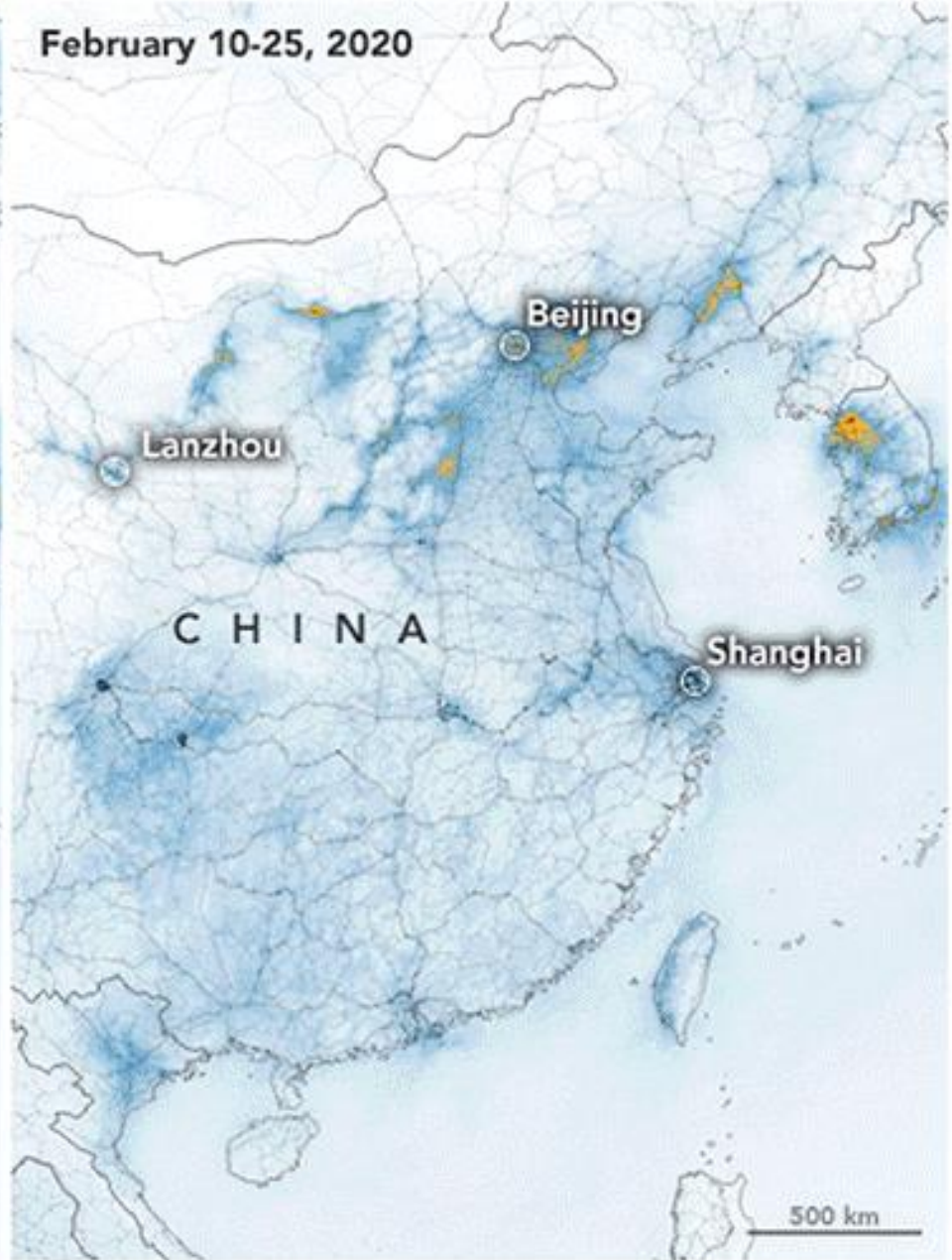
- Environmental Impacts
- Seasonality
- Water Availability

<https://earthdata.nasa.gov/learn/pathfinders/covid-19>

January 1-20, 2020



February 10-25, 2020



Mean Tropospheric NO₂ Density ($\mu\text{mol}/\text{m}^2$)

0 125 250 375 ≥ 500