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

REPORT OF THE EIGHTEENTH SESSION OF THE EXECUTIVE BODY

CONTENTS

	<u>Paragraphs</u>
Introduction.....	1 - 7
I. ADOPTION OF THE AGENDA.....	8 - 9
II. MATTERS ARISING FROM THE FIFTY-FIFTH SESSION OF THE ECONOMIC COMMISSION FOR EUROPE AND THE SEVENTH SESSION OF THE COMMITTEE ON ENVIRONMENTAL POLICY OF CONCERN TO THE EXECUTIVE BODY.....	10 - 13
III. STRATEGIES AND POLICIES OF PARTIES AND SIGNATORIES TO THE CONVENTION FOR THE ABATEMENT OF AIR POLLUTION	14 - 16
IV. COMPLIANCE WITH PROTOCOL OBLIGATIONS.....	17 - 27
V. FINANCING OF CORE ACTIVITIES.....	28 - 42

CONTENTS (continued)

	<u>Paragraphs</u>
VI. PROGRESS IN CORE ACTIVITIES.....	43 - 58
A. Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP)...	43 - 50
B. Effects of major air pollutants on human health and the environment....	51 - 58
VII. ACTIVITIES OF THE WORKING GROUP ON STRATEGIES AND REVIEW.....	59 - 69
VIII. ACTIVITIES OF ECE BODIES AND INTERNATIONAL ORGANIZATIONS RELEVANT TO THE CONVENTION.....	70 - 77
IX. WORK-PLAN.....	78 - 82
X. FINANCIAL ISSUES.....	83 - 91
XI. OTHER BUSINESS.....	92 - 93
XII. ELECTION OF OFFICERS.....	94 - 96
XIII. ADOPTION OF THE REPORT.....	97

Annexes

- I. Decision 2000/1 on the compliance by Slovenia with the 1994 Oslo Protocol
- II. Decision 2000/2 on compliance by the Parties with their reporting obligations
- III. Decision 2000/3 and recommendation on the financing of core activities in 2001-2003
- IV. 2001 work-plan for the implementation of the Convention
- V. Provisional list of meetings for 2001

Introduction

1. The eighteenth session of the Executive Body for the Convention on Long-range Transboundary Air Pollution was convened in Geneva from 28 November to 1 December 2000.
2. The meeting was attended by representatives of the following Parties to the Convention: Armenia; Austria; Belgium; Canada; Cyprus; Czech Republic; Denmark; Finland; France; Germany; Hungary; Ireland; Italy; Kyrgyzstan; Monaco; Netherlands; Norway; Poland; Portugal; Russian Federation; Slovakia; Slovenia; Spain; Sweden; Switzerland; Turkey; Ukraine, United Kingdom; United States of America; and the European Community (EC).
3. Representatives from the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) attended. The European Environment Agency (EEA) was also represented.
4. Representatives of the following non-governmental organizations were present: International Council for Environmental Law (ICEL); International Institute for Applied Systems Analysis (IIASA); International Union of Producers and Distributors of Electrical Energy (UNIPEDE); and World Conservation Union (IUCN).
5. The Meteorological Synthesizing Centre-East (MSC-E) of EMEP was also represented.
6. Mr. J. Thompson (Norway) chaired the meeting.
7. The Executive Secretary of the Economic Commission for Europe, Ms. D. Hübner, addressed the meeting. She noted the important pioneering role that the Convention had played in the ECE region and its continued relevance to ECE. She drew attention to the challenge of implementing the Convention and its Protocols, and suggested that special attention should be paid to assisting countries with economies in transition. She mentioned the need for cooperation with the European Community and its Clean Air For Europe (CAFE) programme, and highlighted the important contribution made by North America to the work of the Convention. In conclusion, she confirmed the support of ECE for the Convention and its activities through the work of the secretariat.

I. ADOPTION OF THE AGENDA

8. The agenda, as contained in document ECE/EB.AIR/70, was adopted on the understanding that item 6 would be taken up immediately after item 3.
9. The secretariat provided information on the distribution of documents, noting the difficulties currently experienced by the Conference Services Division and the subsequent delay in the distribution of documents for the session. It was hoped that this could be avoided in the future.

II. MATTERS ARISING FROM THE FIFTY-FIFTH SESSION OF THE ECONOMIC COMMISSION FOR EUROPE AND THE SEVENTH SESSION OF THE COMMITTEE ON ENVIRONMENTAL POLICY OF CONCERN TO THE EXECUTIVE BODY

10. The Director of the Environment and Human Settlements Division, Mr. K. Bärlund, informed the Executive Body of the round-table discussions between representatives of the ECE environmental Conventions at the seventh session of the Committee on Environmental Policy. These had provided a positive start for the development of future synergies between these conventions. He also informed the Executive Body of the preparations for the fifth Ministerial Conference "Environment for Europe" and the ongoing initiatives on transport, environment and health.

11. Mr. Bärlund noted the changes in staffing of the secretariat that had taken place in the past year, and were intended to address the needs of the Convention.

12. A number of Parties noted that it was important not to give negative signals by failing to adequately staff the secretariat. They emphasized that an overall decrease in the secretariat staff was not acceptable at a time when the Convention was addressing new priorities and facing new challenges. The Executive Body took note of these concerns.

13. The secretariat drew attention to the two new Parties to the Convention, Estonia and Kyrgyzstan, and informed the Executive Body of the status of ratification of the protocols.

III. STRATEGIES AND POLICIES OF PARTIES AND SIGNATORIES TO THE CONVENTION FOR THE ABATEMENT OF AIR POLLUTION

14. The secretariat introduced the draft 2000 review of strategies and policies for air pollution abatement (EB.AIR/2000/1, EB.AIR/2000/1 and Add.1 and Add.3) as well as the present state of emission data (EB.AIR/GE.1/2000/6). It noted the difficulties encountered in preparing the documents due to staffing problems and the large volume of material to be summarized. The "extent of implementation" section (EB.AIR/2000/1/Add.2) was being redrafted by the secretariat.

15. In the subsequent discussion, a number of delegations noted their appreciation for the work of the secretariat. The difficulty of the task had resulted in a report that fell short of some expectations. It was stressed that such work should be adequately resourced in the future. It was agreed that the current structure of the report would be very useful for the Implementation Committee, but did not lend itself to good communication with stakeholders and the public. Some delegations indicated that they would provide corrections or amendments to the secretariat, while several suggested improvements for reporting in the future, including the development of electronic updating procedures and the use of extended summaries.

16. The Executive Body:

(a) Adopted the 2000 Review of Strategies and Policies for Air Pollution Abatement, subject to the corrections and further information provided by the Parties;

(b) Decided to set a deadline of 15 January 2001 for the Parties to submit their comments on and corrections to EB.AIR/2000/1 to the secretariat; the secretariat would inform the Parties of the deadlines for submitting comments on the other documents as they became available;

(c) Requested the secretariat to proceed with the finalization of the report, which should primarily serve the needs of the Implementation Committee;

(d) Expressed a wish for an extended summary of the report, suitable for the public, to be published, given the necessary resources;

(e) Invited the Parties to provide consultant support for these activities;

(f) Requested the secretariat to commence work on the preparation of criteria and guidelines in view of the next questionnaire (for 2002) that would be discussed at its nineteenth session in December 2001; this should be linked to a communication/ information strategy and the proposals should be reported to the Working Group on Strategies and Review at its thirty-third session in September 2001.

IV. COMPLIANCE WITH PROTOCOL OBLIGATIONS

17. Mr. P. Széll (United Kingdom), Chairman of the Implementation Committee, introduced its third report (EB.AIR/2000/2). As a matter of priority, the Committee had considered a submission by Slovenia concerning its compliance with a provision of the 1994 Oslo Protocol on Further Reduction of Sulphur Emissions. The Committee had continued its examination of Parties' compliance with their reporting obligations. At the request of the Executive Body, the Committee had conducted an in-depth review of the compliance by the Parties with their obligations under the 1985 Helsinki Protocol on the Reduction of Sulphur Emissions or their Transboundary Fluxes by at least 30% and the 1988 Sofia Protocol concerning the Control of Emissions of Nitrogen Oxides or their Transboundary Fluxes. Concerning the first two, the Committee had formulated recommendations to the Executive Body for consideration.

18. Several delegations praised the usefulness of the Committee's work and the quality of the clear, precise and well-structured report.

19. The representative of the European Community (EC) presented a declaration to the Executive Body. The EC admitted that, despite its efforts to improve the situation, problems concerning the timeliness and completeness of data reporting persisted. The EC would investigate all possible ways and means to remedy the situation as soon as possible. It had to be underlined, however, that the EC faced a specific situation: it was the only Party to the Convention that was not a country, but an entity made up of several countries. Insofar as data reporting was concerned, the EC was therefore entirely dependent on the contributions from its member States. Any delay or incompleteness in their data reporting necessarily led to delays and missing data in the overall EC figures. The EC appealed to the Executive Body to recognize its specific situation and the resulting problems concerning data reporting.

20. The delegation of the Russian Federation informed the Executive Body that it would, in the second half of 2001, report its final and complete sulphur emission data (covering all relevant emission sources), as required by the Helsinki Protocol and similarly report final and complete data on its emissions of nitrogen oxides for the base year of the Sofia Protocol. In reference to paragraph 32 of the Implementation Committee's report, the delegation noted that with the completion of the base year data for the Sofia Protocol, which so far excluded emissions from mobile sources, it would be able to demonstrate that it was in compliance with the stabilization requirement under that Protocol.

21. With reference to paragraph 31 of the report, the delegation of the United States indicated that it had experienced national implementation problems with the diesel engine manufacturers. This had required a reassessment of emission estimates. New emission estimates had been reported for recent years, but not yet for the base year of the Sofia Protocol. With updated emission estimates also for the base year, the United States would still have to be considered to have been in non-compliance in 1994 by 1.2 to 3%, but was back in compliance since. The delegation would submit more detailed information to the secretariat.

22. The delegation of France informed the Executive Body that it had now completed its questionnaire for the 2000 review on strategies and policies and would submit it shortly to the secretariat.

23. With reference to paragraph 31 of the report, the delegation of Ireland pointed out that it was aware of its problems in reducing nitrogen oxide emissions. These were due to the unexpected growth in road transport. It had initiated policies and measures to render transport more sustainable. These were presented in the 2000 Review on Strategies and Policies. It expressed the hope that these measures would bring it back into compliance very soon.

24. Several delegations noted that it was necessary to ensure good membership on the Implementation Committee so that it could continue its effective work. They stressed that it would be useful to clarify the selection procedure for its members and to study measures to be taken if members became unavailable during their term of office. The Implementation Committee should be requested to examine these questions.

25. The representative of the European Environment Agency drew the attention of the Executive Body to paragraph 34 of the report and to the workshop to be held on 29-30 January 2001 on emission reporting guidelines. It pointed to the dual purpose of emission data: on the one hand to evaluate compliance with the protocol obligations, and on the other to serve the scientific work under the Convention, in particular the work of EMEP. Parties should be aware of this dual purpose when reviewing reporting guidelines. The involvement of the Implementation Committee in the development of the reporting guidelines would be very valuable to ensure that emission data reporting were in line with Parties' protocol obligations.

26. The delegation of Slovenia thanked the Implementation Committee for the attention that it had given to its submission and the useful recommendations that it had made. It noted that an environmental action plan for the Trbovlje power plant was in preparation and would contain a multitude of measures, including those suggested by the Committee. Slovenia would keep the Implementation Committee informed about progress.

