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

Twenty-third session
(Geneva, 12-15 December 2005)
Item 4 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 co-operation 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 co-operation should be evaluated in relation to the 2005 workplan for the implementation of the Convention, as adopted by the Executive Body at its twenty-second session (ECE/EB.AIR/83/Add.2, annex XIII).

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 twenty-second session, the Executive Body for the Convention took note of the updated medium-term work-plan for the further development of the effect-oriented activities (EB.AIR/WG.1/2004/4), as amended in the report on the twenty-third session of the Working Group on Effects (EB.AIR/WG.1/2004/2, paras. 67–70), and invited the Working Group on Effects and the Steering Body of EMEP to continue their close co-operation in implementing the priority tasks of the Convention (ECE/EB.AIR/83, para. 20(l)).

4. Pursuant to decisions of the Executive Body, the Extended Bureau of the Working Group on Effects and the Bureau of the Steering Body of EMEP held their fourth annual joint meeting in February 2005 to reconsider and update their medium-term workplans for 2005–2007.

5. A number of Parties have contributed significantly to the core activities by leading task forces, hosting co-ordinating 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 has further increased.

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

6. The Steering Body held its twenty-ninth session in Geneva from 5 to 7 September 2005 (EB.AIR/GE.1/2005/2).

7. The Steering Body reviewed the progress in the work of its centres and Task Forces. It expressed its satisfaction with the progress achieved in all areas of work and identified the directions for future work, in particular:

(a) Despite the satisfactory development of the EMEP model over past years, the limitations observed earlier in reproducing the levels of some pollutants were also observed for 2003 data. Problems remained with frequency distributions for some of the main pollutants and there was a need to improve particle modelling, e.g. in relation to carbonaceous species. In view of its importance for the review of the Gothenburg Protocol, the Steering Body recommended that the issue of meteorological variability be further analyzed by the Meteorological Synthesizing Centre-West (MSC-W) in co-operation with the Centre for Integrated Assessment Modelling (CIAM) and guidance from the Task Force on Integrated Assessment Modelling. The Steering Body also noted the importance of level 2 and level 3 monitoring data to validate the model;

(b) The Steering Body welcomed the preparations by the Meteorological Synthesizing Centre-East (MSC-E) for the review of its model of heavy metals in October 2005. It noted the discrepancies between the model results and measured concentrations when using data

communicated by Parties and invited MSC-E to look further into this issue in co-operation with appropriate Convention bodies, such as the Task Force on Emission Inventories and Projections. The Steering Body also noted the efforts of MSC-E related to the modelling of mercury on a global scale and invited it to co-operate with the Task Force on Hemispheric Transport of Air Pollution on this matter. Germany organized and supported an intercomparison study for mercury measurements in 2005;

(c) Concerning the work on particulate matter (PM), the Steering Body welcomed the progress in extending the monitoring, urged the Parties to implement fully the EMEP monitoring strategy, as well as to enhance their efforts to improve the quality of their emission reporting of PM. It noted with appreciation the modelling work done by MSC-W, the Chemical Coordinating Centre (CCC) and CIAM on modelling and monitoring of PM and stressed that further work on carbonaceous species, especially on secondary organic aerosols, was needed to improve the EMEP model performance;

(d) The Steering Body welcomed the work done by MSC-E contributing to the review of the Protocol on Persistent Organic Pollutants (POPs). A slight improvement in the reporting of emission data and monitoring data for POPs was reported. There was also generally good agreement between model results and measured concentrations. Nevertheless, further improvement of the quality of the emission data reporting for POPs and the quality and coverage of the monitoring of POPs was needed. The Steering Body welcomed the preparations for the review of the MSC-E POPs, model at a workshop in October 2005. It also invited MSC-E to continue its collaboration with the Task Force on Hemispheric Transport of Air Pollution on the issue of POPs. The Czech Republic was establishing a Central and European Centre for POPs. The Steering Body welcomed this initiative and encouraged future co-operation with EMEP.

8. The Steering Body noted with appreciation the Parties' plans to implement the EMEP monitoring strategy. Most Parties were making efforts to establish new sites or to upgrade existing ones to meet the strategy requirements. The Steering Body requested CCC to continue supporting Parties in their efforts and to improve further the EMEP manual to ensure that Parties' monitoring activities were harmonized.

9. The Steering body also welcomed the opening of the EMEP model source code and encouraged national experts to make use of it. It invited the Task Force on Measurements and Modelling to work further on the uncertainties of monitoring and modelling in co-operation with CIAM and TFIAM. A particles assessment report would also be prepared.

