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EXECUTIVE BODY FOR THE CONVENTION ON  
LONG-RANGE TRANSBOUNDARY AIR POLLUTION

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Item 5 of the provisional agenda

**PROGRESS IN CORE ACTIVITIES**

Note by the secretariat

Introduction

1. This note has been prepared to assist the Executive Body in its review and assessment of progress made in the following areas of cooperation within the scope of the Convention:

(a) Cooperative programme for monitoring and evaluation of the long-range transmission of air pollutants in Europe (EMEP), encompassing the two core activities:

(i) atmospheric monitoring and modelling; and (ii) integrated assessment;

(b) Effects of major air pollutants on human health and the environment, the third core activity identified by the Executive Body.

2. Progress in cooperation should be evaluated in relation to the 2003 work-plan for the implementation of the Convention, as adopted by the Executive Body at its twentieth session (ECE/EB.AIR/77/Add.2).

Documents prepared under the auspices or at the request of the Executive Body for the Convention on Long-range Transboundary Air Pollution for GENERAL circulation should be considered provisional unless APPROVED by the Executive Body.

3. At its nineteenth session, the Executive Body for the Convention approved the priorities for the work of the EMEP Steering Body up to 2004 and its medium-term work programme (ECE/EB.AIR/75, para 57 (b)) and, at its twentieth session, it took note of the updated medium-term work-plan for the further development of the effect-oriented activities and invited the Working Group on Effects and the Steering Body of EMEP to continue their close cooperation in implementing the priority tasks of the Convention (ECE/EB.AIR/77, 61 (e)).

4. The Executive Body also requested the Bureau of the EMEP Steering Body and the Extended Bureau of the Working Group on Effects to develop a coordinated medium-term work-plan, taking note of the planning activities already carried out by the Clean Air for Europe (CAFE) programme (ECE/EB.AIR/75, para. 69 (e)).

5. Pursuant to these decisions of the Executive Body, the Bureau of the Steering Body of EMEP and the Extended Bureau of the Working Group on Effects held joint meetings in February 2002 and February 2003 to reconsider and update their medium-term work-plans for 2002-2005.

6. A number of Parties have contributed significantly to the core activities by leading task forces, hosting coordinating centres, organizing workshops and seminars, and by designating experts to assist the secretariat in the preparation of draft documents for submission to relevant bodies or meetings. The number of Parties taking an active part in these activities further increased.

## **I. COOPERATIVE PROGRAMME FOR MONITORING AND EVALUATION OF THE LONG-RANGE TRANSMISSION OF AIR POLLUTANTS IN EUROPE (EMEP)**

7. The Steering Body held its twenty-seventh session in Geneva from 8 to 10 September 2003 (EB.AIR/GE.1/2003/2).

8. The Steering Body amended and agreed upon the work-plan for 2004 (EB.AIR/GE.1/2003/10), prepared on the basis of the adopted priorities up to 2004 (EB.AIR/GE.1/2001/9), on input by the Task Forces and centres, and taking into account the results of the joint meeting between the Bureaux of the Steering Body and the Working Group on Effects. It expressed its readiness to cooperate with the Working Group on Effects also in the preparation of the substantive report.

9. The Steering Body reviewed the progress in the work of its centres and expressed its satisfaction with the progress achieved in all areas of work, in particular:

(a) Concerning modelling work on acidification, eutrophication and photo-oxidants, it welcomed the excellent progress made with the development and validation of the unified EMEP model. It stressed that reviewing the model to demonstrate its reliability was a top priority and that further work should also include an assessment of uncertainties and recommendations on use for policy purposes. The model would be reviewed at a workshop in Oslo, on 3-5 November 2003. The Steering Body also took note of the development of ecosystem-specific deposition data and the important consequences these may have on the calculation of critical loads exceedances;