27. In the light of the discussion, the Executive Body:

- (a) Took note of the third report of the Implementation Committee (EB.AIR/2000/2), expressing its great appreciation to the members of the Committee and its Chairman for their work;
- (b) Adopted decision 2000/1 (annex I) on the compliance by Slovenia with the 1994 Oslo Protocol;
- (c) Furthermore, adopted decision 2000/2 (annex II) on compliance by the Parties with their reporting obligations;
- (d) Requested the Implementation Committee to examine procedures for the selection of its members and replacing them, in particular if they become unavailable during their term of office;
- (e) Noted that the following seven members remained on the Committee for another year:
 - Mr. Harald Dovland (Norway);
 - Mr. Ramón Guardans (Spain);
 - Mr. Masud Husain (Canada);
 - Mr. Dieter Jost (Germany);
 - Mr. Tuomas Kuokkanen (Finland);
 - Mr. Ivan Mojil (Slovakia); and
 - Mr. Patrick Széll (United Kingdom) , Chairman;
- (f) Elected as new members, for two years:
 - Mr. Cristiano Piacente (Italy); and
 - Ms. Tine Kjaerulf (Denmark);
- (g) Expressed its thanks to Ms. Nataly Karpova (Russian Federation) for her three years of work on the Implementation Committee.

V. FINANCING OF CORE ACTIVITIES

28. On behalf of the Bureau, the Chairman introduced a note on the long-term financing of core activities (EB.AIR/2000/3). He drew attention to the 1999 Gothenburg Ministerial Declaration which mentioned a “stable, long-term funding arrangement”, noted the work that had been done to develop options, and outlined the two proposals made by the Bureau: (a) the future negotiation of a protocol, and (b) a decision of the Executive Body on a budget for the core activities together with a recommendation for a scale of contributions (the “decision and recommendation”). The latter was seen as a useful interim measure that could be taken on a yearly basis until a protocol might enter into force.

29. Mr. R. Ballaman (Switzerland), Chairman of the Working Group on Strategies and Review, described the discussions on long-term funding agreements at the thirty-second session of the Working Group. He noted that the Working Group was predominantly in favour of both options presented with delegations showing enthusiasm for the proposals.

30. Mr. P. Széll (United Kingdom), Vice-Chairman of the Bureau of the Executive Body, provided detailed information on the text of the two proposed financing instruments (EB.AIR/2000/3, annexes I and II). He noted that the text of the proposed protocol would need revising by legal experts should the Executive Body choose to proceed with that option, and he explained the reasons for not choosing to amend the EMEP Protocol. He also pointed out the non-binding nature of the decision and recommendation as it was currently worded.

31. In discussion, a number of delegations proposed changes to the text of the proposals of the Bureau as well as to the text of the decision and recommendation (EB.AIR/2000/3, annex II). Other delegations expressed their reservations on the table of the recommended scale of contributions (EB.AIR/2000/3, annex IV).

32. In a tour de table, a few delegations indicated that they would be unable to become party to a protocol, but a large majority expressed a wish to proceed with negotiations in 2001 on a draft legal instrument through the Working Group on Strategies and Review. The delegation of Canada indicated it was unable to undertake a legally binding commitment on financial contributions. With regard to the decision and recommendation, nearly all delegations indicated they would be able to agree to the decision at the current session, some on the understanding that some wording of annexes II and IV to EB.AIR/2000/3 would be amended.

33. Germany declared that it could not support a legally binding instrument. It would contribute its share in the future on a voluntary basis as it had done in the past. Germany held that the flexible instrument of voluntary contributions was a good and sufficient way to fund the essential coordination costs of the Convention and invited those Parties that had not supported these activities until now to contribute voluntarily so as to obviate the need for a legally binding instrument.

34. Turkey and Ukraine stated they would submit their views on the long-term financing of core activities to the secretariat in writing.

35. In further discussions it was agreed that there was a good basis for proceeding with the decision and recommendation taking into account the amendments to the Bureau's proposals and to the decision and recommendation (EB.AIR/2000/3, annex II and the associated annexes). However, two delegations indicated that they needed to clarify their position with regard to the decision and recommendation.

36. The Russian Federation suggested excluding the scale of contributions for financing the essential coordination costs as it considered its existence to be premature until the future legal instrument was negotiated. It specifically requested that the Russian Federation's share of contributions be excluded from the table in annex IV (EB.AIR/2000/3) and further requested a footnote be inserted in the table.

37. The Russian Federation reserved its position with respect to annex IV to EB.AIR/2000/3 until future negotiations on a legal instrument were finalized.

38. The delegation of Italy reserved its position with respect to annex IV of EB.AIR/2000/3 because it did not agree with the use of any scale when recommending voluntary contributions. It requested that the cost figure for Italy in annex IV be replaced by “voluntary”.

39. The delegation of the Netherlands, as lead country for the Task Force on Integrated Assessment Modelling, requested that annex V to EB.AIR/2000/3 be amended with regard to the essential coordination costs of the Centre for Integrated Assessment Modelling (CIAM). It proposed increasing the listed costs by \$60,000 for 2001. It also informed the Executive Body that the CIAM costs for 2002 and 2003 would provisionally be increased by \$120,000.

40. In concluding the discussion, the Executive Body agreed to amend the text of the draft decision and recommendation (EB.AIR/2000/3, annexes II, IV and V) as follows:

(a) Replace budget by essential coordination costs

(b) At the end of paragraph 2 of annex II, insert without prejudging the outcome of negotiations on a legal instrument

(c) In paragraph 2 of annex II, replace in accordance with the scale of contributions by as

41. The Executive Body further agreed to amend the draft 2001 budget for core activities not funded by EMEP (EB.AIR/2000/3, annex V) to include an additional sum of US\$ 60,000 for dynamic modelling by the Centre for Integrated Assessment Modelling, and amend the table with the draft recommended scale of contributions (EB.AIR/2000/3, annex IV) as follows:

(a) Replace the cost figure for Italy by voluntary

(b) Replace the cost figure for the Russian Federation by the following footnote: The Russian Federation does not consider it possible to use any scale until a future, possibly legally binding instrument is finalized.

(c) Revise all cost figures to take account of the revision to the draft 2001 budget for core activities not funded by EMEP (EB.AIR/2000/3, annex V).

42. The Executive Body:

(a) Requested the Working Group on Strategies and Review to negotiate a draft legal instrument, taking into account paragraph 10 of the Gothenburg Ministerial Declaration as well as the draft protocol (EB.AIR/2000/3, annex I), for submission to it at its nineteenth session;

(b) Adopted decision 2000/3 and the recommendation on financing core activities on the understanding that the essential coordination costs, other than those covered by the EMEP Protocol, were \$1,705,000 for 2001, and the provisional figures for 2002 and 2003 were \$1,765,000, and requested that the decision and recommendation be attached to the report of the session (annex III).

VI. PROGRESS IN CORE ACTIVITIES

A. Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP)

43. Mr. M. Williams (United Kingdom), Chairman of the EMEP Steering Body, introduced the report of its twenty-fourth session (EB.AIR/GE.1/2000/2). With integrated assessment modelling under its responsibility and the establishment of the Task Force on Measurements and Modelling, the Steering Body had begun changing its focus and its way of working. Much of this was reflected in the long-term strategy for EMEP up to 2009 (EB.AIR/GE.1/2000/5 and Corr.1), which the Steering Body presented to the Executive Body. Special attention would also be given to cooperation with other subsidiary bodies under the Convention, in particular the Working Group on Effects and its programme centres. It was hoped that this change would allow it to better serve the new emphasis in work under the Convention identified by the Executive Body.

44. Mr. Williams informed the Executive Body that the first meeting of the Task Force on Measurements and Modelling had taken place in Vienna on 23-25 October 2000. The Task Force had drafted proposals for terms of reference and a work programme for the coming three to five years that included the preparation of an assessment report on the changes in transboundary fluxes, depositions and concentrations. Furthermore, the Task Force had discussed the measurements and modelling of fine particulate matter. An informal note on that meeting was made available to delegations, while a report to the EMEP Steering Body would be prepared after the Task Force's second meeting to be held from 30 May to 1 June 2001 in Portoroz (Slovenia).

45. The Chairman of the EMEP Steering Body drew the attention of the Executive Body to the Coordinated European Programme on Particulate Matter Emission Inventories, Projections and Guidance (CEPMEIP), which was coordinated by EEA and EMEP. The work of CEPMEIP had already started, making use of additional voluntary contributions from Switzerland and the Netherlands through the EMEP Trust Fund for 2000, together with input from EEA. CEPMEIP had contracted the services of the Netherlands Organization for Applied Scientific Research (TNO) to prepare an emission inventory for the year 1995 with contributions from national experts. The inventory would be circulated by the end of 2000 to the Parties so that they could use

it when reporting emission estimates for fine particles for 2000. Reporting of 2000 emissions to the UN/ECE secretariat would be required by 31 December 2001. During 2001, the consultants would be available to provide guidance to national experts.

46. A workshop of the Task Force on Integrated Assessment Modelling on the potential for and the cost of controlling primary emissions of fine particulate matter had been held at IIASA on 23-24 November 2000. The work on particulate matter had advanced in an impressive way since the workshop in Interlaken (Switzerland) in November 1999. A preliminary framework for integrated assessment modelling of particulate matter was available and the Centre for Integrated Assessment Modelling (CIAM) would make this available via the Internet to enable national experts to review data on costs and emissions.

47. The EMEP Steering Body had drafted a tentative work programme for the input of EMEP to the review of the 1999 Gothenburg Protocol (EB.AIR/GE.1/2000/2, annex), with much focus on the work on particulate matter and aiming at providing the tools for policy discussions by 2004. This document was intended inter alia to facilitate cooperation with other bodies, both under the Convention and outside, such as the Clean Air for Europe (CAFE) programme of the European Commission. It also highlighted the need for input from Parties to the work. In view of the importance of fine particulates, the Steering Body invited the Working Group on Effects and its Task Force on the Health Aspects of Air Pollution to consider the characteristics of aerosols that were of importance to provide a better focus for future EMEP work.

48. Several delegations commended EMEP for its good progress. Some delegations stressed the importance of translating the EMEP/CORINAIR Atmospheric Emission Inventory Guidebook into Russian and of continuing the workshops on emission inventories for national experts from the Commonwealth of Independent States and other interested Parties.

49. One delegation expressed its concern over the change of the wording of paragraph 16 (a) of the strategy for EMEP as proposed in the corrigendum prepared by the EMEP Steering Body (EB.AIR/GE.1/2000/5/Corr.1). The inclusion of the reference to forest dieback in central Europe, in a section of the text that referred to driving forces in the 1970s, was not factual. The delegation suggested reverting to the original wording. Another delegation stressed the importance of considering the Strategy as a living document that should be amended, as necessary, while work progressed.

50. The Executive Body:

(a) Took note of the report of the twenty-fourth session of the EMEP Steering Body (EB.AIR/GE.1/2000/2);

(b) Agreed to revert to the original formulation of paragraph 16 (a) of the EMEP Strategy (EB.AIR/GE.1/2000/5 and Corr.1), approved the Strategy, requested the secretariat to ensure its publication after thorough editing, and suggested that the EMEP Steering Body should regularly reconsider the document and update it as necessary;

- (c) Took note of the work initiated on particulate matter modelling and requested EMEP to continue its efforts, especially on further atmospheric model development, improved measurements and emission inventories, and the further development of integrated assessment models, as a matter of high priority and in close collaboration with the Working Group on Effects;
- (d) Took note of the progress made in the further development of the database on emissions, and welcomed plans for further harmonization of reporting for the benefit of both activities within the Convention and external bodies;
- (e) Took note of the progress made in work on heavy metals and POPs and urged Parties to make a greater effort to report emissions so as to improve emission inventories for these compounds;
- (f) Noted the progress in the development of the Eulerian model for acidifying and eutrophying pollutants and for ozone, and recommended that these efforts should continue;
- (g) Requested EMEP to continue its efforts to raise the profile of its national participants, for example, through the EMEP web site;
- (h) Noted the plans for the work of the Task Force on Measurements and Modelling and invited the Steering Body to present a detailed work-plan to it at its nineteenth session in 2001;
- (i) Took note with appreciation of the further development of integrated assessment models, especially in relation to particulate matter, and of the setting-up of national focal points for modelling;
- (j) Welcomed the initiative by the EMEP Steering Body to prepare a long-term work programme (EB.AIR/GE.1/2000/2, annex), approved it in principle, agreed to take it into account when deciding upon its own future work-plan for the year 2001, and requested the Working Group on Effects to consider the activities foreseen therein for it or its subsidiary bodies and to report back to the Executive Body at its nineteenth session; and
- (k) Welcomed the initiative of the Steering Body and representatives of EEA and the European Community's CAFE programme to consider future collaboration and requested the EMEP Bureau and the secretariat to report on concrete proposals at the next session of the Executive Body.