10. The results of the baseline scenarios, developed as part of the European Commission's Clean Air for Europe (CAFE) programme, showed that calculations did not fully reproduce the

PM mass and highlighted the need to focus on the anthropogenic fraction of PM. Funding was needed to validate the results for the non-EU countries. The Task Force on Integrated Assessment Modelling had prepared an action plan for more active involvement of the East European, Caucasian and Central Asian (EECCA) countries in integrated assessment modelling work. The Steering Body requested CIAM and the Task Force to continue their work on uncertainty analysis. It noted that a workshop on non-technical measures would be held in Gothenburg (Sweden) in December 2005.

11. With regard to the status of emission data reporting (EB.AIR/GE.1/2005/8), it was reported that timeliness and the use of correct formats had improved, but there remained problems of completeness and consistency for POPs, heavy metals and PM. The Emission Reporting Guidelines would be revised and the emission inventory guidebook would be updated. The Task Force on Emission Inventories and Projections had prepared draft methods and procedures for review of emission inventories. These were to be submitted to the Executive Body for consideration. The Steering Body welcomed the work accomplished so far in the review of emission data and the focus on PM in the 2006 centralized trial review. The Task Force on Emission Inventories and Projections would develop a model for preparing national inventory reports. The Steering Body also adopted a decision on emission data reporting under the Protocol on Heavy Metals, the Protocol on POPs and the Gothenburg Protocol (EB.AIR/GE.1/2005/8, annex I) and invited the Executive Body to approve its decision.

12. The Steering Body discussed the outcome of the first meeting of the Task Force on Hemispheric Transport of Air Pollution. A brief summary of it would be made available as an informal document to the Executive Body. The Steering Body requested the Task Force to consider all pollutants that were subject to intercontinental transport, but confirmed that ozone was a priority pollutant in light of the forthcoming review of the Gothenburg Protocol. It took note of the relevance of the work of the Task Force in view of the levels of background air pollution in Europe, a factor which might influence the review of the Convention's protocols, and noted the progress in the modelling by the centres related to hemispheric air pollution.

13. The Steering Body amended and agreed upon its workplan for 2006 (EB.AIR/GE.1/2005/10/rev.1), prepared on the basis of the priorities of the Executive Body reflected in recent workplans with input from the Task Forces and centres, and took into account the results of the joint meeting between the Bureaux of the Steering Body and the Working Group on Effects.

14. The Steering Body agreed the proposed budget of CIAM for 2006 as set out in the report of the Task Force on Integrated Assessment Modelling (EB.AIR/GE.1/2003/4, para. 59), and decided to keep the proposed budgets for 2007 and 2008 at the same level. It also considered the

financial and budgetary matters of EMEP (EB.AIR/GE.1/2005/11) that are reported in EB.AIR/2005/2.

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

(a) Take note of the report of the twenty-ninth session of the EMEP Steering Body (EB.AIR/GE.1/2005/2);

(b) Welcome the opening of the source code of the EMEP model and take note of the needs for further improvement of the model and the importance of level 2 and level 3 monitoring data for its validation;

(c) Note the progress made on the modelling and monitoring of heavy metals, POPs and PM;

(d) Welcome Parties' initial steps to implement the EMEP monitoring strategy and call upon them to continue their efforts towards a full implementation of the strategy;

(e) Urge all Parties and relevant bodies under the Convention to provide the necessary data for integrated assessment modelling;

(f) Welcome Parties' efforts for improving the quality of emission data reporting and plans for revising the 2002 Emission Reporting Guidelines and updating the EMEP/CORINAIR emission inventory guidebook;

(g) Adopt the draft methods and procedures for review of emission inventories as presented in EB.AIR/GE.1/2005/7, annex III;

(h) Adopt the draft decision on emission data reporting under the Protocol on Heavy Metals, the Protocol on POPs and the Gothenburg Protocol as contained in EB.AIR/GE.1/2005/8, annex II;

(i) Welcome the output of the first meeting of the Task Force on Hemispheric Transport of Air Pollution and note the positive response from countries and organizations from outside the UNECE region;

(j) Invite the Steering Body of EMEP and the Working Group on Effects to continue close co-operation in implementing the priority tasks of the Convention;

(k) Welcome the continued and useful co-operation of EMEP with other international organizations;

(l) Take note with satisfaction of the work accomplished by CIAM partially funded by the Trust Fund for core activities not covered by the EMEP Protocol, approve the proposed budget of CIAM for 2006 as set out in the report of the Task Force on Integrated Assessment Modelling (EB.AIR/GE.1/2003/4, para. 59), agree to keep the 2007 and 2008 budgets at the same level and call upon Parties to make every effort to provide the necessary funding for work on integrated assessment modelling to be conducted as foreseen in the workplan.

