

**Minutes of the Second COST 715 Meeting of Working Group 2,
Copenhagen, Denmark, November 29 and 30, 1999**

WG 2 participants:

Alexander Baklanov

Koen De Ridder

Joao Ferreira

Sylvain Joffre

Ari Karppinen

Patrice Mestayer

Douglas Middleton

Martin Piringer

Maria Tombrou - Tzella

Invited observers:

Zoltan Dunkel, EU DG12, COST Meteorology

Alix Rasmussen, DMI, WG3

Ruwim Berkowicz, DMU, WG1

1. MP opened the meeting. On behalf of the Danish Meteorological Institute (DMI), Anne Mette Jørgensen, Director of the Research and Development Department, welcomed the participants.
2. The agenda was adopted slightly revised: after item 7, item 7a, "EU framework programme", was added. The revised agenda is given in Annex 1.
3. MP specially welcomed the members taking part the first time, as well as Joao Ferreira, the new delegate from Portugal. MT, DM and JF briefly introduced themselves and highlighted their interests within the WG. The revised list of attendants including full addresses is given in Annex 2. Annex 3 summarizes the lines of activities of WG 2 already fixed at the Hamburg meeting on 15 and 16 February 1999.

4. Status of WG 2: The working group comprises now 9 delegates from 8 European countries.

5. Decisions:

5th Framework Programme : WG 2 supports the proposal 'Improvement/validation of Systems Forecasting Urban Meteorology for Air Pollution Information Systems (FUMAPIS)', presented by DMI, intended to be submitted under "City of tomorrow and cultural heritage". The background for the proposal is based on the general desire/request from authorities on precise forecasts of urban air pollution. Operational information systems on urban air pollution are already implemented in different cities in Europe and it is foreseen that such systems will be more widespread in the future. The quality of these systems depend mainly on the mapping of emissions, the air quality model and the meteorological forecast data in urban areas. The proposal should focus on the quality of meteorological forecast data, NWP applications, and especially evaluate different schemes which focus on the boundary layer parameterisation for urban areas and the physical parameterisation. The project will require comprehensive analyses of the meteorological parameters during air pollution episodes in different regions in Europe.

Expert meeting ("Workshop"): April 12, 2000, at Antwerp, Belgium, at the facilities of VITO on "Surface Fluxes Schemes and Processes in the Urban Atmosphere". Invited experts: Tim Oke (Univ. Vancouver), Sue Grimmond (Indiana Univ.), Alberto Martilli (CH), Valery Masson (Meteo France), Emmanuel Guillote (Univ. Karlsruhe), Nicola Ellis (UK Met. Office; to be refunded by the Met. Office). To be invited in case of cancellation: Mathias Rotach (ETH Zurich). WG 2 experts: Koen De Ridder, Patrice Mestayer.

Study contract: MP launched a draft proposal by H. Scheifinger of ZAMG Vienna, "Validation of net radiation and sensible heat flux time series calculated by pre-processors with measured data at three sites in Austria" for approval by the WG. It was decided to incorporate comments of the WG and to submit the final version to the MC for decision at the next MCM.

6. Results and informations:

Experimental studies, databases: Draft on "Experimental studies of the mixing layer in urban areas" by AB. Information on met. and concentration measurements of the Graz database by MP. Graz database will be ready as a CD-ROM in the end of March 2000. Draft bibliography: contributions by AB and MP.

AB: Information on existing preprocessors and models for MH and their features for

urban areas.

KD: Information on specific urban problems with surface energy budget, urbanization of SVAT models

DM: Overview on classes of models (from simple to NWP) for urban applications

PM: Report on status of soil model developed at Nantes. Distributed review article on urban scale models and information to SUBMESO met. preprocessor.

SJ: presented results from his work on the mixing height with the NOPEX-WINTEX dataset.

MT reported on studies of night-time BL and on convective BL under calm conditions.

JF will investigate Sodar data with respect to MH.

Structure of the final report: members agreed that a blue print for it be available as soon as possible. Propositions should be sent to MP in time (until the end of Feb. 2000) before the VITO/Antwerp meeting.

Work plan and sharing: so far everyone has continued on own current activities. More integrated contributions should be encouraged for the VITO meeting, so that joint activities could be planned afterwards in the frame of the adopted structure and content of the final report.

