# Minutes of the First COST 715 Meeting of Working Group 2, Vienna, Austria, June 7 and 8, 1999

Participants:

Alexander Baklanov
Koen De Ridder
Sylvain Joffre
Ari Karppinen
Patrice Mestayer
Martin Piringer

1. MP opened the meeting. Dr. Fritz Neuwirth, chair of the COST Technical Committee of Meteorology and vice-director of the hosting institute, welcomed the participants.

2. The agenda (Annex 1) as well as the minutes of the preparatory meeting at Hamburg (Annex 7 of the draft minutes of COST 715 MCM 2) were adopted without change.

3. MP was definitely appointed as chairman. SJ agreed to assist as vice-chairman.

4. MP invited the participants to briefly introduce themselves. The list of attendants including full addresses is given in Annex 2.

5. Status of WG 2: Since the preparatory meeting at Hamburg, no action has been taken except of organising and preparing the Vienna meeting. Status of the WG is therefore identical to the minutes of the Hamburg meeting.

6. Ongoing activities: The main emphasis of the WG meeting was drawn on this point. Agreement was achieved to follow the items identified during the preparatory meeting and to concentrate first on points a) and b).
   PM and AB: Problems and demands of meteorological preprocessors, models and parameterisations for air pollution modelling in urban areas should be identified (esp. when M-O – similarity doesn't work). The models abilities to simulate critical pollution episodes (stagnations, strong stability) should be investigated.
   SJ: Different kinds of models are applied in the urban scale. For each group of models, a catalogue of problems is requested. WG should focus on meteorology.
   AB: Chemical processes should be reckognized as well. They are relevant e.g. for urban

smog. Realizes this could be out of scope of the WG.
A discussion on the needs for urban modelling (effects of the internal boundary layers, roughness parameter, how to determine the surface temperature in urban areas) followed.
SJ: In the end a model has to run (with input variables available); adaptations to reduce model uncertainty might be necessary.
AK: Adressed also model uncertainty and the problem of defining the boundary urban/rural.
The group identified (preliminary) some urban datasets that might be used to test models: Graz, Berlin (Berlioz experiment).
SJ: Requirements (minimum/optimum) of such datasets should be defined.
PM: Sensitivity studies with models concerning how relevant a city is with respect to modifications by complex terrain should be undertaken.
PM, SJ: A workshop should be planned and organised on the needs of dispersion models applied to urban areas and on an evaluation of their results. This workshop should concentrate on two types of software, meteorological preprocessors and surface schemes, adaptable to the urban atmosphere. Possible date: course of the year 2000.
MP: A lot of information concerning urban meteorology is already available (COST 615, SATURN) and should be reviewed for the purpose of WG 2.
PM, SJ: Consensus definitions of variables relevant for the urban atmosphere should be found: Surface of urban atmosphere, surface temperature, problem of horizontal resolution, etc.
KD: Surface should be defined depending on the scale of the model used.
MP gave a brief report on methods tried by his group to determine the mixing height (OML preprocessor, methods to determine MH from measured temperature profiles). This initiated a discussion on the representativeness of meteorological stations with respect to urban/suburban/rural. He also showed posters demonstrating the potential of the Graz database.

A draft of an EU proposal launched by DMI foreseen for the action “City of tomorrow and cultural heritage” was presented by AB. After some partly controversial discussion concerning the role of scientists versus end-users of decision support systems in such a project, the WG proposed to support, but not to co-ordinate the proposal and to recommend to select one or two institutions representing end-users to launch the proposal and to seek scientific support, where necessary. Further participation of WG2 members at

the suggested proposal will be discussed in autumn, after the distribution of a brief description of the proposal items and possible structure (corrected according to the above mentioned discussion) by DMI or an end-user/coordinator.

7. Workplan:
   Individual contributions until the next WG meeting are planned as follows:
   AB: will identify models treating urban air pollution, will identify kind of met. information necessary for pollution models; will review existing preprocessors and models to determine MH
   KD: will focus on surface energy budget: start by looking on COST 710 report, add some points concerning cities, extend to land use models, consider satellite data
   SJ and PM: will outline possible contents of planned workshop to be presented at next COST 715 MCM
   AK: will work with Helsinki high mast dataset in collaboration with SJ to look on effects of city on MH, will summarize articles on urban MH from Japan, will undertake intercomparison studies at a later stage
   PM: will work on consensus definitions, on gaps left by COST 710 relevant for COST 715, will cirulate relevant literature
   MT: Due to involvement in Sfincs project, will provide a review on the revised schemes for surface fluxes. Will write a short review on the different available procedures for treating calms.
   MP: will collect information on guidelines to apply for study contract and short term scientific missions, will collect information on the Berlioz experiment (datasets and their availability), will prepare description of the Graz dataset, will summarize MH experience of ZAMG at Vienna

8. Past and future symposia: was treated only briefly.
   MP stated that the meetings in Madrid on urban air pollution and in Venice on challenges for the 2000s did not treat issues relevant for WG 2. He will participate at the IBC/ICUC conference in Sydney from Nov. 8 – 12.

9. The next WG meeting is scheduled for Nov. 29/30 or Nov. 22/23, 1999.
   The location has to be decided. AB will seek approval to conduct it at DMI, Copenhagen.

**Appendix 1:** Agenda

1.Welcome of participants

2. Adoption of minutes and agenda

3. Definite appointment of chairperson and election of vice-chairperson

4. List of full addresses of participants

5. Status of activities of WG 2

6. Discussion of ongoing activities

7. Workplan and timetable of activities of WG 2 according to MoU

8. Report on past and future symposia related to the topics of WG 2

9. Date and place of next meeting

10. AOB

**Appendix 2**: List and addresses of participants

| Name | Institution and Address | Tel./Fax/e-Mail |
|---|---|---|
| Martin Piringer, chairman | Central Institute for Meteorology and Geodynamics (ZAMG)<br>Hohe Warte 38<br>A-1190 Vienna Austria | Tel: +43 1 36026 2402<br>Fax: +43 1 36026 74<br>e-Mail: piringer@zamg.ac.at |
| Sylvain Joffre (vice-chairman) | Finnish Meteorological Institute (FMI)<br>Vuorikatu 24<br>P.O.Box 503<br>F-00101 Helsinki Finland | Tel: +358 9 19292250<br>Fax: +358 9 19294103<br>e-Mail: sylvain.joffre@fmi.fi |
| Alexander Baklanov | Danish Meteorological Institute (DMI)<br>Lyngbyvej 100<br>DK-2100 Copenhagen, Denmark | Tel: +45 39 15 7441<br>Fax: +45 39 15 7460<br>e-Mail: alb@dmi.dk |
| Koen De Ridder | VITO – TAP<br>Boeretang 200<br>B-2400 Mol, Belgium | Tel: +32 14 336840<br>Fax: +32 14 322795<br>e-Mail: dridderk@vito.be |
| Ari Karppinen | Finnish Meteorological Institute (FMI)<br>Sahaajankatu 20E<br>F-00810 Helsinki Finland | Tel: +358 9 19295453<br>Fax: +358 9 19295403<br>e-Mail: ari.karppinen@fmi.fi |
| Patrice Mestayer | CNRS – Ecole Centrale de Nantes<br>BP 92101<br>F-44321 Nantes Cedex 3 | Tel: +33 240371678<br>Fax: +33 240747406<br>e-Mail: patrice.mestayer@ec-nantes.fr |