

April 13, 2023

Air quality is improving in Île-de-France, but the stakes are rising

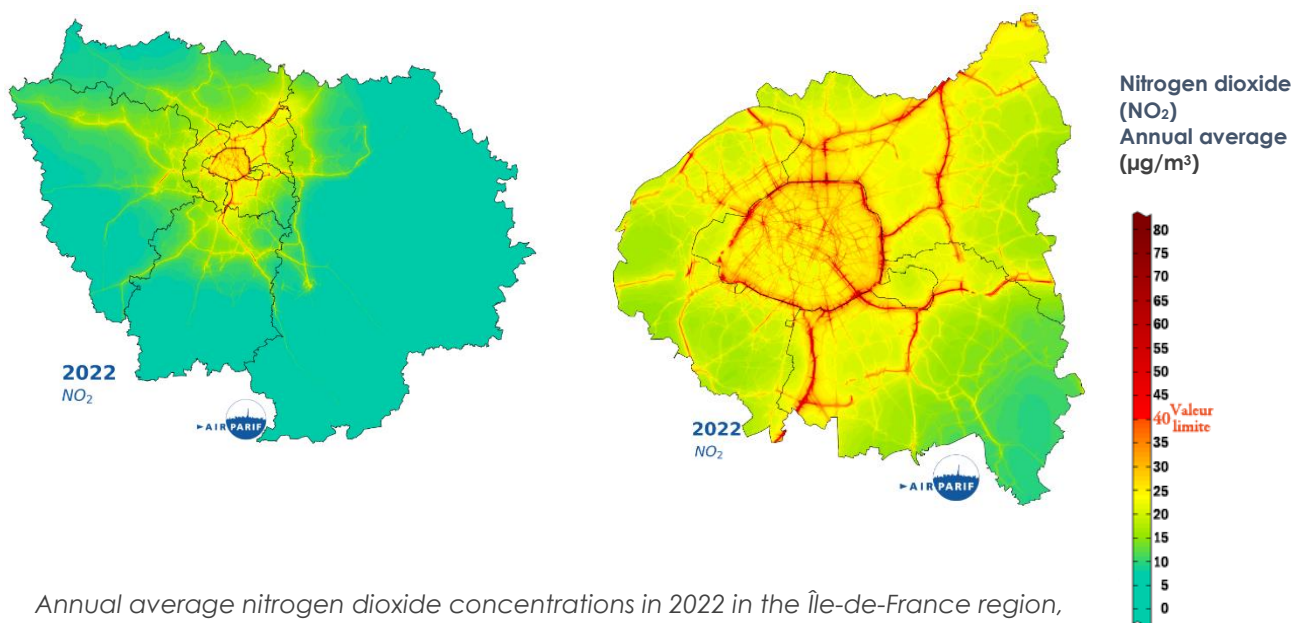
Airparif, an association for monitoring and providing information on air quality in the Ile-de-France region, has published its regional report for the year 2022. Overall, air quality continues to improve, as it has been for the past two decades: nitrogen dioxide and particulate matter levels continue to decrease. Nevertheless, this progress must be sustained considering current regulations: 40,000 residents of the Île-de-France region are still breathing air containing concentrations of nitrogen dioxide that exceed the French and European regulatory limit value. Moreover, developments in scientific research show that air pollution has an impact on health at levels lower than previously estimated (World Health Organisation, 2021). As a result, a strengthening of European air quality regulations is under discussion with a project to lower regulatory limit values in line with new WHO recommendations. On the other hand, ozone, an air pollutant and greenhouse gas, is the only regulated pollutant that continues to increase, underlining the need for a joint approach to these air and climate issues.

Nitrogen dioxide and particulate matter pollution levels fell in Île-de-France in 2022, following the steady trend observed over the last twenty years. This decrease is due to regulations and complementary actions carried out at the local, national, and European levels to reduce emissions of air pollutants, particularly from the industrial sector, road traffic and residential and tertiary heating. This decrease was also favoured by meteorological conditions that were generally conducive to the dissipation of air pollution, as well as mild temperatures during the winter period, which limited the use and therefore the emissions from heating.

The number of pollution episodes observed in 2022 is the lowest recorded to date, at 10 days. Particulate matter (PM) should however be included in this procedure, as recommended by the National Air Council and ANSES (French national agency for food, environmental and labour safety).

A contrasting situation depending on the pollutant

For the first time, no resident of the Île-de-France region has been exposed to air whose concentrations exceed the regulatory limit value for PM₁₀ particles (40 µg/m³ as an annual average), as compared to less than 1,000 residents in 2021. However, 40,000 residents in the Île-de-France region are still exposed to air with concentrations exceeding the limit value for nitrogen dioxide (40 µg/m³ as an annual average), compared with 60,000 in 2021. In 2022, these excess concentrations were located entirely within the Greater Paris metropolitan area, along the main traffic routes.



Annual average nitrogen dioxide concentrations in 2022 in the Île-de-France region, Paris, and its inner suburbs.

In contrast, for low-level ozone, an air pollutant that is formed through the combination of various pollutants in the presence of high heat and strong sunlight, the situation has deteriorated further, with an increasing number of days when the quality objective (120 µg/m³ over 8 hours not to be exceeded) is exceeded. This increase, observed throughout the northern hemisphere, is partly due to global warming, which results in an increase in periods of high temperatures favourable to the accumulation of low-level ozone in the air.

