

Analyzing the behavior of air pollutants during the Covid-19 global lockdown

With millions of people sheltering in place as a result of the coronavirus outbreak, cities across the world have started to see changes in the behavior of air pollutants. A dramatic drop in regional traffic and a reduced industrial and commercial activity has led to a temporary drop in the levels of air pollution almost in the entire world.

Data compiled by air quality monitoring stations in Latin American cities already show a dramatic improvement in air quality from the same period one year ago and in the past weeks. Air pollution has plummeted in most of the developed world as authorities imposed curfews and restricted movement in the wake of the Covid-19 outbreak. The measured drop in nitrogen oxides or NO_x is no surprise as economic activity and transportation are at a bare minimum.

However, this is not the general outlook for all cities; weather events influence atmospheric pollution, so cities experiencing fires can still have high levels of concentration in particulate matter such as PM 2.5. In the same way, other cities can experience an increase in ozone levels and ultra-fine particles, because of chemical interactions between volatile organic compounds (VOCs) and nitrogen oxides. Levels of ozone, especially during summers, could become a problem if not controlled because ozone is a component of smog that affects health, vegetation, and climate. As time goes by, data becomes more reliable, and scientists can make adjustments to exclude the effects of other factors such as weather and one-off events.

In countries like Italy and China, data already suggest links between levels of air pollutants and Covid-19 impact and spread. While it is too early to make a conclusive statement, some scientists are studying the effects of air pollution as a vector that amplifies the spread of the virus and as a chronic stress factor that makes the population more vulnerable to an epidemic.

As the Covid-19 response worldwide altered the behaviors that generate emissions and toxic pollutants, the current situation offers a momentary view into what happens to the air we breathe when emissions are reduced in a drastic and sudden way. In this context, this webinar intends to open a space to share the latest data on air pollution by various air quality monitoring stations in Latin America. The webinar will be an opportunity to discuss emissions data and methods used by monitoring stations to analyze the behavior of air pollutants during this period of lockdown.

Thursday April 16, 2020

2:00 PM Washington DC time (ET)

Opening Remarks

Juan Cruz Monticelli, Section Chief, Department of Sustainable Development, OAS.

General panorama on air pollutants

[Dr. Jorge Koelliker, Coordinador Científico del Grupo de Metrología de Gases, CENAM, Mexico.](#)

James Norris, Gas Sensing Metrology Group, U.S National Institute of Standards and Technology (NIST) requested the floor for an intervention and contributed to the overview on air pollutants. See presentation [here](#).

What can be interpreted from the current levels of Air Pollution?

[Medellín, Colombia: Tiberio Benavidez](#)

Universidad Nacional de Colombia, sede Medellín, Laboratorio Calaire

[Santiago, Chile: Isabel Leiva Campos](#)

Superintendencia del Medio Ambiente (SMA)

[Buenos Aires, Argentina: Maria Ines de Casas](#)

Agencia de Protección Ambiental, S.O Monitoreo Atmosférico

[Ciudad de Mexico, Mexico: Olivia Rivera Hernandez](#)

Sistema de Monitoreo Atmosférico de la Ciudad de Mexico (SEDEMA – SIMAT)

[Sao Paulo, Brasil: Maria Lucia Goncalves Guardani](#)

Companhia Ambiental do Estado de Sao Paulo (CETESB)

[Quito, Ecuador: Maria Valeria Díaz](#)

Responsable Técnica y Administrativa de la Red de Metropolitana Ambiental de Quito, Laboratorio de la Secretaría de Ambiente.

Q&A