(b) Concerning work on heavy metals, the Steering Body noted with appreciation the good progress made in the monitoring and modelling of heavy metals, noted that there were some improvements to the monitoring and emissions data reported, but stressed that emission data quality, for instance for cadmium and mercury, was the most important limitation for improving model results. There was a need for much greater efforts from Parties to report their data in the future, making use of the reporting guidelines, and the Task Force on Emissions Inventories and Projections was requested to pursue this. The Steering Body welcomed the individual national reports prepared by the Meteorological Synthesizing Centre-East (MSC-E) and invited Parties to comment on their country-specific reports to MSC-E as appropriate. It recommended that MSC-E should investigate the possibilities for extending the hemispheric modelling for mercury to the global scale and report back to it at its twenty-eighth session. It requested the Task Force on Measurements and Modelling to look into the review of the heavy metals model and urged Parties to be actively involved in the process;

(c) Concerning the work on particulate matter (PM) monitoring and emissions, it recognized the importance of Parties' reporting of emissions and urged them to continue their endeavours to provide the necessary data including those on chemical composition. The Steering Body noted that measurements of particulates were improving and requested Parties to continue this trend, in particular their efforts in setting up monitoring sites for PM 2.5 and chemical composition. It took note of the progress in modelling particulates and stressed that priorities should focus on important sources and where uncertainties were the highest (e.g. organic carbon). It noted the important results of the deliberations of the experts on health, in particular the decision to use PM 2.5 as an indicator for PM-related health effects, and requested the Meteorological Synthesizing Centre-West (MSC-W) and the Centre for Integrated Assessment Modelling (CIAM) to prepare the necessary tools to include health effects in their work;

(d) Concerning the work on persistent organic pollutants (POPs), it noted the relevant and timely progress made in view of the entry into force of the Protocol on POPs, took note of the progress in model development and welcomed the efforts being made on model validation. It

agreed that, for a comprehensive picture, hemispheric modelling was needed and that the Arctic region required special attention. It noted that there was a need for improved concentration measurements including multi-compartment measurements. It stressed that more work was needed to improve emissions data, and invited national experts to comment on the expert estimates that had been made for their country. It also invited Parties to comment on their country-specific reports that had been prepared by MSC-E.

10. The Steering Body welcomed the work of the Task Force on Measurements and Modelling, expressing its appreciation for the work carried out by the Task Force, MSC-W, MSC-E and the Chemical Coordinating Centre (CCC). It endorsed the conclusions by the Bureau and the Task Force concerning the approval of monitoring data reports (EB.AIR/GE.1/2003/3, para. 54). It also took note of the progress in the preparation of the EMEP assessment report, agreed with the proposed timetable for its production, but requested that an initial draft should be prepared for consideration by its Bureau at its meeting in spring 2004.

11. The Steering Body took note of the new draft monitoring strategy for the 2004-2009 period and agreed that it covered all major issues. It allowed the Steering Body to see how EMEP monitoring fitted into the wider context of the work under other conventions, within the European Union and under the World Meteorological Organization's Global Atmosphere Watch (WMO-GAW). The Steering Body agreed that the draft would be an excellent basis for further discussion of the details of the level-by-level approach. It requested the Task Force on Measurements and Modelling to consider the issues raised during the twenty-seventh session, propose revisions to the draft monitoring strategy accordingly and report back at the twenty-eighth session of the Steering Body. It also urged Parties to consider the draft monitoring strategy in detail and provide input and comments at the next meeting of the Task Force. It welcomed the proposal of the United States to host a workshop on the modelling and monitoring of particulate matter in spring 2004.

12. The Steering Body welcomed the work of the Task Force on Emission Inventories and Projections and expressed its appreciation to MSC-W, CIAM and the Task Force for the progress made, especially on emission inventories and projections and emission data. It noted with appreciation the work of Mr. Woodfield, his supporting colleagues in the United Kingdom, and the United Kingdom as the lead country for their valuable contribution to the work of the Convention. It welcomed the offer by Norway to lead the Task Force, noted the offer of the European Environment Agency (EEA) to continue to support the Task Force through co-chaired joint meetings of the European Environment Information and Observation Network (EIONET) with the Task Force and through supporting the Guidebook, and expressed its appreciation for the offers of EEA and Parties to support work on inventory improvement. It noted that there were some improvements in the timeliness of emissions reporting by Parties, but urged Parties that

reported late, or not at all, to do so in time for the next reporting round (by the deadline of 15 February 2004) and in accordance with the revised Guidelines.

