

Minutes of the Working Group meeting of WG1 within COST 715

Date: January 19/20, 2000

Location: Roskilde, Denmark

Participants: Mathias Rotach, MR (CH, chair); Cecilia Soriano, CS (E); Zbynek Janour, ZJ (CR); Ruwim Berkowicz, RB (DK, host); Victor Prior, VP (PT); Douglas Middleton, DM (GB); Petra Kastner-Klein, PK (CH), Christian Sacré, ChS (F); Ekaterina Batchvarova, EB, (Bul).

Unfortunately, Josef Brechler (CR) could not participate.

Agenda:

1. Welcome of participants
2. Adoption of agenda
3. Adoption of minutes of first WG 1
4. Introduction of new participants
5. Update of list of full addresses of participants
6. Status of activities of WG 1 (report by each member)
7. Discussion of results achieved so far
8. WG 1 workshop
9. Short term scientific missions, study contracts, invited experts
10. First discussion of structure of final report
11. Workplace until next WG 1 meeting
12. Report on symposia related to the topics of WG 1
13. Date and place of next meeting
14. AOB
15. Closing the meeting

The meeting started with an unforeseen presentation by Alexander Baklanov and Alix Rasmussen (both WG 3) on FUME (Integrated System for forecasting urban meteorology and air pollution). FUME will be submitted as an EU-project under the framework 5 program (city of tomorrow). The proposal was briefly discussed and two related projects were mentioned. Detailed discussion should be made directly to ar@dmi.dk and alb@dmi.dk. There was no immediate action of WG1 expected by Alexander and Alix, expect feedback and suggestion of possible other partners.

The meeting did not strictly follow the agenda item by item – but the minutes try to do so. Only, items with some discussion or conclusions are listed below.

AD 4) INTRODUCTION OF NEW PARTICIPANTS

Christian Sacré briefly introduced himself and his institution. The Aerodynamics department of CSTB is mainly concerned with problems of urban air pollution, aerodynamic effects on bridges and other 'special' buildings and work with 3 wind tunnels and also in field campaigns.

Ekaterina Batchvarova informed the group that Bulgaria has not yet signed COST 715 (formally) – but of course, the group will not want her to wait with a participation until this will be done.

AD 5) UPDATE OF LIST OF FULL ADDRESSES OF PARTICIPANTS

An updated list will be added to the minutes

AD 6) & 7) STATUS OF ACTIVITIES OF WG 1 (REPORT BY EACH MEMBER) / DISCUSSION OF RESULTS ACHIEVED SO FAR

Reports were made 'by tasks' rather than by each member:

Homepage: the work of PK in constructing the WG1 homepage was greatly acknowledged and Petra gave a 'live' demonstration. Input is still required from all the participants (recall: it is meant to be a working tool not a show-case), in particular (at the very moment) concerning references of papers mentioned in the different sections.

Roughness sublayer (MR and PK): some recent findings were presented from a wind tunnel investigation of a real building array in the city of Nantes (and comparisons to full-scale data). ChS promised to send more (full-scale) data from Nantes and RB did the same for two sites in Copenhagen. The further procedure seems pretty clear at the moment (will have to be detailed on the homepage) – but requires a lot of work....

As the roughness sublayer contains the canopy layer it was decided to merge the two tasks to one.

Rural-urban transition: Presentation of data from Birmingham (urban vs. rural) at different heights by DM. CS presented similar scatter plots from 3 stations in Barcelona. ChS has data from St. Nazaire (and will distribute a report on that). Discussion on a general procedure how to compare 'urban' and 'rural' wind speed. It was decided that – similar to rural conditions – a reference height should be defined. At a first glance, $d+10m$ (where d =zeroplane displacement) seems to be a reasonable choice (from practical considerations). MR will work out a 'recipe' (according to the findings for the roughness sublayer), how to translate the wind measurements at a particular height to this urban reference height.

Urban Boundary Layer: ZJ presented a collection of definitions, research topics and open questions that had been worked out together with CS. Greatest problem (challenge) is the fact that often the city influence is masked by, e.g., sea breezes, valley winds etc. It was agreed that through careful analysis the city influence must be isolated. Numerical modelling will have to support this effort. The following data sets were mentioned: Paris (ChS), Barcelona (CS), a 'Japanese city' (EB will find out). There is still no testable hypothesis (other than the ,no-

hypothesis' of the first WG 1 meeting, i.e. try to see whether and to what extent the usual boundary layer profiles work) available.

AD 8) & 9) WG 1 WORKSHOP / SHORT TERM SCIENTIFIC MISSIONS, STUDY CONTRACTS, INVITED experts

There was general agreement that no such workshop is necessary at the moment (enough workshops from the other WGs).

AD 11) WORK PLAN UNTIL NEXT WG 1 MEETING

It was agreed to update the list of ,tasks and people' from the last meeting as follows:

- Roughness sublayer (incl. canopy) MR, PK, DM
- Urban boundary Layer ZJ, CS, EB
- Rural → urban transition: DM, RB, CS, VP
- Spatial inhomogeneity ChS
- Urban Meteorological Network VP

(The second last task is ,new' due to the absence of ChS in the first meeting and the last task was suggested by VP to form a new task)

For each of the tasks the following ,program' should be followed:

- 1) define a hypothesis
- 2) Specify the required input data (what do I need to test the hypothesis on a specific data set?)
- 3) data availability (which data sets are suited to test the hypothesis)
- 4) results of tests
- 5) possible generalisation

For each of the tasks the responsible people (see above) will formulate at least points 1) and 2) of the above list (to start with...) and put the results onto the homepage (via PK).

AD 12) REPORT ON SYMPOSIA RELATED TO THE TOPICS OF WG 1

Information can be found on the homepage. No exact dates are yet available for the next Harmonisation Conference (June 2001, Ispra, I) and the next 'Urban Dispersion Conference' (March 2001 in Naples, I). Information will be updated on the homepage as soon as available.

AD 13) DATE AND PLACE OF NEXT MEETING

In connection with the next MC meeting and the workshop of WG4 in Prague, June 15/16 2000. However, the program of these two events is tight, so that possibly an extra day

(June 14) should be envisaged (this information was available only after the Roskilde meeting).