



Megacity Pollution Effects from Urban to Global Scales: Overview of the new EC 7FP Project MEGAPOLI

M. G. Lawrence (1), A. Baklanov (2), S. Pandis (3), and the The MEGAPOLI Team

(1) Max Planck Institute for Chemistry, Department of Atmospheric Chemistry, Mainz, Germany

(lawrence@mpch-mainz.mpg.de, +49-(0)6131-305511), (2) Danish Meteorological Institute, Copenhagen, Denmark, (3) Foundation for Research and Technology, Hellas, University of Patras, Greece

An important concern for the emergence of increasing numbers of megacities is the high pollution levels within many of these cities, along with the impacts of the emissions from these urban agglomerations on downwind regions and on regional and global climate. The new European project “MEGAPOLI” (Megacities: Emissions, urban, regional and Global Atmospheric POLLution and climate effects, and Integrated tools for assessment and mitigation), which started in October, 2008, brings together leading European research groups from 11 countries, state-of-the-art scientific tools and key players from countries outside Europe to investigate the interactions among megacities, air quality and climate. MEGAPOLI will bridge the spatial and temporal scales that connect local emissions, air quality and weather with global atmospheric chemistry and climate.

The main objectives of MEGAPOLI are:

1. to assess impacts of megacities and large air-pollution hot-spots on local, regional and global air quality
2. to quantify feedbacks among megacity air quality, local and regional climate, and global climate change
3. to develop improved integrated tools for prediction of air pollution in megacities.

In order to achieve these objectives we will follow a pyramid strategy of undertaking detailed measurements in one European megacity, Paris, performing detailed analysis for 12 megacities with existing air quality datasets, and investigating the effects of all megacities on climate and global atmospheric chemistry.

This presentation provides an overview of MEGAPOLI along with some of the first results from the project.