B. Effects of major air pollutants on human health and the environment

51. Mr. T. Johannessen (Norway), Acting Chairman of the Working Group on Effects, introduced the report on its nineteenth session (EB.AIR/WG.1/2000/2) and reviewed the recent achievements of the effect-oriented activities (EB.AIR/WG.1/2000/3 and EB.AIR/2000/4, chapter III).

52. He summarized the most important results of the Working Group on Effects, the International Cooperative Programmes and the Task Force on the Health Aspects of Air Pollution, noted the further development of cooperation with other subsidiary bodies, and, while acknowledging the substantial contribution provided by national programmes, institutes and focal centres, he emphasized the need for stable and adequate long-term funding of these activities and their essential international coordination.

53. He further noted, in particular:

(a) The in-depth discussion of priorities in the further development of the effect-oriented activities by the Working Group and its Bureau, resulting, *inter alia*, in the drawing-up and approval of the terms of reference for individual International Cooperative Programmes;

(b) The progress achieved in advancing present knowledge in areas important for the successful implementation of the Convention and its protocols, especially those related to deriving critical limits for heavy metals, further development and broader application of dynamic modelling, and assessing the health risks of heavy metals and persistent organic pollutants;

(c) The remarkable accomplishments of the Joint Task Force of the World Health Organization and the Executive Body on the Health Aspects of Air Pollution and the urgent need to continue and intensify its activities;

(d) The ongoing preparation of the 2001 substantive report on the occurrence, movement and effects of selected heavy metals;

(e) The recommendation of the Working Group on Effects to change the name of ICP on Mapping Critical Levels and Loads to ICP on Modelling and Mapping, based on the assumption that this would better describe its broader activities, in particular in dynamic modelling and assessing trends in the status and recovery of the environment;

(f) The encouraging results of the recent workshop and expert meetings on (i) mapping air pollution effects on materials, including stock at risk; (ii) dynamic modelling; and (iii) effect-based critical limits for selected heavy metals.

54. In the ensuing discussion, a number of delegations commended the important results recently achieved by the effect-oriented activities that were used and/or referred to, both within and also outside the Convention. They also noted the substantial progress in making the available data and results of individual programmes, task forces and programme centres generally accessible.

55. While the Working Group on Effects was commended for its work, it was suggested that it might benefit from a further elaboration of its present medium-term plans for the future development of the effect-oriented activities into a long-term strategy, similar to that presented by EMEP.

56. Some delegations suggested a more integrated approach in dealing with the health and environmental effects of particulate matter, heavy metals and persistent organic pollutants, in particular in view of the further development of the Convention and its protocols.

57. Several delegations, while welcoming the important new activities recently undertaken by ICP on Mapping Critical Levels and Loads, in particular those related to the assessment of trends in actual damage and in recovery of the environment as well as the mapping of the stock at risk, noted that the proposed new name of the programme (ICP on Modelling and Mapping) would not clearly reflect its broader tasks.

58. The Executive Body:

(a) Took note of the report of the nineteenth session of the Working Group on Effects (EB.AIR/WG.1/2000/2);

(b) Took note of 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.1/2000/3);

(c) Noted the document on the future development of the effect-oriented activities, including the terms of reference for individual programmes (EB.AIR/WG.1/2000/4), and agreed that the Task Force on the Health Aspects of Air Pollution should, in addition to particulate matter, address also the effects of heavy metals and persistent organic pollutants;

(d) Invited the Working Group on Effects and its Bureau to consider elaborating a long-term strategy for the effects-oriented activities;

(e) Noted the summary of the preliminary assessment of health risks of heavy metals and persistent organic pollutants (POPs) from long-range transboundary air pollution (EB.AIR/WG.1/2000/12), agreed to continue this work in 2001 and to include it in the work-plan for the implementation of the Convention;

(f) Stressed the need for a more integrated consideration of the health and environmental effects of particulate matter, heavy metals and persistent organic pollutants, as required for the further development of the Convention and its protocols;

(g) Requested the Working Group on Effects to reconsider the change of name of the ICP on Mapping Critical Levels and Loads and to present a new proposal to it at its nineteenth session;

(h) Welcomed the progress in the preparation of the 2001 substantive report on the occurrence, movement and effects of selected heavy metals;

(i) Stressed again the significance of the work carried out on the national level, the substantial contribution made by national focal centres and the programme coordinating centres;

(j) Noted document EB.AIR/WG.1/2000/13 on financing of the effect-oriented activities and acknowledged the essential support rendered by the lead countries of individual programmes and the countries hosting programme centres, as well as the importance of voluntary contributions in cash or in kind provided by a number of other Parties to the Convention.

VII. ACTIVITIES OF THE WORKING GROUP ON STRATEGIES AND REVIEW

59. Mr. R. Ballaman (Switzerland), Chairman of the Working Group on Strategies and Review, introduced the report of its thirty-second session (EB.AIR/WG.5/66). He expressed his satisfaction with the good start of work under the new mandate and the numerous and active participation by the Parties. Based on input by the Chairmen of the EMEP Steering Body and Working Group on Effects and some of its subsidiary bodies, the Working Group had taken stock of progress in the implementation of the protocols and related scientific work.

60. It had discussed the review of the protocols and made a number of recommendations to the Executive Body. The main objective of these recommendations was to integrate the work on the review of earlier protocols and use the multi-effect, multi-pollutant framework of the Gothenburg Protocol for such reviews in the future. Mr. Ballaman welcomed the tentative timetable for work proposed by the EMEP Steering Body to support the review of the Gothenburg Protocol aiming at policy discussions starting in 2004 and also covering particulate matter. This timetable, similar to that of the European Community, was in line with the decisions by the Working Group on Strategies and Review.

61. Mr. Ballaman stressed that preparations for the review of protocols were under way although the three most recent protocols were not yet in force. The Working Group had noted with some disappointment the slow pace of ratification of the two Aarhus Protocols. Mr. Ballaman suggested to Parties to take May 2001, when the adoption session of a global POPs convention was scheduled, as the target date for ratification of the Protocols on POPs and on Heavy Metals.

62. Work on a communication strategy had been initiated and Mr. R. GUARDANS (Spain) had offered to lead an informal expert group to follow up the work initiated for the seventeenth session of the Executive Body in Gothenburg (Sweden).

63. Mr. L. Lindau (Sweden), Co-Chairman of the workshop on the needs for future revisions to the Protocols and strategies on transboundary air pollution held in Saltsjöbaden (Sweden) on 10-12 April 2000, presented the report of the workshop (EB.AIR/WG.5/2000/7). He pointed out that, with over 100 participants from all parts of the Convention area, the workshop was well attended. Mr. Lindau noted that the impact of the workshop was already visible, as the three main bodies under the Executive Body had incorporated the specific conclusions into their work programmes. A long-term work programme was emerging. It followed the directions set out at Saltsjöbaden.

64. Mr. Ballaman informed the Executive Body that the ad hoc expert group on POPs had held its first meeting on 6-8 November 2000 in The Hague (Netherlands) and developed a detailed work programme. It intended to support the review of the POPs Protocol once that entered into force and, in particular, review the POPs (DDT, heptachlor, HCH/lindane, polychlorinated

terphenyls and ugilec) subject to review requirements in the Protocol. It would also start work to assist Parties to prepare preliminary risk profiles and summary reports for possible new substances to be added to the Protocol, including pentabromodiphenyl ether, dicofol, hexachlorobutadiene, pentachlorobenzene and polychlorinated naphthalenes. The delegations of Canada and the Netherlands pointed out that the expert group would be co-led by the two Parties and chaired by Mr. David STONE (Canada).

65. The delegation of the United Kingdom informed the Executive Body about the state of preparation of the first workshop under the Network of Experts on Benefits and Economic Instruments (NEBEI) on the measurement and economic valuation of the health effects associated with air pollution, to be held in London on 19-20 February 2001. The main objective of the workshop was to assess the state of the art in epidemiological studies on health effects and economic valuation to assist further work under the Convention.

66. The delegation of the Netherlands announced that it would organize the second workshop under NEBEI on the valuation of the ecosystem benefits from air pollution abatement in autumn 2001 in the Netherlands. It invited experts from Parties and organizations and especially ICPs under the Working Group on Effects to contact the organizer (Mr. E. Dame, e-mail: Eduard.Dame@minvrom.nl) to propose contributions or topics.

67. The delegation of Sweden drew the attention of the Executive Body to the assessment activities both under EMEP and under the Working Group on Effects to evaluate trends in emissions, fluxes, deposition and concentrations, and changes over the 20 years that the Convention had existed. Such activities should be of great value to support the next policy negotiations envisaged in the context of the review of the Gothenburg Protocol possibly to take place in 2004. It announced that Sweden had offered to provide resources for these activities and was eager to see the work of both bodies well coordinated.

68. The delegation of Italy informed the Executive Body that a workshop on VOC abatement techniques in the surface-coating and dry-cleaning sectors would be held on 19-21 February 2001 in Bologna (Italy). Italy was able to support the participation of a limited number of experts from countries with economies in transition.

69. The Executive Body:

(a) Took note of the report of the thirty-second session of the Working Group on Strategies and Review (EB.AIR/WG.5/66);

(b) Endorsed the conclusions and recommendations of the Saltsjöbaden workshop;

(c) Acknowledged that the negotiations on the Gothenburg Protocol also served the purpose of paragraph 6 of article 2 concerning the second step to the VOC Protocol;

(d) Decided that future work on sulphur emissions should focus on the review of the Gothenburg Protocol and that such reviews should be considered as fulfilling the requirements of further reviews foreseen under article 8 of the Oslo Protocol;

(e) Offered assistance to Parties that required support in the ratification process, either by facilitating bilateral contacts or by establishing a mechanism that allowed the use of its trust funds for technical steps in the ratification process such as the translation of documents;

(f) Invited such Parties to contact the secretariat and requested its Bureau, with the assistance of the secretariat, to respond to their requests;

(g) Agreed to establish a Network of Experts on Benefits and Economic Instruments (NEBEI) with Mr. D. Pearce (United Kingdom) as rapporteur and the objectives as set out in the report of the Working Group on Strategies and Review (EB.AIR/WG.5/66, para. 73); and

(h) Urged the Signatories to the Protocols on POPs and Heavy Metals, that had not yet ratified the Protocols to do so as soon as possible, inviting them to set the envisaged date of adoption of the new global POPs convention in May 2001 as the target date for their ratifications.

VIII. ACTIVITIES OF ECE BODIES AND INTERNATIONAL ORGANIZATIONS RELEVANT TO THE CONVENTION

70. The secretariat provided information on the most relevant activities of other international organizations, particularly the European Centre for Environment and Health of the World Health Organization (WHO/ECEH), the International Civil Aviation Organization (ICAO) and the Arctic Monitoring and Assessment Programme (AMAP), and made information material from these and other organizations available.

71. Mr. B. Wahlstrom (UNEP) briefly reviewed the present state of the negotiations for a global treaty on POPs. The negotiations were expected to be concluded in Johannesburg, South Africa, on 4-9 December 2000 and the convention was tentatively scheduled to be adopted and signed in Stockholm in May 2001.

72. Mr. J. Miller (WMO) emphasized the long-standing collaboration between the Convention and WMO. He drew attention to recent activities where WMO and EMEP had collaborated closely to further each other's programmes of work. He noted in particular that WMO, with Austria, were joint chairs of the newly created Task Force on Measurements and Modelling.

73. Mr. R. van Aalst (EEA) drew the attention of the Executive Body to the ongoing enlargement of EEA to 31 member countries, which strengthened the need for intensifying cooperation with the Convention and avoiding duplication, as proposed at the Saltsjöbaden workshop and by the EMEP Steering Body. He referred to recent EEA indicator-based reports, to the establishment of a new European Topic Centre on Air/Climate Change, and to a recent scenario sensitivity study addressing links between greenhouse-gas emissions and regional and urban air pollution.