7. Past and future symposia:

MP distributed selected papers from the IBC/ICUC conference in Sydney.

SJ: During the 6th IGAC Conference (Bologna, September 1999) a panel discussion was held on the issue "Future Direction of Global Atmospheric Chemistry Research" involving most of the leaders in the field. One of the quoted recommendations was the need to provide chemistry measurements at monitoring sites with more comprehensive ancillary meteorological data, such as vertical profiles and the mixing height (!).

KD informed on the VITO seminar on "Scale Interactions in Modelling and Policies for Air Quality" to be held on 13 and 14 April 2000 at Antwerp.

Since the VITO-meeting would concentrate on only one pillar of the WG 2 activities, it was suggested that WG 2 should organise another workshop on the mixing height later. Two mentioned possibilities were in connection with the Urban Air Pollution Conf. in March 2001 or with the Harmonisation conference in September 2001 in Ispra.

8. The next WG meeting will take place at Antwerp, Belgium, on 12 April 2000.

Annex 1: Agenda

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

Annex 2: List and addresses of WG 2 participants

Name	Institution and Address	Tel./Fax/e-Mail
Martin Piringer, chairman	Central Institute for Meteorology and Geodynamics (ZAMG) Hohe Warte 38 A-1190 Vienna Austria	Tel: +43 1 36026 2402 Fax: +43 1 36026 74 e-Mail: piringer@zamg.ac.at
Sylvain Joffre, vice-chairman	Finnish Meteorological Institute (FMI) Vuorikatu 24 P.O.Box 503 FIN-00101 Helsinki Finland	Tel: +358 9 19292250 Fax: +358 9 19294103 e-Mail: sylvain.joffre@fmi.fi
Alexander Baklanov	Danish Meteorological Institute (DMI) Lyngbyvej 100 DK-2100 Copenhagen, Denmark	Tel: +45 39 15 7441 Fax: +45 39 15 7460 e-Mail: alb@DMI.dk
Koen De Ridder	VITO – TAP Boeretang 200 B-2400 Mol, Belgium	Tel: +32 14 336840 Fax: +32 14 322795 e-Mail: dridderk@vito.be
Joao Ferreira	Instituto de Meteorologia Rua C do Aeroporto 1700 Lisboa Portugal	Tel: +351 21 8483961 Fax: e-Mail: joao.ferreira@meteo.pt
Ari Karppinen	Finnish Meteorological Institute (FMI) Sahaajankatu 20E FIN-00810 Helsinki Finland	Tel: +358 9 19295453 Fax: +358 9 19295403 e-Mail: ari.karppinen@fmi.fi
Patrice Mestayer	CNRS – Ecole Centrale de Nantes BP 92101 F-44321 Nantes Cedex 3	Tel: +33 240371678 Fax: +33 240747406 e-Mail: patrice.mestayer@ec-nantes.fr
Douglas Middleton	UK Met Office Room 161 London Road, Bracknell RG12 2SZ	Tel: +44 1344 856964 Fax: +44 1344 854493 e-Mail: drmiddleton@meto.gov.uk
Maria Tombrou - Tzella	Univ. of Athens, Dept. of Applied Physics Panepistimioupolis Zographou GR - 157 84 Athens	Tel: +30 1 7274935 Fax: +30 1 7275281 e-Mail: mtombrou@atlas.uoa.gr

Annex 3: Lines of activities of WG 2

- a) To review the various pre-processors, schemes and models for the determination of the mixing height and the surface energy budget or stability that are available to the participants. The cases of strong stability and/or windless conditions are of special interest.
- b) To identify and review suitable datasets within and outside the group that could be used to test and validate the pre-processors and models.
- c) To carry out intercomparisons of different schemes against each other and against data under specific conditions.
- d) To assess the influence of the model outputs of certain specific effects such as complex topography, strong heterogeneity, slope effects on radiative fluxes.
- e) To assess the suitability of remote sensing tools to estimate canopy characteristics and surface fluxes.
- f) To provide recommendations for the improvement of existing pre-processors and models and for the development of new schemes.
- g) To provide recommendations for the planning and conduct of field campaigns in order to fill the important existing gaps of empirical data under various critical conditions on key parameters for urban air pollution.
- h) To promote co-ordination of related activities in Europe of presently scattered works, objectives, and responsibilities.