

Estimation des parcs roulants et de l'impact des restrictions d'accès sur les émissions de polluants

Coordinator : Michel André - IFSTTAR

Numerous agglomerations have to face significant air pollution and selective restriction measures (Low Emission Zones), - allowing only the less polluting vehicles to drive in dedicated areas - are frequently envisaged - if not implemented. The assessment of such measures requires a good knowledge of the vehicles fleet according to the geographical areas.

These works enabled the setting-up and the implementation of a experimental technique to observe and characterize the in-use and local vehicle fleet through video monitoring. Apart methodological and logistical difficulties, this approach enabled a very satisfying and accurate sampling and monitoring of the fleet composition, and the identification of the detailed technical characteristics (motorization, age, pollution regulation, etc.) of the vehicles.

The analysis of the vehicle fleet through the mobility survey "Enquête Globale Transport 2010" covering the Île de France area on one hand, and through the video monitoring on the other hand, shows significant differences with the National fleet estimations, which are currently used due to the lack of local data. The analysis according to the territories demonstrates important discrepancies, particularly regarding the share of Diesel cars, and number of recent and less polluting vehicles. Thus, the "well-off" territories, with a younger, less polluting car fleet and with less Diesel would be advantaged as regards air quality, and they would be also less affected by a selective driving restriction measure.

The detailed simulation of the pollutant emissions by the road traffic in Île de France demonstrates the high sensitivity of the assessment to the taking into account of local fleet description. It shows also the importance of the traffic out of the A86 highway (although the intra area is already large), of the heavy vehicles traffic and of the cold start. This report discusses finally the complex question of the assessment as regards air pollution of restriction measures.