Problematic levels of pollutants for human health in Île-de-France

Despite the improvement in air quality for almost all regulated pollutants, their levels still greatly exceed the thresholds recommended by the World Health Organisation (WHO) throughout the Île-de-France region. The WHO thresholds are lower than the French and European regulatory limit values, as they are based on the most recent scientific and health knowledge on the impact of air pollutants on health.

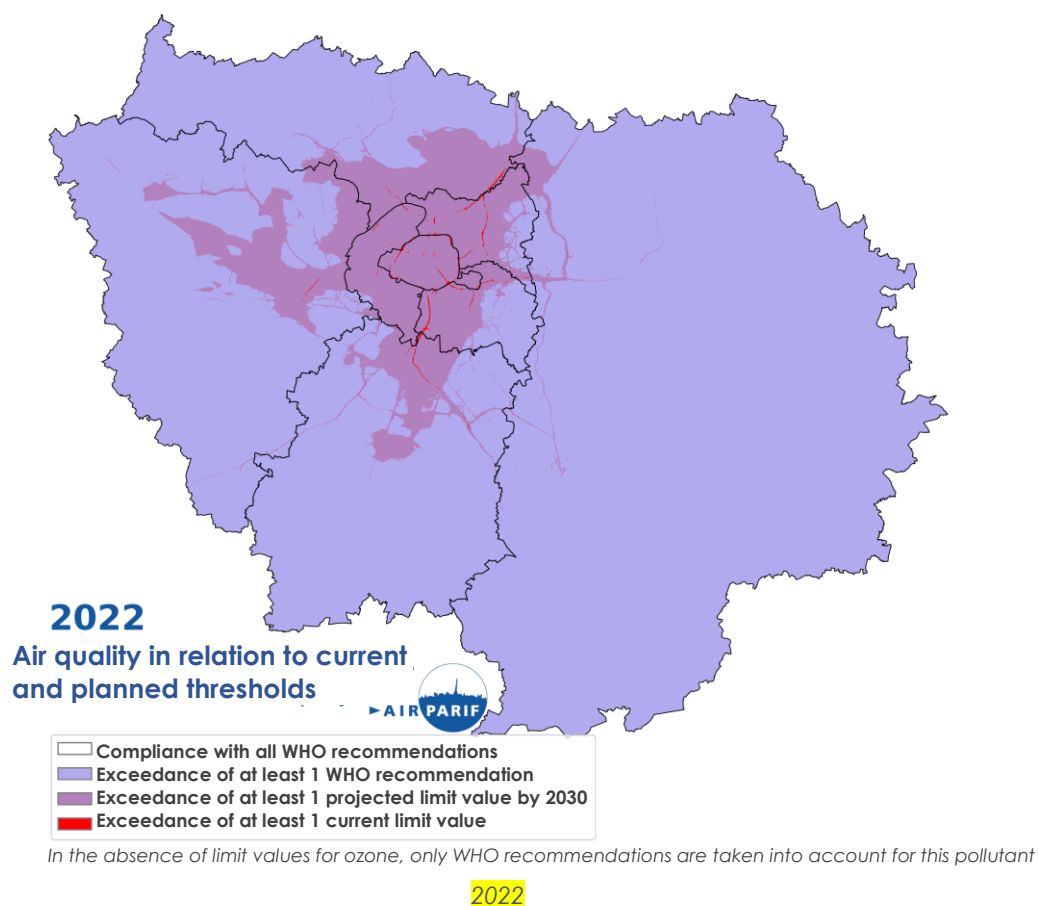
In 2022, the 12 million inhabitants of the Île-de-France region were exposed to air with concentrations of particulate matter and low-level ozone exceeding the thresholds recommended by the WHO, and 11.5 million inhabitants of the region for nitrogen dioxide. As a result, the ORS-Île-de-France (Île de France Regional Health Observatory) and Airparif have estimated that [7,900 premature deaths could be avoided each year in the Île-de-France region](#) if pollutant concentrations fell below the levels recommended by the WHO. As a reminder, particulate matter has a significant impact on the cardiovascular system. Ozone and nitrogen dioxide mainly affect the respiratory system.

Integrating new WHO recommendations into regulation: a challenge for the ongoing revision of the EU directive.

[The European Commission's proposal to lower the thresholds for regulatory air pollution limit values in October 2022](#) aims to bring them closer to - but not completely aligned with - the WHO's recommendations. In 2022, nearly 8 million people in the Ile-de-France region were affected by concentrations above the thresholds proposed in this project to be reached by 2030 (the proposal

aims to reduce, by 2030, the annual limit value for particulate matter from 25 µg/m³ to 10 µg/m³, and for nitrogen dioxide from 40 µg/m³ to 20 µg/m³).

These reflections go hand in hand with the European Commission's Zero Pollution Action Plan within the framework of the European Green Deal, which aims to reduce by 2030 the number of deaths linked to air pollution by 55% and by 25% the percentage of ecosystems impacted by air pollution, in the wider context of the triple global climate/biodiversity/pollution crisis (UN). This is all the more important as improving air quality is a shared benefit in the fight against climate change (see [Airparif dossier #07-08: Air pollution and climate change, a common cause](#)).



Link: [2022 air quality assessment in Île-de-France](#)

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