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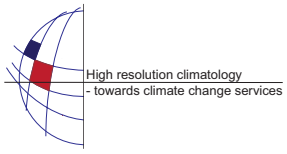

Boundary-Layer & health

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It has long been known that specific atmospheric processes, such as weather and longer-term climatic fluctuations, affect human health.
The biometeorological literature refers to this relationship as meteorotropism, defined as a change in an organism that is correlated with a change in atmospheric conditions. Plenty of (patho)physiological functions are affected by those conditions – like the respiratory diseases - and currently it is difficult to put any limits for pathologies developed in reply.
Nowadays the importance of atmospheric boundary layer and health is increasingly recognised. A number of epidemiologic studies have reported associations between ambient concentrations of air pollution, specifically particulate pollution, and adverse health effects, even at the relatively low concentrations of pollution found.
Since 1995 there have been over twenty-one studies from four continents that have explicitly examined the association between ambient air pollutant mixes and daily mortality. Statistically significant and positive associations have been reported in data from various locations around the world, all with varying air pollutant concentrations, weather conditions, population characteristics and public health policies.
Particular role has been given to atmospheric boundary layer processes, the impact of which for specific patient-cohort is, however, not well understood till now. Assessing and monitoring air quality are thus fundamental to improve Europe’s welfare.

One of current projects run by the “European Medical Association” - PASODOBLE will develop and demonstrate user-driven downstream information services for the regional and local air quality sectors by combining space-based and in-situ data with models in 4 thematic service lines:
- Health community support for hospitals, pharmacies, doctors and people at risk
- Public information for regions, cities, tourist industry and sporting event organizers
- Compliance monitoring support on particulate matter for regional environmental agencies
- Local forecast model evaluation support for local authorities and city bodies.

Giving value to the above listed aspects, PASODOBLE objectives are following:
- Evolution of existing and development of new sustainable air quality services for Europe on regional and local scales
- Development and testing of a generic service framework for coordinated input data acquisition and customizable user-friendly access to services
- Utilization of multiple cycles of delivery, use and assessment versus requirements and market planning in cooperation with users
- Promotion and harmonisation of best practise tools for air quality communities.

Further European multidisciplinary projects should be created to better understand the most prevalent atmospheric factors to be impacted in predictive, preventive and personalised medicine considered as the central concept for future medicine.