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

16. The Working Group on Effects held its twenty-fourth session in Geneva from 31 August to 2 September 2005 (EB.AIR/WG.1/2005/2).

17. The Working Group reviewed the results of the effect-oriented activities, as presented in the 2005 Joint Report of the International Cooperative Programmes (ICPs) and the Task Force on the Health Aspects of Air Pollution (EB.AIR/WG.1/2005/3 and EB.AIR/WG.1/2005/3/Add.1). It welcomed the growing participation of countries in the effect-oriented activities, noted the positive results of closer and more effective co-operation 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, including that outside the Convention, and to the general public, in order to maintain the necessary awareness and support.

18. The Working Group took note of the appointment of Mr. Köhl as Chairman of the ICP on the Assessment and Monitoring of Air Pollution Effects on Forests (ICP Forests) and expressed its appreciation of the work of the previous Chairman, Mr. T. Haußmann (Germany). It reviewed the work of ICP Forests, in particular the links observed between nitrogen throughfall, soil carbon-nitrogen status and nitrogen leaching in forested ecosystems, and took note of the summary report on the results of monitoring forest condition in Europe (EB.AIR/WG.1/2005/5).

19. The Working Group congratulated the ICP on the Assessment and Monitoring of Acidification of Rivers and Lakes (ICP Waters), noted in particular the report on POPs in the freshwater environment (EB.AIR/WG.1/2005/6), encouraging coordinated efforts to further survey and analyse the levels and effects of POPs in freshwater ecosystems.

20. The Working Group considered the recent results of the ICP on Effects of Air Pollution Materials, including Historic and Cultural Monuments (ICP Materials) and noted the corrosive effect of nitric acid (HNO_3) on several materials (EB.AIR/WG.1/2005/7), and the maps of the UNESCO (United Nations Educational, Scientific and Cultural Organization) World Heritage sites in Europe showing areas at risk of limestone and sandstone corrosion due to sulphur concentrations. It also took note of the plan for dividing tasks between Italy and Sweden in order to develop the activities of ICP Materials' sub-centre on cultural heritage and stock at risk.

21. The Working Group expressed its satisfaction with the progress achieved in implementing the ICP on Effects of Air Pollution on Natural Vegetation and Crops (ICP Vegetation), and took note of the technical report on the impacts of ambient ozone on white clover at ICP Vegetation sites in 1996–2003 (EB.AIR/WG.1/2005/8). It also noted that tolerable deposition loads of

arsenic, cadmium, lead and mercury, as related to potential crop contamination, had been calculated.

22. The Working Group congratulated the ICP on Integrated Monitoring of Air Pollution Effects on Ecosystems (ICP Integrated Monitoring) on its work and took note that climate change scenarios and site-specific characteristics significantly affected the rate of ecosystem recovery from acidification (EB.AIR/WG.1/2005/9). It also noted that critical loads of heavy metals had been calculated at selected ICP Integrated Monitoring sites.

23. The Working Group expressed its satisfaction with the recent important results of the ICP on Modelling and Mapping of Critical Loads and Levels and Air Pollution Effects, Risks and Trends (ICP Modelling and Mapping) and the Co-ordination Center for Effects (CCE) and took note of the new 2005 data from national focal centres on critical loads and dynamic models for acidification and eutrophication (EB.AIR/WG.1/2005/10) as well as on heavy metals (Pb, Cd and Hg) (EB.AIR/WG.1/2005/10/Add.1). It noted that the latest exceedance calculations, based on the new emission baseline scenarios, had led to revised values of ecosystem areas at risk in Europe. It encouraged the programme to carry out validation studies using available field data and further discuss the various methods for closing the gap between current exceedances and critical loads. The Working Group recommended that the 2005 national data on critical loads be used in work under the Convention. It also welcomed the collaboration between CCE and the CIAM to make available updated methods and data on critical and target loads for the integrated assessment modelling work.

24. The Working Group reviewed the work of the Task Force on the Health Aspects of Air Pollution and took note of the summary information on the health risks of ozone and PM (EB.AIR/WG.1/2005/11). It welcomed the development of a methodology to include morbidity estimates in quantifying health impacts of ozone and PM and the plans to update the risk assessment of heavy metals.

