

**SECOND JOINT MEETING OF THE BUREAUX
OF THE EMEP STEERING BODY
AND THE WORKING GROUP ON EFFECTS**

**held at the Palais des Nations, Geneva,
on Thursday, 27 February 2003, 10:30 –12:30, room C3.**

NOTES ON THE MEETING

1. The meeting was attended by members of the Bureau of the EMEP Steering Body, the Bureau of the Working Group on Effects, and the task force chairpersons and international centres operating under these bodies, as well as members of the secretariat. The meeting was co-chaired by Mr J. Schneider (Chair of the EMEP Steering Body) and Mr H. Gregor (Chair of the Working Group on Effects)

2. The Co-Chairs welcomed the representatives of the two bodies noting the success of the previous meeting in 2002, and the Executive Body's encouragement to continue with the scientific collaboration.

3. Mr R. Ballaman (Chairman of the Working Group on Strategies and Review) addressed the meeting. He drew attention to the timetable of the Executive Body especially with regard to the review of protocols yet to enter into force, and noted the need for timely completion of the necessary scientific activities. He noted that the Executive Body had established an Expert Group on Heavy Metals to prepare for the review of that Protocol and asked for support for this group, as appropriate. The Expert Group on POPs was continuing its work, and its Vice Chairs had been invited to give consideration to the detailed procedures for reviewing the Protocol. The review of the Gothenburg Protocol could still be scheduled for 2004 though there were still only 4 ratifications. It was important that scientific decisions were made soon, e.g. on ozone critical levels, particulate matter effects, etc. There were also important areas of work on dynamic modelling, hemispheric modelling and economic benefits ongoing. He drew attention to the upcoming workshop on a communications strategy for the Convention in London (9-11 April 2003) and noted the important contribution that the two major reports being prepared by the Working Group on Effects and by the EMEP Steering Body could make in the future to demonstrate the effective work of the Convention.

4. The meeting adopted its agenda (annex I).

Planned activities related to elements of the harmonized work-plans

5. Based on the notes of last meeting (February 2002, see: <http://www.unece.org/env/lrtap/2002-02-jm-notes.pdf>) an in depth review was made of the expected EMEP and the Working Group on Effects deliverables/results, their timetable and their required external inputs (data, information, resources). The meeting discussed: (i) the timely mutual provision of required inputs; and (ii) harmonizing the timetables of deliverables needed for the review of the protocols. Updated tables of planned deliverables were agreed (annex II).

6. *Acidification and eutrophication.* Historic emission data for NO_x will be finalized and made available in 2003 and but there were currently no activities to compile historic emission data for particulate matter. There was a problem with historic NH₃ data. Fine-scale deposition data for forests would be finalized in 2003. Concerning base cation deposition, Sweden proposed to hold a workshop in autumn 2003 to discuss the follow up of a Nordic project on this topic.

7. *Ozone.* The Chair of ICP Vegetation, Ms G. Mills, indicated that the Gothenburg workshop had decided that a revised level I critical level approach should be used for vegetation though a flux-based approach for two crops seemed feasible in the near future. A decision on the use of the level II approach would be postponed though ICP Vegetation would continue to develop a level II approach for discussion at its task force meeting in February 2004. There was no need for additional data from ICP Modelling and Mapping. For forests, an AOT_x approach was the most likely way forward, although two other concepts were still being further considered.

8. It was stressed that, without a decision on level II by mid-2003, there was no possibility of including it in RAINS in time for the work within CAFE. CAFE needed a clear message from the Convention on the way forward by April 2003 in order to do further planning. It was agreed to make available preliminary results on level I (modified) and level II critical levels as soon as they became available for certain receptors.

9. Mr Krzyzanowski informed the meeting on results that showed that there was no detectable threshold for some health effects of ozone. The consequences of these findings, e.g. on the treatment of ozone effects on human health in integrated assessment modelling, would be discussed at a meeting of the Task Force on Health Aspects in May 2003 to which EMEP experts would also be invited.

10. *Particulate matter*. It was noted that there was a lack of measured and modelled data of particulate matter (PM) for the effects work, especially at the urban scale. A WHO assessment was almost completed.
11. *Heavy metals*. Preliminary critical loads maps for Cd and Pb have already been presented through cooperation between CCE and MSC-E.
12. *POPs*. The modelling work was continuing as planned but there was a lack of measurements for validation.

