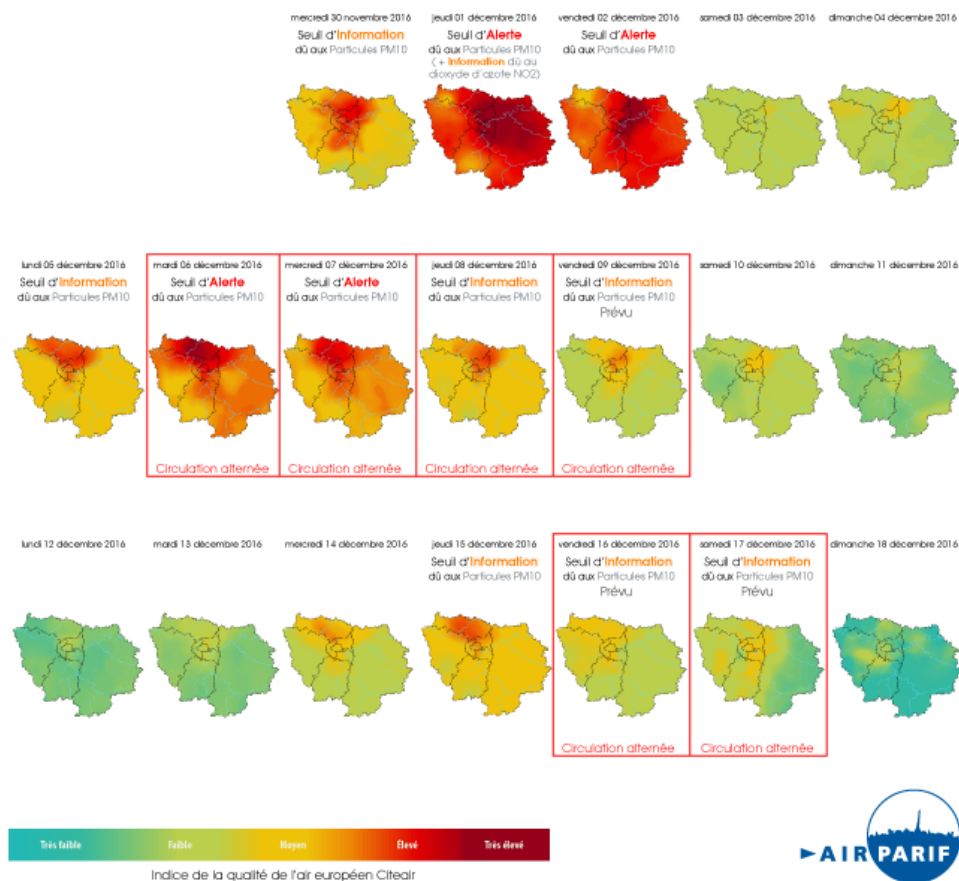


Pollution episode in the Greater Paris Area – December 2016

From November 30th to December 17th, the Greater Paris Area was facing one of the longest and intense pollution episode of the last 10 years. This pollution event took place in the Greater Paris area but also in some other cities in France (Lyon, Grenoble...). The high PM10 concentration was mainly due to local emissions (traffic and wood burning) and anticyclone meteorological conditions (no wind, low mixing layer). The importation of pollutants wasn't to blame in this case. The anticyclone conditions was covering a large part of Europe and was responsible for the pollution episodes which occurred in other cities also.

The pollution event started on Wednesday November 30th with background average daily concentrations higher than 50µg/m³ (first information threshold). On Thursday December 1st, the second PM10 threshold of 80 µg/m³ was overpassed (alert threshold). On the same day, NO₂ first threshold was also overpassed (hourly concentration of 200 µg/m³). The situation improved during the week-end (the 3rd and 4th of December) and worsen on the following week. The 5th of December, the first threshold was overpassed for the PM10 and the 6th and 7th, the second threshold was overpassed, still for PM10. The 8th and the 9th, the situation improved but the 50 µg/m³ threshold was still overpassed on the region. After improving for few days, from the 10 to the 14 of December, the air quality worsen again on the 15.

Cartes journalières de la qualité de l'air en Île-de-France de l'épisode de pollution débuté le 30 novembre 2016



This episode was remarkable in the region due to its duration and the levels reached. On the 1st of December, the daily PM10 background concentrations reached 146 µg/m³ in Paris area which make it one of the highest PM daily level in the last 10 years. The hourly concentration even reached a peak level with 259 µg/m³.

In the view of this situation, the police department settled an emergency plan focusing on traffic and wood burning uses. In fact, wood burning was banned during the pollution event (but no control measure was settled). Concerning traffic, in addition to the speed reduction (20km/h lower than usual), and high duty vehicles ban from the inner city, the alternating odd and even number plate measure was decided for the 6th, 7th, 8th, 9th, 16th and 17th of December. In the meanwhile, the public transportations were free during the episode and in some cities, the residential parking was also free. Some cities like Paris took additional measures providing half an hour free for the bike sharing system (velib') and 1 hour free for the electric vehicle sharing system (autolib).

Major industries also had to reduce their production volume and aircrafts were given a fine if they were using their Auxiliary Power Unit (APU) instead of electric connection

The alternating odd and even number plate measure was previously settled in the greater Paris area and its impact was evaluated by Airparif. In March 2014, the consequence of the traffic reduction was 18% less vehicles and therefore a 2% PM10 reduction (in average for the urban background). Close to major traffic roads, the reduction was 6% and during rush hour on the Paris ring road particulate levels fell by 20%. Rush hour levels of nitrogen oxides fell by as much as 30%. However; according to the 1st traffic figures available for Tuesday the 6th, the decrease of vehicles in circulation was in the 5% range despite an increase in police controls compared to 2014. This can be partly explained by a breakdown on a metro line. Therefore the impact of the traffic restriction on its own, and independently of the other measures, is probably smaller than expected.