4 URBAN PLATEFORMS DEDICATED TO AIR QUALITY SURVEY IN PACA REGION

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1. Atmo PACA is in charge of monitoring air quality in most of the Provence Côte d’Azur (PACA) region. As per the French “Air and Energy Efficiency” Law (30th Dec. 1996), Atmo PACA has been agreed as one of the French AASQA (Agence Association pour l’Air Qualité Monitoring) by the Ministry in charge of Environment.

2. Air quality in the PACA region

   The pollutants monitored by Atmo PACA are determined on knowledge about their sources, their effects on health & environment, and the techniques available for their evaluation. WHO’s recommendations, EU directives, French laws and regulations are considered together. PACA region is ranking n°1 to 3 in France for emissions of NO, SO2, CO, CO2 and other pollutants (vehicles, heating and industry) and industrial processes are the main sources of emissions in the region.

3. Emissions Inventory / Monitoring network / Modelling: complementary approaches

   The inventory of emissions deals with about hundred pollutants from various sources (human activities and nature). It is an essential step for feeding models, preparing balances per geographic area or per pollutant and maps of emissions with high spatial resolutions.

   The measuring network includes about 50 sites spread from the Rhône River to Italy, plus few mobile units and means for passive diffusion tubes campaign.

   Under the name of AIRES Méditerranée, the modelling system, including Chemistry & Transport Model, has been developed within an interregional cooperation with Languedoc Roussillon.

   It is based over years on several national, EU & international scientific teams & field projects, such as AIRPROCHE, ELPLE, ESCOMPTE and PRIMEQUAL (Cros et al., 2004 and Coll et al., 2009)

   www.aires-mediterranee.org

4. Results

   In this context, ADMS Urban (Mc Hugh et al., 1997) has been implemented over 4 cites and their suburbs in the PACA region. The dispersion code has been tested and the results have been compared to measurements performed by Atmo PACA (passive devices and automatic stations) (Atmo PACA, 2007 and 2009). The validation of the model includes both comparisons with long term measurements (yearly average concentrations) and hourly data.

5. Improvements have been tested in considering the link between mesoscale resolution and urban resolution. Since the last four years, Atmo PACA has been working in close cooperation with NUMTECH in order to test and improve the URBAN AIR System (Pradelle et al., 2010).

References:

Atmo PACA, 2007: SIMPCY project. Phase II. Analysis of the territory: meteorology, emissions, modeling

Atmo PACA, 2009: Pollution atmosphérique et gaz de effet de serre. Inventario des emissions 2004