74. Mr. P. Wicks (European Community) presented information on the European Commission's Clean Air for Europe (CAFE) programme, pointing to the informal document that had been prepared for the meeting. He outlined the objectives and probable organizational

structure of CAFE and drew attention to a number of ways in which links could be established between CAFE and the Convention.

75. In the ensuing discussion a number of delegations voiced their strong support for future collaboration with the European Commission and the need to coordinate activities to avoid duplication and waste of resources. Several delegations also stressed the need to ensure that the focus of the Convention was not lost in this process and that regions such as eastern Europe and North America were not neglected. It was noted that the active development of cooperation should not send the wrong message to Parties that were not member States of the European Community.

76. The delegation of Spain noted that in the future it would be useful to strengthen cooperation with the countries on the southern shores of the Mediterranean basin.

77. The Executive Body:

(a) Noted with appreciation the information provided by the organizations and stressed the importance of effective collaboration in the future;

(b) Welcomed the offer of collaboration from the European Community and noted the existing links as well as those proposed by the European Community;

(c) Agreed that, following invitations to sit on the Technical Analysis Group and the Air Quality Steering Group of CAFE, representation should be the responsibility of the EMEP Steering Body and the secretariat respectively, but requested the European Commission to maintain some flexibility for appropriate representation from the Convention at the future meetings of these bodies;

(d) Requested the Bureau of the Executive Body to seek to re-establish a high-level coordinating group with the European Commission, and through this group explore opportunities for collaboration and coordination at the strategic level;

(e) Requested its subsidiary bodies to seek, guided by the high-level coordinating group as appropriate, effective ways of coordinating meetings and activities to avoid duplication, as soon as clear plans for CAFE had evolved, whilst noting the importance of ensuring the participation and involvement of all Parties to the Convention, and maintaining the focus of the Convention's agreed priorities.

IX. WORK-PLAN

78. The secretariat introduced the draft work-plan for the implementation of the Convention (EB.AIR/2000/5) and the provisional list of meetings for 2001, amended to reflect the discussion and the decisions that the Executive Body had taken earlier in the session.

79. The Executive Body decided to set up an open-ended expert group to draft elements for a communication strategy for the Convention. The expert group could seek external assistance

funded through voluntary contributions. The Executive Body invited Mr. R. Guardans (Spain) to coordinate, in collaboration with its Bureau and the secretariat, the work of the expert group, which was expected to present draft proposals to the Working Group on Strategies and Review at its thirty-third session.

80. The Executive Body acknowledged the benefits of a more advanced, longer-term planning of the activities of its subsidiary bodies and invited the Steering Body of EMEP and the Working Group on Effects to prepare their medium-term programmes for the period 2001-2004 for review of the protocols and to submit them to it for consideration at its nineteenth session.

81. The Executive Body adopted its work-plan for 2001 as annexed below (annex IV).

82. The Executive Body tentatively scheduled its nineteenth session from 11 to 14 December 2001. A provisional list of meetings for 2001 is annexed below (annex V).

X. FINANCIAL ISSUES

83. The secretariat introduced document EB.AIR/2000/6 on the financial requirements for the implementation of EMEP. It drew the attention to the status of the mandatory contributions and explained that due to the non-payments by some Parties it had so far been impossible for the secretariat to pay the EMEP centres the budgeted contributions for 2000 in full. The situation had somewhat improved since the document had been drafted, with full payments received from Denmark, Greece, Hungary, Latvia, Malta and Spain. Malta had also paid its arrears. In addition, the secretariat had received a voluntary contribution from Switzerland of SwF 35,000 to support the development of an interim particulate matter emission inventory, as indicated in note (e) to table 4.

84. The secretariat also informed the Executive Body about the situation of payments by Ukraine. In 1999, Ukraine had declared its intention to cover its arrears in kind for 1992-1994 and 1996-1998 and to pay its contributions from 1999 onwards in cash to the Trust Fund. During this meeting, Ukraine had informed the secretariat that due to its economic difficulties and its administrative reform, it was unable to pay the mandatory contributions for 1999 and 2000 in cash by the end of this year. Discussions were under way between Ukraine and MSC-E as well as the collaborating centre in Poland on the details of the joint project which would cover the outstanding contributions in kind of Ukraine.

85. The delegations of Austria, Belgium, the United Kingdom and the European Community explained that their EMEP contributions for 2000 had been delayed due to administrative problems, but that this would be remedied soon.

86. The delegation of Italy informed the Executive Body that it would not be in a position to pay either its arrears or its EMEP contribution for 2000 before 2001, as the necessary legislative basis was lacking. It explained that it was making every effort to speed up the procedure.

87. The delegation of Canada announced that it had made a voluntary contribution of Can\$ 20,000 to the effect-oriented activities.

88. The delegation of Cyprus announced that it had decided to make annually a voluntary contribution of US\$ 1,000 to the Trust Fund under the Convention.

89. The Executive Body:

(a) Approved the decision by its Bureau to revise the budget for 2000 as set out in EB.AIR/2000/6, table 3;

(b) Decided on the detailed use of resources in 2001 as set out in EB.AIR/2000/6, table 4 (including the use of voluntary contributions from the Netherlands and Switzerland for the development of an interim particulate matter emission inventory in 2000 and 2001), and on the scale of mandatory contributions as set out in EB.AIR/2000/6, table 5 (last two columns);

(c) Reaffirmed its decision of the seventeenth session to keep the budgets for 2002 and 2003 at the same level as in 2000 and 2001 (US\$ 2,040,495) and to calculate the mandatory contributions for these years in United States dollars based on the 2000 United Nations scale of assessments;

(d) Requested the Steering Body, with the assistance of its Bureau, to consider further the details of the 2002 budget together with the work-plan for approval by the Executive Body at its nineteenth session; and

(e) Strongly urged Parties to pay their 2000 contributions in cash to the Trust Fund if they had not yet done so and, in 2001, to pay their contributions in February/March according to the procedure that would be explained in a circular letter by the secretariat.

90. The Executive Body furthermore welcomed the voluntary contributions made in 2000 to the Trust Fund for funding the effect-oriented activities under the Convention.

91. Contributions towards financing core activities, other than those covered by the EMEP Protocol, by bank transfer should be made to the United Nations Economic Commission for Europe (UN/ECE) as follows:

Account Number:	001-1-508629
Bank Name:	Chase Manhattan Bank, New York
Account Title:	UNOG General Fund
General Ledger:	UN-0503456 (for UNOG/Finance reference only)
Address:	International Agencies Branch 270 Park Avenue, 43 rd Floor New York, N.Y. 10017, USA
ABA:	021000021 (US Banking Code)
Reference:	For the credit of "LUA-ECE/EOA TRUST FUND"

These contributions should be clearly earmarked and indicate the year for which they are made and the specific programme/coordinating centre (if applicable). Alternatively, contributions may also be made by cheque made payable to "UN Economic Commission for Europe" and clearly earmarked as indicated above, and addressed to:

Executive Office (Office 333)
Office of the Executive Secretary
Economic Commission for Europe
Palais des Nations
1211 Geneva 10

Whatever the method of payment, a communication should be sent to UN/ECE, specifying the amount contributed, the date and purpose of the payment.

XI. OTHER BUSINESS

92. The secretariat informed the Executive Body about ECE work on transport and environment. In the follow-up to the UN/ECE Ministerial Conference on Transport and the Environment (Vienna, November 1997), an ad hoc group of experts had been set up *inter alia* to prepare for a mid-term review of the Programme of Joint Action. The Executive Body had contributed to its implementation. At the request of the Third Ministerial Conference on Environment and Health (London, June 1999), where Ministers had adopted the Charter on Transport, Environment and Health, WHO and UN/ECE had prepared an overview of relevant agreements and legal instruments, including the Convention and its protocols, with a view to improving and harmonizing their implementation and further developing them as needed. The report was close to finalization and would be made available at <http://www.unece.org/poja/london.htm>. It would contain *inter alia* a proposal to start negotiations of a new framework convention on transport sustainable for environment and health. It would be submitted to a high-level meeting on 4 May 2001.

93. The delegation of Sweden noted the importance of the global-scale transport of mercury and the need for future action. It asked the Executive Body to request its Bureau to write to UNEP inviting it to initiate an assessment of mercury and to consider future action. Several delegations, including that of the United States, supported this proposal whilst noting their concern about mercury as a global pollutant, and noting that the Protocol on Heavy Metals, for mercury, lead and cadmium, would soon enter into force. However, they stressed the need to consider the overall workload and priorities of UNEP. The Executive Body agreed to request its Bureau in consultation with the secretariat to prepare and send a letter to UNEP on this matter.

XII. ELECTION OF OFFICERS

94. Mr. H. Dovland (Norway) was elected Chairman. Messrs. D. Hrcek (Slovenia), W. Harnett (United States), and L. Lindau (Sweden) were elected Vice-Chairmen. The Chairmen of the EMEP Steering Body (Mr. M. Williams, United Kingdom), the Implementation Committee (Mr. P. Széll, United Kingdom), the Working Group on Strategies and Review (Mr. R. Ballaman, Switzerland) and the Working Group on Effects (Acting Chairman Mr. T. Johannessen, Norway) were also elected as Vice-Chairmen. Mr. R. Ballaman was re-elected as Chairman of the Working Group on Strategies and Review.

95. The Chairman thanked Mr. S. Hart (Canada) for his work as Vice-Chairman and the important contribution he had made to the work of the Bureau and generally under the Convention.

96. Many delegations expressed their appreciation for the work of the outgoing Chairman over the past 11 years. They noted the success of the Executive Body under his chairmanship as seen through the successfully negotiated protocols and the development of the Convention as a whole. The Executive Body noted with appreciation the Chairman's valuable contribution to its work during an important period in its development.

XIII. ADOPTION OF THE REPORT

97. The Executive Body adopted for general distribution the report of its eighteenth session on 1 December 2000.

Annex I**DECISION 2000/1 ON THE COMPLIANCE BY SLOVENIA
WITH THE 1994 OSLO PROTOCOL**The Executive Body,

Acting under paragraph 11 of the structure and functions of the Implementation Committee (Executive Body decision 1997/2, annex),

1. Welcomes the submission by Slovenia to the Implementation Committee concerning its compliance with the requirements of paragraph 5 (b) of article 2 of the 1994 Oslo Protocol on Further Reduction of Sulphur Emissions with respect to sulphur emissions from the Trbovlje power plant;.
2. Notes the report by the Implementation Committee on this matter (EB.AIR/2000/2, paras. 3-12) and in particular its conclusion that Slovenia could not be in non-compliance with this obligation before 1 July 2004;
3. Notes with satisfaction that Slovenia has reported that it was well on the way to complying with its sulphur emission ceilings under annex II to the Oslo Protocol;
4. Also notes the intention of Slovenia to adopt an ecological action programme to reduce the sulphur emissions originating from the Trbovlje power plant and to shut down that plant;
5. Invites Slovenia, in keeping with the spirit of the Oslo Protocol, to consider applying timely measures to reduce sulphur emissions from the plant, for instance the use of coal with a lower sulphur content, coal cleaning or the establishment of time restrictions on the operation of the plant over a year;
6. Recommends Parties to the Oslo Protocol and invites other Parties to the Convention to examine ways in which they could assist Slovenia in reducing emissions from the Trbovlje plant (for instance through the provision of equipment); and
7. Invites Slovenia to keep the Implementation Committee informed of the progress it makes with regard to the implementation of its obligations under paragraph 5 (b) of article 2 of the Protocol.