13. It took note of the results and conclusions of the workshop on validation and evaluation of air emission inventories, held in Gothenburg (Sweden) on 14-16 October 2002 (EB.AIR/GE.1/2003/5), and invited the Task Force to consider them, draw up proposals for procedures and mechanisms to improve the quality of emission inventories and report these to the Steering Body at its twenty-eighth session.

14. The Steering Body welcomed the work of the Task Force on Integrated Assessment Modelling, expressing its appreciation to the Chairman, the lead country and the International Institute for Applied Systems Analysis (IIASA), which had hosted a workshop, for the support that they had given to the Task Force. Several new insights would lead to the conclusion that it would be harder to meet the environmental objectives of the Gothenburg Protocol to protect ecosystems and human health. Additional measures would be needed, at both the regional and the hemispheric level, if policy makers still intended to fulfil their original ambitions. On the other hand, an effective reduction in national greenhouse gas emissions, as agreed under the Kyoto Protocol, might reduce the costs of the Gothenburg Protocol substantially.

15. The Steering Body noted the importance of developing the baseline scenario for the review of the Gothenburg Protocol and urged Parties to collaborate with CIAM and provide the necessary data. It also recognized the important new insights that were identified by CIAM (e.g. ecosystem-specific critical load exceedances) and requested that information on these should be drawn to the attention of appropriate bodies under the Convention. It stressed the importance of uncertainty management and treatment, and requested CIAM to continue its efforts to assess robustness and possible biases.

16. It noted the report and conclusions of the workshop on linkages and synergies of regional and global emission control, held at IIASA in Laxenburg (Austria) on 27-29 January 2003 (EB.AIR/GE.1/2003/4/Add.1), and requested that work should continue on this topic, noting the possibilities for a future workshop.

17. The Steering Body received information about the results of a workshop on hemispheric air pollution held in Bad Breisig (Germany). It took note of the report and the important conclusions of the workshop (EB.AIR/GE.1/2003/7) and thanked the organizers. It recognized the importance of intercontinental transport of pollutants, in particular of ozone, PM and mercury, decided to continue work on this issue, since it was identifying results of significance for the Convention and other regions, and stressed the need for further scientific input. It welcomed the

continued interest of the United States in the issue, hoped that collaboration with United States experts would continue and noted the possibility for a further workshop in autumn 2004.

18. The Steering Body received information about recent activities under and cooperation with: the European Commission's Clean Air for Europe (CAFE) programme, the European Community's Joint Research Centre (JRC), EEA, EIONET, the ACCENT programme and the World Health Organization's European Centre for Environment and Health (WHO/ECEH). The Steering Body took note of the information with appreciation, welcoming the useful cooperation and expressing its gratitude to the organizations for their contributions to EMEP.

19. The Steering Body approved the proposed budget of CIAM for 2004 as set out in the report of the Task Force on Integrated Assessment Modelling (EB.AIR/GE.1/2003/4, para. 59), and agreed to keep the 2005 and 2006 budgets at the same level. It also considered the financial and budgetary matters of EMEP (EB.AIR/GE.1/2003/11). Financial and budgetary matters are reported in EB.AIR/2003/5.

20. The Executive Body may wish, inter alia, to:

(a) Take note of the report of the twenty-seventh session of the EMEP Steering Body (EB.AIR/GE.1/2003/2);

(b) Note the progress made on heavy metals modelling, monitoring and emission reporting, and call upon Parties to make greater efforts to report their data in the future, making use of the reporting guidelines;

(c) Note the timely progress made on POPs modelling, in view of the entry into force of the Protocol on POPs, welcome the efforts being made on model validation;

(d) Call upon Parties to comment on their country-specific reports prepared by MSC-W;

(e) Note the progress in the development of the unified Eulerian model for acidifying and eutrophying pollutants, ozone and particulate matter, and take note of the conclusions of the workshop for the review of the model in Oslo on 3-5 November 2003;

(f) Recognize the importance of the Parties' reporting of PM emissions and call upon Parties to continue their endeavours to provide the necessary data, including those on chemical composition;

