

MEGAPOLI + CityZen Projects meeting, Vienna, Austria

Tue, 21 Apr 2009 – 10.30–12.00 – SM6 Room

Participants:

1. Alexander Baklanov <alb@dmi.dk> (DMI, Denmark) – MEGAPOLI
2. Michael Gauss <michael.gauss@met.no> (met.no, Norway) – CityZen
3. Mark Lawrence <lawrence@mpch-mainz.mpg.de> (MPIC, Germany) – MEGAPOLI
4. Spyros Pandis <spyros@chemeng.upatras.gr> (FORTH, Greece) – MEGAPOLI
5. Alexander Mahura <ama@dmi.dk> (DMI, Denmark) – MEGAPOLI
6. Tomas Halenka <tomas.halenka@mff.cuni.cz> (CUNI, Czech Republic) – MEGAPOLI
7. Isabelle Coll <isabelle.coll@lisa.univ-paris12.fr> (CNRS-LISA, France) – MEGAPOLI
8. Guillaume Siour <siour@lisa.univ-paris12.fr> (CNRS-LISA, France) – MEGAPOLI, PhD Student
9. Reza Shaiganfar <shaigan@mpch-mainz.mpg.de> (MPIC, Germany) – MEGAPOLI, PhD Student
10. Matthias Beekmann <Matthias.Beekmann@lisa.univ-paris12.fr> (CNRS-LISA, France) – MEGAPOLI
11. Ashraf Zakey <azakey@ictp.it> (ICTP, Italy) – MEGAPOLI
12. Ahmed Shalaby <ashalaby@ictp.it> (ICTP, Italy) – PhD student, MEGAPOLI
13. Tim Batler <tmb@mpch-mainz.mpg.de> (MPIC, Germany) – MEGAPOLI
14. Liisa Jalkanen <LJalkanen@wmo.int> (WMO, Switzerland) – MEGAPOLI
15. Michael Memmesheimer <mm@eurad.uni-koeln.de> (University of Cologne, Germany) – EURAD modeling, CityZen
16. Andreas Stohl (NILU, Norway) – MEGAPOLI
17. Sabine Ecvhardt (NILU, Norway) – MEGAPOLI
18. Ozlem Ozkizilkaya <ozkizilkaya@itu.edu.tr> (ITU, Turkey) – PhD student, MEGAPOLI collaborator
19. Natalia Shartova <shartova@yandex.ru> (MSU, Russia) – MEGAPOLI collaborator
20. Luisa Molina <ltmolina@mit.edu> (Molina Center, USA) – MILAGRO, MEGAPOLI collaborator
21. Georgiy Stenchikov <gera@envsci.rutgers.edu> (Rutgers University, USA) – MEGAPOLI collaborator, global regional modelling
22. Alexandru Lupu <alexlupu@yorku.ca> (York University, Toronto, Canada) – MEGAPOLI collaborator, global and regional modelling
23. Oivind Hodnebrog <oivinho@geo.uio.no> (University of Oslo, Norway) – PhD student, CityZen

1) Michael Gauss (met.no) – Tentative Agenda for the Meeting

Outlined different ways of co-existence, i.e. instead of competition the collaboration is selected with overall goal to maximize useful scientific results; similarities and differences between two projects.
/see linked the MS PPoint presentation/

2) Introduction of the meeting participants – names + affiliations + topics of research activities

3) Alexander Baklanov (DMI) – Introduction of the MEGAPOLI Project – “Megacities: Emissions, Impact on Air Quality and Climate, and Improved Tools for Mitigation Assessments”

Presented list of involved main partners; connections between megacities, air quality, and climate; main objectives and scientific questions to be addressed during the project; main workpackages structure and integration; pyramid of selected main and other order megacities to be in focus; European population distribution in megacities; MEGAPOLI European and international partners (funded and non-funded) and end-users/stakeholders; information about the 1st telephone conference between MEGAPOLI and CityZen projects (Jan 2009); and selected modelling domains for Po Valley simulations.