Annex II

DECISION 2000/2 ON COMPLIANCE BY THE PARTIES WITH THEIR REPORTING OBLIGATIONS

The Executive Body,

Acting under paragraph 11 of the structure and functions of the Implementation Committee (Executive Body decision 1997/2, annex),

1. Takes note of the report of the Implementation Committee with respect to compliance by Parties with their emission data reporting obligations under the Convention and its Protocols, prepared on the basis of information compiled by EMEP;
2. Also takes note of the report of the Implementation Committee with respect to compliance by Parties with their reporting obligations on strategies and policies for air pollution abatement under the Convention and its Protocols;
3. Recalls that the Implementation Committee in its second report (EB.AIR/1999/4, para. 28) drew attention to the fact that Greece, Luxembourg and the European Community had not reported emission data for the base year for the 1988 NO_x Protocol;
4. Also recalls that the Implementation Committee in its second report (EB.AIR/1999/4, para. 8) drew attention to the fact that France, Liechtenstein and Luxembourg had not submitted any report for the 1998 Major Review of Strategies and Policies;
5. Expresses concern that France, Greece, Liechtenstein, Luxembourg and the European Community all remain in non-compliance with these reporting obligations;
6. Urges Greece, Luxembourg and the European Community to comply with their reporting obligations under the 1988 NO_x Protocol and, in this context, to provide as soon as possible, but no later than 31 January 2001, all the missing information on their national emissions, including in particular their respective base year data;
7. Also urges France, Liechtenstein and Luxembourg to comply with their reporting obligations under the 1985 Sulphur, the 1988 NO_x, the 1991 VOC and the 1994 Sulphur Protocols and, in this context, to provide as soon as possible, but no later than 31 January 2001, a response to the questionnaire used for reporting for the 2000 Review of Strategies and Policies;
8. Requests the Implementation Committee to review the progress made by the above-mentioned Parties with regard to their reporting obligations and to report thereon to it at its nineteenth session.

Annex III

**DECISION 2000/3 AND RECOMMENDATION
ON THE FINANCING OF CORE ACTIVITIES IN 2001-2003**

The Executive Body,

Noting that the 1979 Convention on Long-range Transboundary Air Pollution does not contain provision for the financing of core activities,

Noting also that, with the exception of the Protocol on Long-term Financing of the Cooperative Programme for the Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (hereafter referred to as the “EMEP Protocol”), none of the Protocols to the Convention provides for the financing of core activities,

Recognizing that the efficient operation of the Convention and its Protocols would benefit from the adoption of essential coordination costs for three years, the immediate year for decision and the following two years as provisional, for the financing of core activities under the Convention and its Protocols, other than those covered by the EMEP Protocol, and from recommending to Parties an indicative scale of their contributions to those essential coordination costs,

1. Decides that the essential coordination costs for financing the core activities of the Convention and its Protocols,¹ other than those covered by the EMEP Protocol, shall be US\$ 1,705,000 in 2001 and shall provisionally be US\$ 1,765,000 in 2002 and US\$ 1,765,000 in 2003;
2. Recommends that the Parties to the Convention should make contributions, in cash or in kind, to those essential coordination costs, as set out in appendix I to this decision and recommendation, without prejudging the outcome of negotiations on a legal instrument;
3. Calls for all such contributions to be deposited in the General Trust Fund for the Financing of the Implementation of the Convention, which has been established by the Secretary-General of the United Nations.

¹ The core activities for 2001 are set out in appendix II to this decision and recommendation.

Appendix I
RECOMMENDED SCALE OF CONTRIBUTIONS
(based on information from EB.AIR/GE.1/2000/10 and appendix II below)

Parties	UN 2000 assessment rate (%)	"EMEP share" (%)	Recommended contribution US\$
Armenia	0.006	0.014	241
Belarus	0.057	0.134	2292
Bosnia and Herzegovina	0.005	0.012	201
Bulgaria	0.011	0.026	442
Canada	2.732		voluntary
Croatia	0.030	0.071	1206
Cyprus	0.034	0.080	1367
Czech Republic	0.107	0.252	4302
Estonia	0.012	0.028	483
Georgia	0.007	0.017	281
Hungary	0.120	0.283	4825
Iceland	0.032	0.075	1287
Kyrgyzstan	0.006	0.014	241
Latvia	0.017	0.040	684
Liechtenstein	0.006	0.014	241
Lithuania	0.015	0.035	603
Malta	0.014	0.033	563
Monaco	0.004	0.009	161
Norway	0.610	1.439	24528
Poland	0.196	0.462	7881
Republic of Moldova	0.010	0.024	402
Romania	0.056	0.132	2252
Russian Federation	1.077	2.540	<u>1/</u>
Slovakia	0.035	0.083	1407
Slovenia	0.061	0.144	2453
Switzerland	1.215	2.865	48854
The FYR of Macedonia	0.004	0.009	161
Turkey	0.440	1.038	17692
Ukraine	0.190	0.448	7640
United States	25.000		voluntary
Yugoslavia	0.026	0.061	1045
Austria	0.942	2.222	37877
Belgium	1.104	2.604	44391
Denmark	0.692	1.632	27825
Finland	0.543	1.281	21834
France	6.545	15.435	263171
Germany	9.857	23.246	396344
Greece	0.351	0.828	14113
Ireland	0.224	0.528	9007
Italy	5.437	12.822	voluntary
Luxembourg	0.068	0.160	2734
Netherlands	1.632	3.849	65622
Portugal	0.431	1.016	17330
Spain	2.591	6.110	104183
Sweden	1.079	2.545	43386
United Kingdom	5.092	12.009	204746
European Community		3.330	56777
Total (EMEP region)	40.991	100.000	

1/ The Russian Federation does not consider it possible to use any scale until a future, possibly legally binding instrument is finalized.

Appendix II
2001 ESSENTIAL COORDINATION COSTS
FOR CORE ACTIVITIES NOT FUNDED THROUGH THE EMEP PROTOCOL
(in thousands of United States dollars)

Activities	ICP Forests; PMCC <u>1/</u>	ICP Waters; PC <u>2/</u>	ICP Materials; PMRC <u>3/</u>	ICP Vegetation; PCC <u>4/</u>	ICP Integrated Monitoring; PC <u>5/</u>	ICP Mapping CCE <u>6/</u>	TF Health Aspects <u>7/</u>	CIAM <u>8/</u>	Subtotal Activities
Monitoring and assessment	160	55	70	15	70				370
Dose-response		60	50	80	35				225
Critical loads and levels	30	25	60	45	20	115			295
Dynamic modelling		25	25	20	70	130		60	330
Database management	80	65	70	60	65	25		120	485
Total	270	230	275	220	260	270		180 <u>9/</u>	1705

1/ International Cooperative Programme (ICP) on Assessment and Monitoring of Air Pollution Effects on Forests; Lead Country: Germany; Programme Main Coordinating Centre: Federal Research Centre for Forestry and Forest Products, Hamburg, Germany.

2/ ICP on Assessment and Monitoring of Acidification of Rivers and Lakes; Lead Country: Norway; Programme Centre: Norwegian Institute for Water Research, Oslo, Norway.

3/ ICP on Effects of Air Pollution on Materials, including Historic and Cultural Monuments; Lead Country: Sweden; Programme Main Research Centre: Swedish Corrosion Institute, Stockholm, Sweden.

4/ ICP on Effects of Air Pollution on Natural Vegetation and Crops; Lead Country: United Kingdom; Programme Coordination Centre: Centre for Ecology and Hydrology, Bangor, United Kingdom.

5/ ICP on Integrated Monitoring of Air Pollution Effects on Ecosystems; Lead Country: Sweden; Programme Centre: Finnish Environment Institute, Helsinki, Finland.

6/ ICP on Mapping Critical Levels and Loads; Lead Country: Germany; Coordination Center for Effects: National Institute of Public Health and the Environment, Bilthoven, Netherlands.

7/ Task Force on the Health Aspects of Air Pollution; Led by the WHO European Centre for Environment and Health, Bilthoven, Netherlands; essential coordination costs borne by the WHO European Centre for Environment and Health.

8/ Centre for Integrated Assessment Modelling: International Institute of Applied Systems Analysis (IIASA), Laxenburg, Austria.

9/ Figure only covers maintenance of existing databases and dynamic modelling. Excludes costs for extending the model to particulate matter (US\$ 280,000)

Annex IV

2001 WORK-PLAN FOR THE IMPLEMENTATION OF THE CONVENTION

1. STRATEGIES AND POLICIES

1.1 STRATEGIES AND REVIEW

Description/objective: Assessment of ongoing scientific and technical activities in view of the potential need to revise existing protocols or prepare new ones; negotiating revisions to protocols, including their annexes; promoting the exchange of technology; preparing proposals for any strategic developments under the Convention. The Working Group on Strategies and Review will assist the Executive Body in all policy-related issues.

Main activities and time schedules:

Taking into account the relevant activities under EMEP and the Working Group on Effects, as well as the relevant initiatives of the European Community, and on the basis of information received from its expert groups, the Working Group on Strategies and Review will, in particular:

- (a) Assess work in preparation of a review of the 1999 Gothenburg Protocol, including progress in reducing acidification, eutrophication and ground-level ozone and the pollutants responsible for these effects. It will also review progress in the work on particulate matter pollution (emission inventories, effects, atmospheric modelling and integrated assessment modelling) in order to present to the Executive Body a draft decision, including a timetable, on possible international action to tackle it;
- (b) Assess work in preparation of a review of the Protocol on Heavy Metals, including information on the measures scheduled for re-evaluation in the Protocol. It will prepare a timetable of further action and required input for a review of the Protocol, including a possible effect-based approach as a basis for future action;
- (c) Assess work in preparation of a review of the Protocol on Persistent Organic Pollutants (POPs), also taking into account progress under item 1.5 below, including information on the pollutants scheduled for re-evaluation in the Protocol and on pollutants that are candidates for future inclusion. It will prepare a timetable of further action and required input for a review of the Protocol;
- (d) Review progress in the exchange of information and technology, including the results of a second workshop on techno-economic databases to be held in France in April 2001, information received on product-related measures to reduce emissions of volatile organic compounds (VOCs), POPs and heavy metals and progress in work carried out under item 1.6 below;

(e) Conduct negotiations, as requested by the Executive Body, on an instrument to secure the long-term financing of all core activities under the Convention, and present a draft instrument to the Executive Body at its nineteenth session;

(f) Develop, on the basis of input from the expert group and with the assistance of the secretariat, a communication strategy for the Convention, including the biennial reviews of strategies and policies, and report to the Executive Body at its nineteenth session.

A meeting of heads of delegations to the Working Group on Strategies and Review will be held on 23 – 24 April 2001 in Geneva, to prepare a negotiating text for a legal instrument on the long-term financing of core activities

The thirty-third session of the Working Group on Strategies and Review will take place from 24 to 27 September 2001.

1.2 COMPLIANCE REVIEW

Description/objectives: Review of compliance by the Parties with their obligations under the Protocols to the Convention.

Main activities and time schedule: The Implementation Committee will evaluate the effectiveness of the revised questionnaire for reporting strategies and policies, including the reporting on technology-related obligations. It will carry out an in-depth review of compliance by Parties with the 1991 VOC Protocol, focusing on their national emission obligations. The Committee will continue its dialogue with appropriate subsidiary bodies and experts. It will also continue consideration of compliance issues related to obligations in the Protocols that are not subject to specific reporting requirements, such as provisions dealing with research and monitoring. If a submission, referral or request for a report is made under paragraph 3 (b) or (d) of the Committee's functions, this will have to be dealt with as a priority and the Committee may have to adjust its work-plan and time schedule accordingly.

- (a) Seventh meeting of the Implementation Committee, 2-4 May 2001, Bratislava;
- (b) Eighth meeting of the Implementation Committee in Geneva in September 2001;
- (c) Fourth report by the Implementation Committee to the Executive Body at its nineteenth session.

1.3 REVIEWS OF STRATEGIES AND POLICIES FOR AIR POLLUTION ABATEMENT

Description/objectives: Overview of air pollution abatement in the UN/ECE region, giving a comprehensive description of national and international strategies and policies, including legislation in force and emission levels. Provide, together with emission data, a basis for the Implementation Committee to review compliance by Parties with their obligations under the protocols to the Convention. The reviews are carried out every two years.