- (g) Note the progress in modelling particulates and stress that priorities should focus on important sources and where uncertainties are the highest (e.g. organic carbon);
- (h) Note the progress in the work on hemispheric air pollution, welcome the continued interest of the United States in this issue and invite other Parties to lend support to this work;
- (i) Accept with appreciation the offer by Norway to lead the Task Force on Emission Inventories and Projections, and welcome the offer of EEA to continue its support for the Task Force;
- (j) Welcome progress in the development of the new draft monitoring strategy for EMEP and encourage the Steering Body to finalize this work in 2004;
- (k) Recognize the importance of the work to develop a baseline scenario for integrated assessment modelling, and call upon Parties to collaborate with CIAM and provide the necessary data;
- (l) Take note of the results of the workshop on linkages and synergies of regional and global emission control (EB.AIR/GE.1/2003/4/Add.1), and request EMEP to continue work on this topic; and
- (m) Approve the proposed budget of CIAM for 2004 as set out in the report of the Task Force on Integrated Assessment Modelling (EB.AIR/GE.1/2003/4, para. 59) and agree to keep the 2005 and 2006 budgets at the same level.

## **II. EFFECTS OF MAJOR AIR POLLUTANTS ON HUMAN HEALTH AND THE ENVIRONMENT**

- 21. The Working Group on Effects held its twenty-second session in Geneva from 3 to 5 September 2003 (EB.AIR/WG.1/2003/2).
- 22. The Working Group reviewed the results of the effect-oriented activities, as presented in the 2003 Joint Report of the International Cooperative Programmes (ICPs) and the Task Force on the Health Aspects of Air Pollution (EB.AIR/WG.1/2003/3). It welcomed the growing participation of countries in the effect-oriented activities, noted the positive results of closer and more effective cooperation between ICPs, as well as with EMEP and other bodies under the Convention, and stressed the continuing need for communicating the results of the effect-oriented

activities to policy and decision makers, to the professional community also outside the Convention and to the general public, in order to maintain the necessary awareness and support.

23. The Working Group welcomed the important results achieved by ICP on the Assessment and Monitoring of Air Pollution Effects on Forests, in particular in level II monitoring, and took note of the summary report on the results of monitoring forest condition in Europe (EB.AIR/WG.1/2003/5). It took note of the programme's plans to develop further its activities, in particular on level II monitoring, forest biodiversity and climate change and welcomed the increased focus on dynamic modelling, ozone and carbon sequestration as well as the programme's continued links with other programmes, bodies and international organizations within and outside the ECE region.

24. The Working Group expressed its satisfaction with the progress achieved in implementing ICP on the Assessment and Monitoring of Acidification of Rivers and Lakes, noted with appreciation the 15-year report on acidification of surface water in Europe and North America (EB.AIR/WG.1/2003/6) and stressed its importance. It also welcomed the recent publication of the proceedings from the workshop on models for biological recovery from acidification in a changing climate, and the reports on the results of the 2003 chemical and biological intercalibration exercises. The Working Group also welcomed proposals from the programme to continue work on dynamic modelling and to further develop its interests in heavy metals and POPs.

25. The Working Group congratulated the ICP on Effects of Air Pollution Materials, including Historic and Cultural Monuments, on the recent results of the four-year exposure from the multi-pollutant programme, in mapping areas of increased corrosion rates and in assessing stock at risk. It also took note of the report on the workshop on the release of heavy metals due to corrosion of materials and the review of activities of the new sub-centre on cultural heritage and stock at risk (EB.AIR/WG.1/2003/7). It took note of the recent developments in the programme's participation in the MULTI-ASSESS project of the European Commission. It welcomed the start of activities of the new programme sub-centre for stock at risk and cultural heritage in Italy with the technical support of l'Ente per le Nuove Tecnologie, l'Energia e l'Ambiente (ENEA). Furthermore, the Working Group noted the continued support of the lead country and its intention to streamline the activities of the programme, concentrating on the needs of the Convention and eventually reducing activities in coordination and reducing the monitoring network.

