

# Summary Report

## Enviro-HIRLAM

### Research Training

(7-12 Jun 2010)



Young scientists – Adomas Mazeikis (University of Vilnius; Vilnius, Lithuania) and Suleiman Mostamandy (Russian State Hydrometeorological University; St. Petersburg, Russia) -- had attend a short practical research training on the technical support, research and development topics of the Enviro-HIRLAM (Environment - High Resolution Limited Area Model) in the Research Department of the Danish Meteorological Institute (RD DMI). The item of this visit was a joint work/ research/ discussions/ consulting/ co-advising/ etc. of young researches.

The DMI scientists --- Yang Xiaohua, Ulrik S. Korsholm, Roman Nuterman, Iratxe Gonzales, Bent H. Sass, Alexander Baklanov, Alexander Mahura --- were involved into discussions on related technical aspects and research themes for the Enviro-HIRLAM. The relevant topics included general discussions on progress made by young researches so far, topics of the HIRLAM Chemistry Branch, versions setups for applications, links with boundary conditions, datasets, aerosol feedbacks, chemistry schemes, urbanization aspects of the model using the building effect parameterization module, and others.

On 11 Jun 2010, students have attended also the research seminar “*Current State and Future Direction of Air Quality Prediction*” given by Prof. Gregory Carmichael (University of Iowa, USA). The presentation was related to air quality prediction (which remains a challenge due to complexity of governing processes and strong coupling across scales) playing an important role in the management of environment. While air quality prediction is closely aligned with weather prediction, there are important differences, including the role of pollution emissions and their associated large uncertainties. Improvements in air quality prediction require a close integration of observations. Advances in air quality forecasting are discussed with an emphasis on data assimilation and the need for further developments in the modeling and observing systems. Furthermore, students have been involved into talks/ discussions held between the FP7 EC MEGAPOLI and Russian MEGAPOLIS projects.

Adomas Mazeikis is planning to present results of his studies at the European Meteorological Society (EMS-2010) Annual Meeting to be held in Geneva, Switzerland (Sep 2010).

Funding was provided by the following projects:

MUSCATEN - *Towards Multi-Scale Modelling of the Atmospheric Environment* (<http://muscaten.ut.ee>);

TEMPUS - *QualiMet - Development of Qualification Framework in Meteorology*;

FP7 EC MEGAPOLI - *Megacities: Emissions, urban, regional and Global Atmospheric POLLution and climate effects, and Integrated tools for assessment and mitigation* (<http://megapoli.dmi.dk>).