Main activities and time schedule:

(a) Parties are invited to present corrections and additional information to the draft 2000 review (EB.AIR/2000/1 and addenda) to the secretariat by 15 January 2001;

(b) The secretariat will then publish the review after additions and corrections have been incorporated;

(c) The next review is scheduled for 2002. The secretariat will prepare a new draft outline and draft questionnaire for consideration by the Executive Body at its nineteenth session.

1.4 ECONOMIC ASSESSMENT OF BENEFITS FROM AIR POLLUTION ABATEMENT AND ECONOMIC INSTRUMENTS

Description/objectives: To develop further the economic work on benefits and economic instruments undertaken by the former Task Force on Economic Aspects of Abatement Strategies and to enable economic considerations to be taken into account in the discussion/review of the protocols to the Convention. A first workshop shall establish the state of science concerning the measurement and economic valuation of the health effects associated with air pollution, discuss alternative methodologies for the measurement and valuation of air-related health effects, and present the results of the latest research in those areas where there is greatest uncertainty. A second workshop shall focus on the valuation of ecosystem benefits from air pollution abatement and build on the work of all relevant International Cooperative Programmes (ICPs) under the Working Group on Effects. Further work will also be done on the use of economic instruments to reduce transboundary air pollution.

Main activities and time schedule: The Network of Experts on Benefits and Economic Instruments (NEBEI), led by the United Kingdom and with Mr. David Pearce as rapporteur, will provide the framework and expertise for a series of workshops. NEBEI will meet only on the occasion of planned workshops and include not only economists but also representatives from other specialist groups. It will collaborate closely with the Task Force on the Health Aspects of Air Pollution, the Working Group on Effects and the Task Force on Integrated Assessment Modelling.

(a) A first workshop on the measurement and economic valuation of health effects associated with air pollution will be held on 19-20 February 2001 in the United Kingdom. Its report will be presented to the Working Group on Strategies and Review at its thirty-third session;

(b) A second workshop under NEBEI on the valuation of ecosystem benefits from air pollution abatement will be held in autumn 2001 in the Netherlands.

1.5 FURTHER ASSESSMENT OF PERSISTENT ORGANIC POLLUTANTS

Description/objectives: Review the evidence on specific POP compounds with a view to:

(a) Making the best use of available knowledge to meet the existing obligations for substances listed in annexes I, II and III to the Protocol on POPs; and

(b) Assisting Parties in identifying which candidates may be given priority for inclusion in the Protocol. The addition of new substances to annex I, II or III to the Protocol on POPs is regulated in Executive Body decision 1998/2 on procedures and information to be submitted to the Executive Body.

Main activities and time schedule:

(a) An ad hoc expert group co-led by Canada and the Netherlands will assess priority substances and then review and assess data put forward, including risk profiles, for those POPs that may qualify to be included in the Protocol on POPs. The expert group will further develop its work programme and report on progress in its work to the Working Group on Strategies and Review at its thirty-third session;

(b) The second meeting of the expert group will take place in Poland, co-hosted by Canada, in autumn 2001, to review preliminary risk profiles and summary reports, and to plan further work.

1.6 EXCHANGE OF INFORMATION AND TECHNOLOGY

Description/objectives: To create favourable conditions for implementing technology-related obligations of the Convention and its protocols, to facilitate the implementation of existing protocols and the accession of non-Parties, particularly countries with economies in transition.
To examine the needs for updating technical annexes and guiding documents to the protocols.

Main activities and time schedule:

(a) Workshop in Bologna (Italy) on 19-21 February 2001 on the implementation of VOC abatement techniques in the surface-coating and dry-cleaning sectors and report on its outcome to the Working Group on Strategies and Review;

(b) Seminar/workshop on control technologies for emissions from stationary sources to be held in Warsaw on 8-12 October 2001;

(c) Collection of information by the secretariat from Parties and international institutions on control technology and product management practices for pollutants covered by the protocols and establishment of collaboration with other international bodies, e.g. European Integrated Pollution Prevention and Control Bureau in Seville (Spain).

1.7 AMMONIA ABATEMENT

Description/objectives: A framework code of good agricultural practice identifying the best available control options and techniques to reduce ammonia emissions from agriculture will be

prepared as a basis for Parties to draw up national codes and to better quantify relationships between recommended control options/techniques and resulting ammonia emissions undertaken by the ad hoc expert group on ammonia abatement led by the United Kingdom.

Main activities and time schedule:

(a) Drafting of guiding part of the framework advisory code of good agricultural practice for submission to the Working Group on Strategies and Review at its thirty-third session;

(b) Collection of information necessary to improve relationships between the measures applied, ammonia emissions and their reduction, and new information on control techniques by the expert group;

(c) Second meeting of the ad hoc expert group in autumn 2001 and progress report to the Working Group on Strategies and Review at its thirty-third session.

1.8 MANAGEMENT OF BY-PRODUCTS/RESIDUES CONTAINING HEAVY METALS OR PERSISTENT ORGANIC POLLUTANTS

Description/objectives: Preparation of a state-of-the-art report on the management and use of by-products/residues containing primarily heavy metals or POPs generated by different sectors, including conclusions and draft recommendations and, where appropriate, proposals to modify or to extend control techniques under the existing protocols, by the Task Force under the leadership of Austria.

Main activities/time schedule:

(a) Editorial meeting of the Task Force to finalize the state-of-the-art report, 7-9 March 2001, Rome;

(b) Final draft state-of-the-art report for consideration by the Working Group on Strategies and Review at its thirty-third session.

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

EMEP will continue to foster links and cooperation with the Working Group on Effects. It will also cooperate and pursue mutually beneficial links with the Clean Air for Europe (CAFE) programme of the European Commission

2.1 EMISSIONS

Description/objectives: Update, using data submitted by Parties, and maintain the EMEP emission inventory, including carrying out quality assurance, to provide reliable information on emissions

and emission projections and to aid the monitoring of compliance. Provide assistance to Parties to help them fulfil reporting tasks. The Task Force on Emission Inventories and Projections, led by the United Kingdom, will provide a technical forum and expert network to discuss, exchange information and harmonize emission factors, methodologies, projection models and reporting. The Meteorological Synthesizing Centre-West (MSC-W) will support the inventory database, the secretariat will request the data. The Meteorological Synthesizing Centre-East (MSC-E) will provide support for heavy metal and POP emission activities. The Chemical Coordinating Centre (CCC) will also contribute to this work.

Main activities and time schedule:

(a) A workshop (early 2001) will address emission reporting to international bodies to: (i) improve the reporting process allowing for the validation of data quality; (ii) guarantee consistency and comparability with emission projections; and (iii) minimize the workload at the national level. It will be organized in collaboration with other interested groups, e.g. United Nations Framework Convention on Climate Change, the Statistical Office of the European Communities (EUROSTAT) and the Organisation for Economic Co-operation and Development (OECD);

(b) The Task Force on Emission Inventories and Projections will finalize the emission reporting guidelines using recommendations from the workshop, for consideration at the twenty-fifth session of the Steering Body, for approval by the Executive Body at its nineteenth session, and for comprehensive reporting at the end of 2001;

(c) As requested by the secretariat, Parties will submit 2000 emission data from the territories covered by EMEP for SO_x, NO_x, non-methane volatile organic compounds (NMVOCs), NH₃, CO, heavy metals (priority metals: cadmium (Cd), mercury (Hg) and lead (Pb)) and selected POPs. For CO₂ and CH₄, the same data as reported under the United Nations Framework Convention on Climate Change should be submitted. The Parties, in cooperation with MSC-E and MSC-W, will carry out the necessary work to submit the specified data on heavy metals and POPs emissions, in accordance with the EMEP Guidebook, to ensure that data are available for the reference years and for current emissions. MSC-W in collaboration with the Task Force will consider requirements for estimating organic emissions;

(d) In 2001 Parties will start reporting emissions of fine particulate matter (PM) as PM₁₀ and PM_{2.5}. MSC-W will provide guidance for reporting in cooperation with the European Community and the European Environment Agency (EEA). Parties will review an interim emission inventory developed by the Netherlands Organization for Applied Scientific Research (TNO) for 1995 as a basis for the 2000 inventory. Experts at TNO and EMEP will be available for consultation. In addition, the Task Force will discuss PM emission reporting requirements;

(e) CCC in consultation with national experts will adjust European emission inventories for POPs and mercury to the EMEP requirements and provide these data to MSC-E;

(f) MSC-W will present the updated report on 1980-1999 emissions to the Steering Body at its twenty-fifth session. The report will be available to the Implementation Committee and for the report on strategies and policies presented to the Executive Body at its nineteenth session. CCC will develop profiles of chemical species of the heavy metals and POPs considered within the Protocols on Heavy metals and POPs;

(g) MSC-W, in cooperation with CIAM, the EEA European Topic Centre on Air Emissions (ETC/AE), the secretariat, the other EMEP centres and the Task Force on Emission Inventories and Projections, will develop further methods and a scientific basis for compliance monitoring, verifying emission data and controlling data quality;

(h) The Task Force will increase its work on the verification of emission data and on emission projections. It will prepare a further extension of the Guidebook on VOC species and particulate matter. It will work with Parties to improve the quality and completeness of emission reporting, and strengthen the use of the designated emission expert network. The tenth meeting of the Task Force will take place in May 2001.

2.2 DEPOSITION OF ACIDIFYING AND EUTROPHYING COMPOUNDS

Description/objectives: Provide monitoring and modelling data on concentrations, depositions and transboundary fluxes of sulphur and nitrogen compounds over Europe. Analyse past, present and future exceedances of critical loads of acidifying and eutrophying depositions in Europe, in collaboration with the Coordination Center for Effects (CCE). Analyse scenarios on cost-effective reductions of acidification, eutrophication, tropospheric ozone. Provide information for monitoring compliance. The Task Force on Measurement and Modelling, led by Austria and co-chaired by the World Meteorological Organization (WMO), will increase the involvement of Parties in developing and implementing monitoring and modelling strategies.

Main activities and time schedule:

(a) The Parties will report monitoring results to CCC twice a year: January-June data by 1 December and July-December data by 1 June. CCC will manage the monitoring database and assist countries with monitoring nitrogen compounds and quality assurance. The exchange of monitoring information and experiences with the WMO/Global Atmospheric Watch Programme, North American experts and European research groups will continue and increase. CCC will place a stronger emphasis on uniform methodologies, and on quality control and quality management of the network;

(b) CCC and MSC-W will coordinate a study of the EMEP monitoring strategy for acidifying and eutrophying compounds and particulates taking into account the evolving needs of the Convention. CCC will consider solutions, with national experts, for harmonizing national monitoring needs with those of EMEP and the European Community and follow up recommendations with all countries;

- (c) MSC-W will calculate the annual transboundary transport of sulphur and nitrogen compounds with the Eulerian model. In collaboration with CIAM and the Parties, it will continue to develop methods and visualization tools for the analysis of emission reduction strategies, in particular the user-interface for the Lagrangian EMEP models via the Internet;
- (d) CCC and MSC-W together will continue to evaluate trends in concentrations and depositions of acidifying pollutants and base cations from EMEP data; MSC-W and CCC will explore new methods for evaluating and validating results between measurements and models. MSC-W will review, as necessary, the parameterization of dry and wet depositions in the acid deposition model;
- (e) MSC-W will focus on the implementation of a unified Eulerian model code for acidification, eutrophication, ground-level ozone and particulates;
- (f) MSC-W will begin recalculation of meteorological input data from 1990 to enable analysis of trends and evaluation of achievements. It will continue to revise and verify meteorological input fields relevant to air pollution modelling;
- (g) Results derestricted by the Steering Body will be put on the EMEP web site. Contributions to the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) and the Baltic Marine Environment Protection Commission (HELCOM) will seek to provide a near-regional evaluation of protocol achievements through interpretation of observed data;
- (h) The Task Force on Measurement and Modelling will prepare for an assessment of EMEP measurement and modelling work for 1980-2000 and will propose other major issues for its work for the next five years. The Task Force will promote the review of national monitoring network data by Parties and will itself review the current monitoring strategy of EMEP to identify any changes needed for assessing implementation and compliance. In particular, a measurement strategy for PM₁₀ will be drawn up, taking account of the recommendations of the Interlaken workshop (EB.AIR/GE.1/2000/9), the need to validate models, and activities of other international bodies. The second meeting of the Task Force will be held on 30 May - 1 June 2001 in Portoroz, Slovenia;
- (i) A workshop to address issues related to the trans-Atlantic transport of air pollutants organized with the Arctic Monitoring and Assessment Programme (AMAP) and hosted by the United States Environmental Protection Agency (EPA) will be held on 12-15 June 2001.