26. The Working Group reviewed the work of ICP on Effects of Air Pollution on Natural Vegetation and Crops, and took note of the technical report on the survey on heavy metals in mosses conducted in 2000/2001 (EB.AIR/WG.1/2003/8) and congratulated the programme on the results of its survey. It welcomed the progress achieved in developing the programme's activities,

mainly in the area of ozone biomonitoring, and its plans to further develop flux-based approaches for ozone effects. It also noted the outcome of an expert panel meeting to review changes to chapter 3 of the Mapping Manual, which had been further discussed at the meeting of the Task Force of ICP Modelling and Mapping in May 2003, and welcomed the contributions made by the programme to the revision of the text.

27. The Working Group considered the recent results of ICP on Integrated Monitoring of Air Pollution Effects on Ecosystems and took note of the programme's twelfth annual report 2003. It noted the continued progress in site-specific dynamic modelling, welcomed the technical report (EB.AIR/WG.1/2003/9) and requested that work on this topic should continue with particular emphasis on uncertainties. The Working Group also took note of the programme's continued progress in the calculation of pools and fluxes of heavy metals, the calculation of fluxes and trends of sulphur, nitrogen compounds and base cations, and in particular the results being published on proton budgets and on the cumulative effects of N deposition.

28. The Working Group reviewed the work of ICP on Mapping Critical Levels and Loads and the Coordination Center for Effects (CCE), and the progress achieved in addressing critical loads data quality and comparability, deriving critical loads for heavy metals and their modelling and mapping, dynamic modelling, and revising the mapping manual. It noted with appreciation the CCE Status Report 2003 on Modelling and Mapping of Critical Thresholds in Europe and welcomed the technical report on progress in the development of heavy metal critical loads methodology (EB.AIR/WG.1/2003/10/Add.1). It also took note of the results of the call for data for European critical loads on acidification and eutrophication including dynamic modelling parameters (EB.AIR/WG.1/2003/10) and invited CCE to issue a new call for data on critical loads and dynamic modelling data in autumn 2003. The Working Group urged the programme to continue its efforts to harmonize land cover mapping for the purposes of the Convention in cooperation with other bodies and agreed to extend its work to include studies of the synergies between the effects of air pollution and climate change.

29. The Working Group expressed its satisfaction with the recent important results of the Task Force on the Health Aspects of Air Pollution, in particular the publication by WHO of the report on Health Risks of Persistent Organic Pollutants from Long-range Transboundary Air Pollution, and welcomed the plans to assess the health impacts of ozone and particulate matter, and reiterated its invitation to all interested countries to nominate their experts and actively participate in the work of the Task Force. It welcomed the efforts of the Task Force to consider the monitoring and assessment of the health impacts of particulate matter and ozone (EB.AIR/WG.1/2003/11) in collaboration with EMEP and CIAM.

30. The Working Group took note of the results of the joint meeting of its Extended Bureau and the Bureau of the EMEP Steering Body, approved the updated medium-term work-plan for the further development of the effect-oriented activities (EB.AIR/WG.1/2003/4) (as amended). It stressed the importance of continuing collaboration with the EMEP Steering Body, in particular with its Bureau and programme centres, to ensure that the Convention's priorities were addressed effectively.

31. The Working Group considered and approved the draft of the 2004 substantive report on the review and assessment of present air pollution effects and their recorded trends, summarized in document EB.AIR/WG.1/2003/3/Add.1, and decided to submit it to the Executive Body for information. It agreed that the Bureau, in collaboration with the secretariat, would take the necessary steps to ensure that the report was finalized and published in readiness for the Working Group's twenty-third session and the Convention's twenty-fifth anniversary. It noted that to fill the gaps in the report (in particular the overall conclusions and recommendations) a major collaborative effort of all programme centres would be required and that, most probably, some form of additional external assistance (e.g. through the Trust Fund and/or as contributions in kind) would be needed.

32. The Working Group welcomed the progress achieved by the Joint Expert Group on Dynamic Modelling, as summarized in the report on its third meeting (EB.AIR/WG.1/2003/13), and noted the need for further work on uncertainties as well as the importance of securing resources for this work. It noted with appreciation the proposals from the Joint Expert Group to continue its work, noting the suggestions for more openness and focus on ICP work, and requested the Joint Expert Group to report on progress to it in 2004.