/see linked the MS PPoint presentation/

4) Michael Gauss (met.no) – Introduction of the CityZen Project – “megacity – Zoom for the Environment”

Presented list of main involved partners; main areas of expertise; main objectives of the project; selected hot spots in focus; interactions between spatial scales, feedbacks considered and chosen cases studies; listed satellite and ground-based measurements proposed; participating models for global, regional and local scales; linkage between the past-present-future; collaboration ways with MEGAPOLI on emissions, observations, modelling and publications.

/see linked the MS PPoint presentation/

5) Discussions:

Emission Databases:

How to link emissions on different scales? – use the global data for 50 km resol , and 2 km for Istanbul; there are data from TNO: 6 km resol, European and global scales for 2003, and move to new dataset of 2005; for specific megacities – use 1 km resol datasets; high resol databases will be used for higher resol model; use small scale emissions by nesting; comparing dif scales, several nested domains, grid res 100 km and down, for smaller scales – how deposition occurred within large grid-cell, and compare emissions of larger vs. small scales.

IGAC Assessment:

Initiated by Mark Lawrence (MPIC) – “Assessment on Impacts of Mega-cities on Air Quality and Climate: Outline and Activities” (Chapter 7 – Europe); Coordinating Authors: Mark Lawrence, Michael Gauss; Contributing Authors from CityZen: Michael Gauss, Maria Kanakidou, and from MEGAPOLI: Mark Lawrence, Alexander Baklanov, and Spyros Pandis.

In this assessment each chapter includes: 1) Objectives of each research activity, 2) Emission, 3) Inventory used, 4) Observation data base; 5) Model development: diagnostic, analysis, forecast, 6) Lessons learned from the past experiments; 7) Summary of the regions: Local/regional/global for the emissions/model sections and intensive measurements/long term measurements for the observation database. As contributions – Po-Valley, and later from Paris campagne; collect all info, put together, etc., international vs national levels; consider on how national collaborators can get extra funding based on MEGAPOLI, for example, Russia initiated own project as collaboration with MEGAPOLI; contributions to be send by the end of the 1st week of May 2009 to Mark L.; it is reasonable to participate in writing to other chapters as well – 2, 3, 9.

Common Model Studies:

Perform on vs. off exercise to estimate effects from megacities; 1x1 deg vs 0.5; problem between grid-cells vs. location of megacities; agreed on common, later discuss details of running for global, regional, local; look a way how to do separately and analyze; make in parallel with different approaches and then inter-compare; can do ensemble;

Joint studies for Istanbul + Cairo as cities of M+C collaboration; already focused jointly on the Po Valley + possibly BeNeLux-Ruhr area; looking for case studies for extreme summers 2003, 2007; scenario information on emissions might be shared for joint simulations and analysis; Gauss meeting in IIASA.

Other Issues:

- Joint database – NIULU – does not have resources for creating the DB, i.e. only helping with existing data, but not construction the new database – to store modeled data; ask extra funding for such management; do not consider it as an obligation;
- Information about the Atlas of Environmental State of the Moscow Region (Russia), as an example for estimation of weather and pollution on population and environment – presented by external MEGAPOLI collaborator from the Moscow State University;
- Draft planning of a joint open session on the MEGAPOLI + CityZen + MILAGRO (+other related projects) during the EGU-2010 Conference (May 2010, Vienna, Austria);
- Consider possibility to present MEGAPOLI results as well at the American Geophysical Union (AGU) Annual Meeting in Dec 2009, or 2010 (San Francisco, USA) – information will be provided by L. Molina; although preferably may be wait until more solid results will be obtained, especially with respect to the Paris Plume Study (WP3) campagne in summer 2009;
- Information about other conferences where the MEGAPOLI results can be presented as well: 1) EMS-2009 (*9th European Meteorological Society Annual Meeting/ 9th European Conference on Applications of Meteorology* (28 Sep – 02 Oct 2009, Toulouse, France; see at <http://meetings.copernicus.org/ems2009/>) and 2) 13th conference on *Harmonization within Atmospheric Dispersion Modelling for Regulatory Purposes* (1-4 June 2010, Paris, France; see at <http://www.aria.fr/harmo/>);
- Consider possibility of combining the annual MEGAPOLI meeting with the end-user meeting with COST action (Fal 2009, Zurich, Switzerland).