2.3 PHOTO-OXIDANTS

Description/Objectives: Provide monitoring results on ozone and VOCs. Develop and verify the ozone model aiming at a common oxidant/acidification model. Evaluate short- and long-term exposures to photochemical oxidants and collaborate with the Working Group on Effects in developing methods for damage analysis. Analyse scenarios of ground-level ozone in cooperation with CIAM.

Main activities and time schedule:

(a) Parties will report ozone and VOC monitoring results to CCC, which is responsible for quality assurance, data storage, and making data available on the Internet. CCC will continue to measure and collect ozone and VOC data. It will work to increase the spatial coverage of data;

(b) MSC-W and CCC will continue the evaluation of the status of monitoring and quality assurance activities for photo-oxidants;

(c) MSC-W will calculate the short-term exposures to photochemical oxidants of vegetation for growing periods, and the potential exposure of humans; it will apply the revised ozone level II dry deposition sub-routine and harmonize the treatment of emissions in the unified Eulerian acid rain-photochemical-particulate matter (PM) model;

(d) MSC-W and CCC will evaluate ozone trends and review the status of monitoring and quality assurance activities. For selected monitoring sites, ozone trend calculations will be made and compared with modelled values over several years;

(e) MSC-W will evaluate the effects of control measures on photo-oxidants, in cooperation with CIAM, paying particular attention to effects of scale;

(f) EMEP/EUROTRAC LOOP workshop on NO_x and/or VOC limitation of ozone formation to be held on 3-6 December 2001 in Gerzensee, Switzerland.

2.4 HEAVY METALS

Description/objectives: Provide monitoring and modelling data on concentrations, depositions and transboundary fluxes of Cd, Pb and Hg over Europe. Develop further the Pb, Cd and Hg transport models in parallel with the development of heavy metal (HM) critical limits under the Working Group on Effects. Analyse trends in Pb and Cd deposition.

Main activities and time schedule:

(a) CCC and MSC-E in cooperation with Parties will prepare an estimate of trends in emissions, concentrations and depositions of HMs in Europe;

(b) The Parties, in cooperation with CCC, will further develop the EMEP network for trace metals, with first priority elements Hg, Cd and Pb and second priority elements copper (Cu), zinc (Zn), arsenic (As), chromium (Cr) and nickel (Ni). The HM sampling and analysis manual will be completed. CCC will continue work on HM standard operating procedures and quality control routines. Noting the lack of reliable data and the need for cooperative efforts, CCC will collect all new measurement data and results from existing national and other international networks;

(c) MSC-E will make model calculations of concentrations, depositions and country-to-country matrices for Pb and Cd, as well as their trend analysis. It will cooperate with CCC, MSC-W and the Task Force on Emission Inventories and Projections to verify HM emission data quality. In close cooperation with CCC and the Task Force on Measurements and Modelling, modelling results will be checked against measurements. MSC-E will further refine model parameterization and perform uncertainty analysis;

(d) MSC-E will further develop the multi-compartment Hg model, paying special attention to atmosphere-soil and atmosphere-seawater exchange processes. Intercomparison of Hg models (II stage) will continue and hemispherical model development will start. The sharing of information and experience with the Arctic Monitoring and Assessment Programme (AMAP) and with North American and European research groups will continue/increase;

(e) CCC and MSC-E will report on HM measurements and modelling results and put detailed data on the EMEP web site. Specific attention will be given to the reporting to HELCOM and OSPARCOM. MSC-E will continue cooperation with WMO, EC, UNEP, the European Experiment on the Transport and Transformation of Environmentally Relevant Trace Constituents over Europe (EUROTRAC), AMAP, the Working Group on Effects, CCE and the Task Force on the Health Aspects of Air Pollution.

2.5 PERSISTENT ORGANIC POLLUTANTS (POPs)

Description/objectives: Increase the provision of monitoring and modelling data on transboundary fluxes, concentrations and depositions of selected POPs over Europe. Study further the physico-chemical processes of POPs in different environmental compartments, taking into account their transport within the EMEP region and on the hemispheric/global scale.

Main activities and time schedule:

(a) MSC-E will, in cooperation with CCC, MSC-W and the Task Force on Emission Inventories and Projections and in consultation with the Parties, verify POP emission data quality;

(b) The Parties, in cooperation with CCC, will further develop the measurement network. CCC will collect monitoring data available from other international programmes. The laboratory comparison will continue and CCC will continue work on the standard operating procedures and quality control routines for the manual for sampling and chemical analysis;

(c) MSC-E will study the physico-chemical properties of selected POPs and will analyse and summarize scientific results obtained under EUROTRAC/MEPOP, other international programmes such as AMAP, HELCOM and OSPARCOM and national programmes. MSC-E will further develop multi-compartmental POP models, paying special attention to model sensitivity. It will assess seasonal and annual variations and check results against measurements in cooperation with CCC. The results will be posted on the Internet. The POPCYCLING-Baltic model will be used to assess pathways, deposition and fate in the Baltic Sea region;

(d) MSC-E will use new procedures for meteorological data for regional and hemispheric modelling and begin preparatory work on the intercomparison of models. Hemispheric model development will continue. MSC-E will develop and validate multi-compartment transport models for selected POPs, and improve parameterization of exchange processes. It will also investigate the sedimentation, accumulation and degradation processes and the influence of size distribution on the long-range transport of benzo(a)pyrene (B(a)P).

2.6 FINE PARTICULATES

Description/objectives: Draw up recommendations for emission reporting and monitoring of air concentrations of atmospheric particles. Develop transport and integrated assessment models to provide the Steering Body, the Task Force on the Health Aspects of Air Pollution and the Executive Body with further information on the transboundary transport of fine particulates.

Main activities and time schedule:

(a) Given that a basic limitation to developing emission reduction strategies for atmospheric particles is the uncertainty of the elements responsible for adverse health effects, the EMEP centres will provide the Task Force on the Health Aspects of Air Pollution with relevant data allowing for the drawing-up of recommendations on plausible indicators/ limit values. Such indicators will subsequently be used to develop the EMEP monitoring and modelling strategy for particulate matter;

(b) EMEP will develop a monitoring strategy for the Convention, harmonized as far as possible with the EC. CCC, in collaboration with the Task Force on Measurements and Modelling, will recommend methods for PM_{2.5} measurements, chemical speciation/size distribution and quality assurance procedures. CCC will initiate the collection of data from Parties;

(c) MSC-W will develop further the unified Eulerian model to include primary and secondary aerosols. It will test a box model that allows for aerosol dynamics. The first results on the introduction of the aerosol dynamic module will be analysed;

(d) Workshop on implementation of aerosol dynamics modules in Eulerian models (2001);

(e) An EMEP workshop on fine-particulate modelling and speciated measurements will be organized in collaboration with EPA in autumn 2001 or spring 2002;

(f) Model development at MSC-W will take account of the coordinated European programme on particulate matter emission inventories and contribute to the integrated assessment model for particles being developed by CIAM.

2.7 INTEGRATED ASSESSMENT MODELLING

Description/objectives: Analysis of scenarios on cost-effective reduction of acidification, eutrophication, tropospheric ozone and related phenomena, especially particulate matter pollution. Modelling will cover: (i) abatement options for reducing sulphur, nitrogen oxides, ammonia, VOCs and primary particulate matter, including structural measures in energy, transport and agriculture, and their costs; (ii) projections of emissions; (iii) assessments of the atmospheric transport of substances (including global transport); and (iv) analyses and quantification of environmental and health effects and benefits of emission reductions. Modelling will draw upon the results from other subsidiary bodies. The Task Force on Integrated Assessment Modelling, led by the Netherlands, will guide the work of CIAM at the International Institute for Applied Systems Analysis (IIASA). All activities will be conducted in close collaboration with related work led by the European Commission.

Main activities and time schedule:

(a) CIAM, in collaboration with MSC-W, will improve the framework for an integrated assessment model for particulates. It will liaise with the Coordinated European Emissions Inventory Project for Particles to develop abatement cost curves for particles;

(b) CIAM, in collaboration with MSC-W, will revise the integrated assessment models to incorporate recent advances in atmospheric transport models. In addition, work on the analysis of uncertainties will consider uncertainties in atmospheric transport models and related non-linearities from numerical advection and atmospheric chemical processes;

(c) The Task Force will hold its twenty-sixth meeting on 14-16 May 2001 in Brussels, and organize a workshop (autumn 2001).

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

3.1 REVIEW OF EFFECTS OF MAJOR AIR POLLUTANTS

3.1.1 Annual reports on progress in effects-oriented activities

Description/objectives: Annual review of activities and results of the International Cooperative Programmes and the Task Force on the Health Aspects of Air Pollution. Preparation of a draft annual joint report based on the information provided by the lead countries and the programme coordinating centres, for consideration by the Working Group on Effects.

Main activities and time schedule:

(a) Submission of relevant information on the International Cooperative Programmes and the Task Force on the Health Aspects of Air Pollution to the secretariat (18 May 2001);

(b) Submission of the draft 2001 joint report of the International Cooperative Programmes and the Task Force on the Health Aspects of Air Pollution prepared by the secretariat, to the Working Group on Effects in 2001.

3.1.2 Major review of effects of air pollutants

Description/objectives: Review of knowledge on the effects of selected air pollutants based on the results of the International Cooperative Programmes and the Task Force on the Health Aspects of Air Pollution as well as other relevant data and information. The 2001 substantive report will summarize present knowledge on the occurrence, movement and effects of selected heavy metals in the environment.

Main activities and time schedule:

(a) Submission of draft contributions to the substantive report by the International Cooperative Programmes and the Task Force on the Health Aspects of Air Pollution (in accordance with the outline approved by the Working Group on Effects at its nineteenth session) in January 2001;

(b) Review of the draft contributions by the Extended Bureau of the Working Group on Effects at its meeting in February 2001;

(c) Preparation of the draft substantive report (March-June 2001);

(d) Draft substantive report and its executive summary to the Working Group on Effects in 2001;

(e) Draft plan for future work on heavy metals taking into account available funding (prepared by the Bureau) to the Working Group in 2001;

(f) Draft outline of the possible comprehensive review and assessment of the present air pollution effects and their recorded trends (prepared by the Bureau) to the Working Group on Effects in 2001 for consideration.

3.2 INTERNATIONAL COOPERATIVE PROGRAMME ON EFFECTS OF AIR POLLUTION ON MATERIALS, INCLUDING HISTORIC AND CULTURAL MONUMENTS

Description/objectives: Quantification of the multi-pollutant effects on the corrosion of selected materials under different environmental conditions, *inter alia*, as a basis for the economic evaluation of air pollution damage. A Programme Task Force led by Sweden, in cooperation with the Programme's main research centre (Swedish Corrosion Institute, Stockholm), is responsible for the detailed planning and coordination of the Programme.

Main activities and time schedule:

- (a) Preparation and publication early in 2001 of the proceedings of the workshop on mapping air pollution effects on materials, including stock at risk (held in Stockholm, June 2000);
- (b) Report on the evaluation of corrosion attack after one year of exposure in the multi-pollutant programme to the Working Group on Effects in 2001;
- (c) Progress report on the further development of a database of environmental data for the multi-pollutant exposure programme to the Working Group in 2001;
- (d) Seventeenth meeting of the Programme Task Force, 11-13 June 2001, Dübendorf, Switzerland.