25. The Working Group took note of the conclusions of the report of the fifth meeting of the Joint Expert Group on Dynamic Modelling (EB.AIR/WG.1/2005/13), noting its work in facilitating the call for data on dynamic modelling parameters made by CCE. It noted with appreciation the proposals from the Joint Expert Group to continue its work and welcomed the broad participation in its activities and focus on issues relevant to ICP work.

26. The Working Group took note of the results of the workshop "Future convention priorities: summary report and conclusions of the workshop on review and assessment of European air pollution policies" (EB.AIR/WG.1/2005/14), noting that the conclusions and recommendations had been considered by the Bureau in the preparation of the draft long-term

strategy (EB.AIR/WG.1/2005/15). The Working Group considered the workshop outcome to be successful and recommended similar future workshops.

27. The Working Group discussed and approved its draft long-term strategy (EB.AIR/WG.1/2004/15) and decided to submit it, as a revised document, to the Executive Body at its twenty-third session.

28. The Working Group took note of the results of the joint meeting of its Extended Bureau and the Bureau of the EMEP Steering Body. 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.

29. The Working Group noted that the draft 2006 workplan for the further development of the effect-oriented activities (EB.AIR/WG.1/2005/4) had followed the Executive Body's invitation to harmonize as much as possible the workplans of the Working Group and the EMEP Steering Body. It noted that all ongoing monitoring and modelling activities were not always in the workplan, as they were mostly covered by the programme objectives. It agreed that workplan items should focus on the most important work with concrete and verifiable outcomes, as they were also used for setting up contracts under the Trust Fund. It noted the increased need for attention to nutrient nitrogen issues and urged that more work on this issue be done in future. It approved the updated 2006 workplan (EB.AIR/WG.1/2005/4), as amended, for the further development of the effect-oriented activities.

30. The Working Group considered the note on the financing of the effect-oriented activities (EB.AIR/WG.1/2005/12) and, in particular, the tables showing the 2006 essential co-ordination costs of different effect-oriented activities and the preliminary annual budgets for 2007 and 2008. The Working Group approved the note, as amended, including an agreed budget for effects-oriented programmes for 2006 of US$ 2,152,700 and provisional annual budgets for 2007 and 2008 of US$ 2,152,700, 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. It took note with satisfaction of the work accomplished by ICPs and the Task Force on Health partially funded by the Trust Fund (EB.AIR/WG.1/2005/12).

31. The Working Group discussed the effectiveness of decision 2002/1 on the financing of core activities not covered by the EMEP Protocol. It concluded that the information provided by the secretariat clearly demonstrated that decision 2002/1 had had no significant effect on the overall cash contributions to the Trust Fund and urged the Executive Body to seek further measures to improve the long-term funding of the effect-oriented activities. It requested the

secretariat, in collaboration with the Bureau, to prepare a short document on the effectiveness of decision 2002/1 that included the conclusions of its discussion on financing and information provided by the secretariat.

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

(a) Take note of the report of the twenty-fourth session of the Working Group on Effects (EB.AIR/WG.1/2005/2);

(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.1/2005/3 and EB.AIR/WG.1/2005/3/Add.1);

(c) Welcome the progress achieved in co-operation between the bodies under the Convention;

(d) Reiterate the importance of the active participation of all Parties to the Convention, the effective co-operation 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;

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

(f) Appreciate the continued progress achieved in the application of dynamic modelling (EB.AIR/WG.1/2005/13) and provide guidance for future work;

(g) Confirm that the new 2005 European critical and target loads data and maps (EB.AIR/WG.1/2004/10 and EB.AIR/WG.1/2004/10/Add.1) may be used for work under the Convention;

(h) Note with satisfaction the work accomplished by ICPs and the Task Force on Health partially funded by the Trust Fund (EB.AIR/WG.1/2005/12);

(i) 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;

(j) Take note of the updated 2006 workplan for the further development of the effect-oriented activities (EB.AIR/WG.1/2005/4) and provide guidance on the desired support of effects-based approaches for the review and possible revision of the Convention protocols;

(k) Invite the Working Group on Effects and the Steering Body of EMEP to continue their close co-operation in implementing the priority tasks of the Convention;

(l) Note document EB.AIR/WG.1/2005/12, as amended, on the financing of the effect-oriented activities;

(m) Note the information provided by the secretariat and the Bureau of the Working Group on Effects and agree that decision 2002/1 has not been an effective mechanism to secure long-term funding for the core activities not covered by the EMEP Protocol. Note the need for an

improved approach to secure sufficient and stable funding for effects-oriented and integrated assessment modelling activities.