WGE Substantive Report and EMEP Assessment Report: consideration of possible cooperation, exchange of information and data

13. Mr Gregor explained that a draft of the Working Group on Effects substantive report would be presented to the Working Group's twenty-second session in September 2003. It was planned that the final version would be available in 2004. A consultant had been engaged, Mr Fenech, who was Vice-Chair of the Working Group until his recent retirement, to carry out the necessary editing of contributions from the programme centres. Mr. Gregor noted that the Bureau was hoping for some additional contributions from EMEP to the report.
14. Mr Schneider and Mr A. Eliassen indicated the EMEP assessment report would be in two parts. Part II of the report would be based on contributions from national experts. Some national contributions were also intending to include information on effects, and this needs to be coordinated with the Working Group on Effects representatives nationally. Part I of the report would cover a European assessment prepared by the EMEP centres and invited experts. An editorial committee had been established and a web page (http://www.emep.int/index_assessment.html) set up to show how work was progressing. The EMEP report would also briefly cover PM explaining the status of the work and its importance for future policy discussions.
15. It was agreed that the two reports should be consistent and complementary, providing different parts of the same story. There was a special need to ensure consistency in the conclusions of the two reports. The EMEP report's section on "the need for further action" would be drafted and sent to the Working Group on Effects experts for comment. There was a need to comment on the status of the environment compared to objectives. Effort would be made to provide the necessary text from the Working Group's report to EMEP, as well as additional contributions from EMEP to the Working Group on Effects report, especially for dealing with trends in deposition. The executive summaries of the two reports could provide

important links. It was agreed that lead authors would need to collaborate directly and draft executive summaries need to be exchanged regularly as work progressed.

RAINS review

16. The meeting was informed by the Chairs that the review of the RAINS model, which was being planned jointly by the Chairman of the Task Force on Integrated Assessment Modelling and the European Commission (EC) to ensure that both the Convention and the CAFE programme were provided with the information required to give confidence to the work being done. EC was planning to issue a call for tender for an external reviewer; possible candidates for this had already been discussed by the High Level Coordinating Group (of the Bureau of the Executive Body and the CAFE secretariat) at its recent meeting in Brussels. The review would be done in the second half of 2003 in close collaboration with the Task Force on Integrated Assessment Modelling. It was stressed that the review would not cover the input data, but would focus on the modelling tool. National input data would need to be reviewed by national experts. Separate reviews by the appropriate Convention bodies were proposed for the Eulerian model and the critical load modelling and mapping data.

Cooperation with CAFE

17. The secretariat provided an overview highlighting the Convention's participation in the CAFE process, through the secretariat, and officers and centres associated with Convention bodies. There were specific areas of cooperation such as with integrated assessment modelling, and with WHO. There was also collaboration between ICP Materials and DG Research; within the 6th framework programme; a project was intended to cover air pollution damage to cultural heritage. Similar collaboration existed in many other areas (some of it not directly associated with CAFE). There was a general feeling of satisfaction with the current level of cooperation though continued effectiveness would require continued efforts.

18. Ms. Wichmann-Fiebig drew attention to work of DG Environment more generally. Scientific work on PAHs and heavy metals, including critical loads, would be of interest to EC as it was trying to develop a more integrated strategy for control of these substances.

Other business, including next joint meeting

20. Information was given about the next Acid Rain conference to be held in Prague in 2005 (see: www.acidrain2005.cz) that was to focus on regional pollution effects. Mr Gregor, who had been invited to sit on the scientific committee, would keep the Convention informed of developments.

21. Work has started under the Task Force on Integrated Assessment Modelling on the links between air pollution and climate change. Many ICPs have done, or are conducting, work related to this topic and this area of work could be discussed at a future joint meeting.
22. EMEP is developing a monitoring strategy and future monitoring work could benefit from still more intensive cooperation between EMEP and the effects community. This should be added to next year's agenda.
23. In view of its usefulness, the meeting agreed to aim at continuing the model of joint meetings in the future.

TABLE 1. PLANNED ACTIVITIES CONCERNING ACIDIFICATION AND EUTROPHICATION

YEAR	EMEP SB		WGE		REMARKS
	DELIVERABLES	INPUTS FROM WGE	DELIVERABLES	INPUTS FROM EMEP	
2003	Historic emission and deposition data (CIAM/CCE) Deposition maps by land use classes European base cation deposition maps Approved monitoring strategy Model intercomparison between regional and urban scales	Methodologies for IAM input (continuing from 2002) Uncertainty estimates for IAM data Preliminary IAM input data: CL maps, dynamic modelling results	Updated CL maps Dynamic modelling results: European scale	Historic emission data (N, PM) Fine-scale deposition data for forests Ecosystem-specific deposition maps (50x50) for selected years European base cation deposition maps	EMEP inter-laboratory comparisons open to WGE participation
2004	Approved Eulerian modelling results Link to hemispheric scale Uncertainty assessment of IAM IAM modelling as basis for negotiations Assessment report	Final approved IAM input data: CL maps, dynamic modelling results	Substantive report Approved CL maps and dynamic modelling results		
2005		Updated CL and dynamic modelling results			