33. The Working Group took note of the workshop report on empirical critical loads for nitrogen deposition on (semi-) natural ecosystems (EB.AIR/WG.1/2003/14) and decided to make it available to the Executive Body for information. It welcomed the progress made, but stressed the need for continued research into the long-term effects of increased nitrogen deposition on (semi-) natural ecosystems, including low deposition areas. It also specifically welcomed the linking of empirical critical loads to ecosystems classified according to the harmonized European Nature Information System (EUNIS) system.

34. The Working Group welcomed the substantial progress made in the development of new ozone critical levels for agricultural crops, semi-natural vegetation and forest trees, presented in an informal note on the results of the workshop on establishing ozone critical levels II. It noted the results of the workshop and its main conclusions and recommendations, and agreed this formed a good basis for revised critical levels for ozone. It also requested ICP Vegetation and ICP Forests

to continue their efforts to develop improved critical levels for ozone.

35. The Working Group considered the note on the financing of the effect-oriented activities (EB.AIR/WG.1/2003/12) and, in particular, the tables showing the 2004 essential coordination costs of different effect-oriented activities and the preliminary annual budgets for 2005 and 2006. The Working Group approved the note, as amended, including an agreed budget for effects-oriented programmes for 2004 of US\$ 1,838,550 and provisional annual budgets for 2005 and 2006 of US\$ 1,905,500, and decided to submit it to the Executive Body. The Working Group reiterated its appreciation for the essential support rendered by countries leading the programmes and/or hosting the programme centres, as well as for all other forms of additional voluntary contributions in cash or in kind provided for the effect-oriented activities.

36. The Executive Body may wish, inter alia, to:

(a) Take note of the report of the twenty-second session of the Working Group on Effects (EB.AIR/WG.1/2003/2);

(b) Note the further progress in developing the effect-oriented activities and the important results achieved by the International Cooperative Programmes and the Task Force on the Health Aspects of Air Pollution in implementing the Convention (EB.AIR/WG.1/2003/3);

(c) Reiterate the importance of the active participation of all Parties to the Convention, the effective cooperation among the programmes, task forces and coordinating centres and their close collaboration with EMEP, and welcome the further development of close links with relevant institutions and organizations outside the Convention;

(d) Reiterate its invitation to Parties to nominate national focal centres for those effect-oriented activities/programmes in which they do not yet actively participate;

(e) Take note of the updated medium-term work-plan for the further development of the effect-oriented activities (EB.AIR/WG.1/2003/4) and invite the Working Group on Effects and the Steering Body of EMEP to continue their close cooperation in implementing the priority tasks of the Convention;

(f) Note the draft of the 2004 substantive report on the review and assessment of present air pollution effects and their recorded trends, summarized in document EB.AIR/WG.1/2003/3/Add.1;

(g) Appreciate the continued progress achieved in the application of dynamic modelling and the steps taken in linking it to integrated assessment (EB.AIR/WG.1/2003/13);

(h) Welcome the increased focus on work on persistent organic pollutants and heavy metals, note with appreciation the publication by WHO of the report on Health Risks of Persistent Organic Pollutants from Long-range Transboundary Air Pollution and welcome the plans to assess the health impacts of ozone and particulate matter;

(i) Note with appreciation the revision and further development of the Mapping Manual and the continued updating of the European critical loads data set and maps;

(j) Take note of the work-plan elements dealing with the synergies between climate change and air pollution as identified by the ICPs and the Task Force on the Health Aspects of Air Pollution;

(k) Note the importance of continuing the communication of the results and findings of the effect-oriented activities to the scientific community, policy makers and the general public both nationally and internationally, and take note that the twenty-fifth anniversary of the Convention in 2004 will provide a good opportunity for publicizing the work of the programmes;

(l) Confirm the need for guidance to select target years for dynamic modelling, to be considered in the upcoming call for data on critical loads and dynamic modelling;

(m) Note the need for data on non-atmospheric inputs of lead and cadmium (e.g. fertilizer) in order to assess total exceedances of critical thresholds;

(n) Welcome the progress achieved in evaluating and updating empirical critical loads for nitrogen deposition on (semi-) natural ecosystems (EB.AIR/WG.1/2003/14);

(o) Note document EB.AIR/WG.1/2003/12, as amended, on the financing of the effect-oriented activities.