3.3 INTERNATIONAL COOPERATIVE PROGRAMME ON ASSESSMENT AND MONITORING OF ACIDIFICATION OF RIVERS AND LAKES

Description/objectives: Identification of the state of surface water ecosystems and their long-term changes, with respect to the regional variation and impact of selected air pollutants, and including effects on biota. A Programme Task Force led by Norway, which also provides the Programme's centre (Norwegian Institute for Water Research, Oslo), is responsible for the detailed planning and coordination of the Programme.

Main activities and time schedule:

- (a) Publication of the report on trends in intercalibration results;
- (b) Organization of the year 2001 biological and chemical intercalibrations; presentation of the 2000 results (including intercalibration on heavy metals) to the Working Group in 2001;
- (c) Progress report on the further development of the monitoring network and the Programme's database with emphasis on biological data to the Working Group in 2001;
- (d) Report on the in-depth evaluation of nitrogen in surface waters, prepared in cooperation with EMEP, and note on the impact of short-term climatic fluctuations (sea-salt episodes) on the assessment of trends in water quality, to the Working Group in 2001;
- (e) Seventeenth meeting of the Programme Task Force, October 2001, United States of America (tentatively).

3.4 INTERNATIONAL COOPERATIVE PROGRAMME ON ASSESSMENT AND MONITORING OF AIR POLLUTION EFFECTS ON FORESTS

Description/objectives: Collection and assessment of comprehensive and comparable data on changes in forests under actual environmental conditions (in particular air pollution, including acidifying and eutrophying deposition, as well as other stresses) and determination of cause-effect relationships. A Programme Task Force led by Germany, in cooperation with the Programme's main coordinating centre (Federal Research Centre for Forestry and Forest Products, Hamburg, Germany), is responsible for the detailed planning and coordination of the Programme. Intensive monitoring of forest ecosystems on the permanent sample plots (level II), extensive large-scale monitoring (level I) and integrated evaluation of results are carried out in cooperation with the European Commission.

Main activities and time schedule:

- (a) Preparation of the 2001 executive and technical reports on Forest Condition in Europe (levels I and II); summary report on the 2000 monitoring results to the Working Group on Effects in 2001;
- (b) Information on progress in compiling a cause-effect report based on the results of core plots of ICP Forests and ICP Integrated Monitoring to the Working Group in 2001;
- (c) Progress report on the further development of links between level I and level II monitoring to the Working Group in 2001;
- (d) Seventeenth meeting of the Programme Task Force, 19-23 May 2001, Westport, Ireland.

3.5 INTERNATIONAL COOPERATIVE PROGRAMME ON EFFECTS OF AIR POLLUTION ON NATURAL VEGETATION AND CROPS

Description/objectives: Evaluation of the effects of air pollutants and other stresses on natural vegetation and crops; identification of dose/response functions for a range of crops; validation of ozone critical levels for natural vegetation and crops and further development of the level II approach; evaluation of natural vegetation and crops as effective indicators of the potential for damage to natural ecosystems by ozone, and evaluation and mapping of heavy metal deposition to vegetation. A Programme Task Force, led by the United Kingdom, with the cooperation of the Programme's coordination centre (Centre for Ecology and Hydrology, Bangor Research Unit, Bangor, United Kingdom), is responsible for the detailed planning and coordination of the Programme.

Main activities and time schedule:

- (a) The 2001 annual status report on the achievements of the Programme to the Working Group on Effects in 2001;

(b) Progress report on further development of the Programme's experiments on the effects of ambient ozone episodes on crops and natural vegetation to the Working Group in 2001;

(c) Progress report on determining the critical flux for effects of ozone on biomass to the Working Group in 2001;

(d) Continuing study of deposition of heavy metals, including analysing heavy metal content of clover clone samples and taking over the coordination of the Europe-wide heavy metal in mosses programme; information to the Working Group on Effects in 2001;

(e) Fourteenth meeting of the Programme Task Force, 23-26 January 2001, Louvain, Belgium.

3.6 INTERNATIONAL COOPERATIVE PROGRAMME ON INTEGRATED MONITORING OF AIR POLLUTION EFFECTS ON ECOSYSTEMS

Description/objectives: Determination and prediction of the state of ecosystems and their long-term changes with respect to the regional variation and impact of selected air pollutants, with special attention to effects on biota. A Programme Task Force led by Sweden is responsible for planning, coordinating and evaluating the Programme. The Programme's centre (Finnish Environment Institute, Helsinki) is entrusted with collecting, storing, processing and analysing data from countries taking part in the Programme.

Main activities and time schedule:

(a) Presentation of the Tenth Annual Report to the Working Group on Effects in 2001;

(b) Continued calculation of: (i) sulphur and nitrogen compounds, base cations and H⁺ budgets and trends; and (ii) heavy metal pools and fluxes; information to the Working Group in 2001;

(c) Further development of bioeffects indication, assessment of multi-pollutant, multi-effect relationships; progress report to the Working Group in 2001;

(d) Progress report on the results of site-specific dynamic modelling and assessment of the recovery at selected ICP Integrated Monitoring sites, to the Working Group in 2001;

(e) Consideration of possibilities for closer cooperation with and/or more active participation in activities of other relevant international organizations/bodies, in addressing global environmental issues (e.g. climate change); information to the Working Group in 2001;

(f) Ninth meeting of the Programme Task Force, 3-5 May 2001, Rome, Italy.

3.7 INTERNATIONAL COOPERATIVE PROGRAMME ON MAPPING CRITICAL LEVELS AND LOADS

Description/objectives: Determination of critical loads and levels and their exceedances for selected pollutants, development and application of other methods for effect-based approaches, and modelling and mapping of the present status and trends in impacts of air pollution. A Programme Task Force led by Germany is responsible for the detailed planning and coordination of activities. The Task Force uses and integrates available and accepted data, drawing, in particular, on the current work of other task forces, International Cooperative Programmes and EMEP. The Coordination Center for Effects (CCE at the National Institute of Public Health and the Environment, Bilthoven, Netherlands) provides scientific and technical support to the Task Force and to other effect-related activities, in particular by developing methods and models for calculating critical loads and levels and for applying other effect-based approaches, as well as by producing maps of critical loads and levels and their exceedances, and other risk parameters related to potential damage and recovery.

Main activities and time schedule:

- (a) Continuing maintenance and updating of the database of critical loads of sulphur and nitrogen, as well as data derived from them; information to the Working Group on Effects in 2001;
- (b) Report on the results of the expert group meeting on dynamic modelling (October 2000, Ystad, Sweden) and progress report on further development of methods and procedures (including Europe-wide dynamic modelling) for the assessment of recovery and risk of future damage, to the Working Group in 2001;
- (c) Further development of critical limits for heavy metals based, *inter alia*, on the outcome of the meeting of the ad hoc expert group (held in October 2000 in Bratislava); information to the Working Group in 2001;
- (d) Preparation of the sixth CCE 2001 status report for presentation to the Working Group in 2001;
- (e) Eleventh CCE workshop on modelling and mapping, 24-27 April 2001, Bilthoven, Netherlands;
- (f) Seventeenth meeting of the Programme Task Force, 7-9 May 2001, Bratislava.

3.8 EFFECTS OF AIR POLLUTANTS ON HUMAN HEALTH

Description/objectives: Preparation of state-of-the-art reports on the direct and indirect effects of long-range transboundary air pollution on human health.

(a) The World Health Organization (WHO) is invited to present relevant progress/technical reports to the Working Group on Effects, so that acquired knowledge of WHO can be applied in the further implementation of the Convention. Additional information/reports should be provided, when appropriate, by other international organizations, interested Governments, and/or other subsidiary bodies under the Convention;

(b) To support the Working Group on Effects and the Executive Body in preparing/substantiating new and/or updating existing protocols, the joint Task Force of WHO/European Centre for Environment and Health (ECEH) and the Executive Body, led by WHO/ECEH, evaluates and assesses the health effects of long-range transboundary air pollution and reports on the subject.

Main activities and time schedule:

(a) Continuation of the assessment of population exposure to particulates from long-range transport and of its health effects; information to the Working Group on Effects in 2001;

(b) Finalization of the report on a preliminary assessment of the health risk of selected heavy metals from long-range transboundary air pollution to be presented to the Working Group in 2001;

(c) Preliminary assessment of the potential health effects of the selected "higher priority" POPs; information to the Working Group in 2001;

(d) Fourth meeting of the Task Force on the Health Aspects of Air Pollution, 4-6 April 2001, Bonn, Germany (tentatively).

Annex V

PROVISIONAL LIST OF MEETINGS FOR 2001

23-24 April 2001 Geneva	Working Group on Strategies and Review (meeting of heads of delegations)
29-31 August 2001 Geneva	Working Group on Effects (twentieth session)
3-5 September 2001 Geneva	EMEP Steering Body (twenty-fifth session)
24-27 September 2001 Geneva	Working Group on Strategies and Review (thirty-third session)
11-14 December 2001 Geneva	Executive Body for the Convention (nineteenth session)
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2-4 May 2001 Bratislava	Implementation Committee (seventh meeting)
September 2001 Geneva (tentatively)	Implementation Committee (eighth meeting)
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23-26 January 2001 Louvain (Belgium)	Programme Task Force, ICP on Effects of Air Pollution on Natural Vegetation and Crops (fourteenth meeting)
29-30 January 2001 Hague (Netherlands)	EMEP workshop on harmonized emission reporting to The international bodies
19-21 February 2001 Bologna (Italy)	Workshop on the implementation of VOC abatement techniques in the surface-coating and dry-cleaning sectors
19-20 February 2001 London	The Network of Experts on Benefits and Economic Instruments (NEBEI) First workshop on the measurement and economic valuation of health effects associated with air pollution

7-9 March 2001 Rome	Task Force on Management of By-products/Residues Containing Heavy Metals and POPs (editorial meeting)
19-21 March 2001 York (United Kingdom)	Workshop on chemical criteria and critical limits for steady-state and dynamic modelling
4-6 April 2001 Bonn (Germany) (tentatively)	Task Force on the Health Aspects of Air Pollution (fourth meeting)
24-27 April 2001 Bilthoven (Netherlands)	Eleventh CCE workshop on modelling and mapping
3-5 May 2001 Rome (Italy)	Programme Task Force, ICP on Integrated Monitoring of Air Pollution Effects on Ecosystems (ninth meeting)
7-9 May 2001 Bratislava (tentatively)	Programme Task Force, ICP on Mapping Critical Levels and Loads (seventeenth meeting)
14-16 May 2001 Brussels	Task Force on Integrated Assessment Modelling (twenty-sixth meeting)
19-23 May 2001 Westport (Ireland)	Programme Task Force, ICP on Assessment and Monitoring of Air Pollution Effects on Forests (seventeenth meeting)
14-18 May 2001 (Greece) (tentatively)	Task Force on Emission Inventories and Projections (tenth meeting)
30 May – 1 June 2001 Portoroz (Slovenia)	Task Force on Measurement and Modelling (second meeting)
11-13 June 2001 Dübendorf (Switzerland) (tentatively)	Programme Task Force, ICP on Effects of Air Pollution on Materials, Including Historic and Cultural Monuments (seventeenth meeting)
12-15 June 2001 (United States)	EMEP/AMAP workshop on trans-Atlantic transport of air pollutants (organized in collaboration with, and hosted by, EPA)

8-12 October 2001 Warsaw (tentatively)	Workshop on control technologies for emissions from stationary sources
October 2001 (United States) (tentatively)	Programme Task Force, ICP on Assessment and Monitoring of Acidification of Rivers and Lakes (seventeenth meeting)
3-6 December 2001 Gerzensee (Switzerland)	EMEP/EUROTRAC LOOP workshop on NO _x and/or VOC limitation of ozone formation
Autumn 2001 Poland	Ad hoc expert group on POPs (second meeting)
Autumn 2001 Laxenburg (Austria) (tentatively)	Workshop organized by the Task Force on Integrated Assessment Modelling
Autumn 2001 (tentatively)	Ad hoc expert group on ammonia (second meeting)
Autumn 2001 Helsinki (tentatively)	EMEP workshop on fine-particulate modelling: model intercomparison and aerosol dynamics
Autumn 2001 Netherlands	Second NEBEI workshop on the valuation of ecosystem benefits from air pollution abatement