TABLE 2. PLANNED ACTIVITIES CONCERNING OZONE (SEE ALSO TABLE 1)

YEAR	EMEP SB		WGE		REMARKS
	DELIVERABLES	INPUTS FROM WGE	DELIVERABLES	INPUTS FROM EMEP	
2003	Flux modelling for level II Model intercomparison between regional and urban scales	Uncertainty estimates for IAM data Provisional IAM input data Land use maps	Decision about level II approach or modified level I Modified level I models and/or level II (flux-effect) models for crops, semi-natural vegetation and trees Review of health effects	Additional data for (modified) level I, if applicable	EEA input on urban assessment would be welcomed
2004	Approved Eulerian modelling results Link to hemispheric scale Uncertainty assessment of IAM IAM modelling as basis for negotiations	Final approved IAM input data	Geographic assessment of forest injury Approved maps/data on level II/I approach for IAM Health effects of exposure	Population relevant concentration data	Exposure data ?
2005			Flux model comparisons. Mapping plant communities at risk		

TABLE 3. PLANNED ACTIVITIES CONCERNING PARTICULATE MATTER (SEE ALSO TABLE 1)

YEAR	EMEP SB		WGE		REMARKS
	DELIVERABLES	INPUTS FROM WGE	DELIVERABLES	INPUTS FROM EMEP	
2003	New method to evaluate change in life expectancy in IAM Mass closure models Model intercomparison between regional and urban scales	Uncertainty estimates (health) for IAM data Final approved IAM input data: CL maps, dynamic modelling results	Health effects review		EEA input on urban assessment would be welcomed CITYDELTA project Lack of measurements
2004	Size distribution and chemical composition modelled Approved Eulerian model Link to hemispheric scale Uncertainty assessment of IAM IAM modelling as basis for negotiations		Materials effects thresholds Health effects exposure assessment		Exposure data ?
2005			Final materials results		

TABLE 4. PLANNED ACTIVITIES CONCERNING HEAVY METALS

YEAR	EMEP SB		WGE		REMARKS
	DELIVERABLES	INPUTS FROM WGE	DELIVERABLES	INPUTS FROM EMEP	
2003	Transfer matrices for Cd, Hg and Pb Deposition maps by land use category for Cd, Hg and Pb	Preliminary map of CL for Cd and Pb Validation in cooperation relevant ICPS	Preliminary CL maps (Cd and Pb) Assessment of methodology to map exceedances of Cd and Pb CLs (with MSC-E) Health effect assessment Moss survey results Release of HMs due to corrosion (workshop)	Deposition maps	Risk assessment for other HMs? Input to Expert Group
2004	First report (with CCE) on CL exceedances for Cd and Pb Hemispheric scale modelling for Hg IAM scenarios linking to Cd and Pb effects	Revised maps of CL	Update of risk assessment for forests		Input to Expert Group
2005	Material for Protocol review (emissions, transfer)	Improved maps of CL	Advanced CL maps for Cd and Pb And first report (with MSC-E) on CL exceedances for Cd and Pb with improved CL maps Material for Protocol review (CL maps, risk assessment of other HMs) Trends in heavy metals in mosses		Input to Expert Group

TABLE 5. PLANNED ACTIVITIES CONCERNING PERSISTENT ORGANIC POLLUTANTS

YEAR	EMEP SB		WGE		REMARKS
	DELIVERABLES	INPUTS FROM WGE	DELIVERABLES	INPUTS FROM EMEP	
2003	Trend analysis for PCDD/F and B[b]F 1990-2000 Evaluation of criteria for risk assessment of selected POPs for selected areas (with WGE)	Requirements for risk assessment	Review of environmental effects Review of health risks from LRTAP		Cooperate with GEF/ UNEP projects Lack of measurements
2004	Trend analysis for PCB, γ -HCH, PCDD/F and B[b]F 1990-2000 Evaluation of media response to emission reduction for PAH and PCBs Risk assessment of selected POPs for selected areas (with WGE)	Risk assessment data	Assessment of POPs in aquatic environment		
2005	Material for Protocol review (existing and new substances)		Material for Protocol review (existing and new substances)		