

Air pollution goes down as Europe takes hard measures to combat coronavirus



The EEA has received many questions about the impacts of the stark measures to limit the spread of the coronavirus (COVID-19) on air quality in Europe.

The EEA's data show an accurate picture of the drop in air pollution, especially due to reduced traffic in cities. However, addressing long-term air quality problems requires ambitious policies and forward-looking investments. As such, the current crisis and its multiple impacts on our society work against what we are trying to achieve, which is a just and well-managed transition towards a resilient and sustainable society.

Hans Bruyninckx, EEA Executive Director

The EEA's data for recent weeks show how concentrations of nitrogen dioxide (NO₂), a pollutant mainly emitted by road transport, have decreased in many Italian cities. For example:

- In Milan, average concentrations of NO₂ for the past four weeks have been at least 24 % lower than four weeks earlier this year. The average concentration during the week of 16-22 March was 21 % lower than for the same week in 2019.
- In Bergamo, there has been a constant decline in NO₂ pollution over the past four weeks. The average concentration during the week of 16-22 March was 47 % lower than for the same week in 2019.
- In Rome, average NO₂ concentrations for the past four weeks were 26-35 % lower than for the same weeks in 2019.

Similar trends can be seen in other European cities where lockdown measures have been implemented during the week of 16-22 March.

- In Barcelona, average NO₂ levels went down by 40 % from one week to the next. Compared with the same week in 2019, the reduction was 55 %.
- In Madrid, average NO₂ levels went down by 56 % from one week to the next. Compared with the same week in 2019, the reduction was 41 %.
- In Lisbon, average NO₂ levels went down by 40 % from one week to the next. Compared with the same week in 2019, the reduction was 51 %.

Exposure to air pollution can lead to adverse health effects, including respiratory and cardiovascular diseases. A number of health authorities have warned that those citizens with certain pre-existing conditions, such as

respiratory illnesses, may have an increased vulnerability to COVID-19.

However at present it is not clear whether ongoing exposure to air pollution might worsen the condition of those infected by the virus. Further epidemiological research is needed to address such questions.

About the methodology

The weekly average concentration levels of air pollutants were calculated based on data from the EEA's [up-to-date air quality data](#) system. All daily mean values from the stations in each city have been considered for the average. Other factors than the lockdown measures, such as weather conditions, can also have an effect on weekly variations of the pollutant concentrations.

Background

The EEA monitors Europe's air quality through a network of more than 4,000 local air pollution measurement stations across Europe. Most of the stations, managed by the EEA's member countries in the European Environment Information and Observation Network (Eionet), record hourly data on key air pollutant concentrations and send it to the EEA.

[The European Air Quality Index](#) uses the monitoring data to allow users to understand more about air quality where they live, work or travel. Displaying up-to-date information for Europe, users can gain insights into the air quality in individual countries, regions and cities.

Similar air quality information can be found on the [Copernicus Atmosphere Monitoring Service \(CAMS\)](#) that provides daily analyses of hourly concentrations of the regulatory air pollutants.

Although emissions of air pollutants have decreased substantially in Europe over recent decades, poor air quality continues to harm human health and the environment. [Poor air quality causes an estimated 400 000 premature deaths in Europe every year](#) and it is the single largest environmental health risk in Europe. A significant proportion of Europe's population lives in areas where air pollution poses risks to their health.