



**Economic and Social  
Council**

Distr.  
GENERAL

ECE/EB.AIR/53  
7 January 1998

Original: ENGLISH

ECONOMIC COMMISSION FOR EUROPE

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

**REPORT OF THE FIFTEENTH SESSION OF THE EXECUTIVE BODY**

**CONTENTS**

	<u>Paragraphs</u>
Introduction . . . . .	1 - 7
I. ADOPTION OF THE AGENDA . . . . .	8
II. MATTERS ARISING FROM THE FIFTY-SECOND SESSION OF THE ECONOMIC COMMISSION FOR EUROPE AND THE SPECIAL AND THIRD SESSIONS OF THE COMMITTEE ON ENVIRONMENTAL POLICY OF CONCERN TO THE EXECUTIVE BODY . . . . .	9 - 10
III. STRATEGIES AND POLICIES OF PARTIES AND SIGNATORIES TO THE CONVENTION FOR THE ABATEMENT OF AIR POLLUTION . . . . .	11 - 19
A. 1997 annual review . . . . .	11 - 15
B. Draft outline for the 1998 major review . . . . .	16 - 19
IV. ACTIVITIES OF THE WORKING GROUP ON STRATEGIES . . . . .	20 - 41
V. FUTURE PRIORITIES . . . . .	42 - 46
VI. EXPERT GROUP ON IMPLEMENTATION . . . . .	47 - 50
VII. PROGRESS IN SELECTED AREAS OF COOPERATION . . . . .	51 - 70
A. Cooperative programme for monitoring and evaluation of the long-range transmission of air pollutants in Europe (EMEP) . . . . .	51 - 55

**CONTENTS** (continued)

	<u>Paragraphs</u>
B. Effects of major air pollutants on human health and the environment . . . . .	56 - 65
C. Technologies for emission control . . . . .	66 - 70
VIII. WORK-PLAN . . . . .	71 - 74
IX. ACTIVITIES OF ECE BODIES AND INTERNATIONAL ORGANIZATIONS RELEVANT TO THE CONVENTION . . . . .	75 - 80
X. FINANCIAL ISSUES . . . . .	81 - 88
XI. OTHER BUSINESS . . . . .	89 - 91
XII. ELECTION OF OFFICERS . . . . .	92
XIII. ADOPTION OF THE REPORT . . . . .	93

Annexes

- I. Decision 1997/1 on rules and conditions for joint implementation under the Oslo Protocol
- II. Model article on compliance
- III. Decision 1997/2 concerning the Implementation Committee, its structure and functions and procedures for review of compliance  
Annex: Structure and functions of the Implementation Committee and procedures for review of compliance
- IV. Decision 1997/3 on compliance monitoring for the VOC Protocol
- V. 1998 work-plan for the implementation of the Convention
- VI. Provisional list of meetings for 1998
- VII. Decision 1997/4 on the facilitation of participation of countries with economies in transition

## Introduction

1. The fifteenth session of the Executive Body for the Convention on Long-range Transboundary Air Pollution was convened in Geneva from 16 to 19 December 1997.
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; Lithuania; Malta; Netherlands; Norway; Poland; Portugal; Romania; Russian Federation; Slovakia; Slovenia; Spain; Sweden; Switzerland; Ukraine; United Kingdom; United States of America; and the European Community (EC).
3. Representatives from the United Nations Environment Programme (UNEP/Chemicals), the secretariat of the United Nations Framework Convention on Climate Change, and the World Meteorological Organization (WMO) also attended.
4. Representatives of the following non-governmental organizations were present: Edison Electric Institute; International Union of Producers and Distributors of Electrical Energy (UNIPEDE); and the World Conservation Union (IUCN).
5. Mr. J. Thompson (Norway) chaired the meeting.
6. The Executive Secretary of the Economic Commission for Europe, Mr. Y. Berthelot, addressed the meeting. He recognized the strong political momentum that was behind the current negotiations for three new protocols to the Convention and pledged the full support of the secretariat in the important undertakings of the Executive Body.
7. He noted that the regional work under the Convention set an example for similar work in other regions of the world and on the global scale. He further reported on the recent ECE Ministerial Conference on Transport and the Environment, the outcome of which might have implications for the Executive Body, as well as the reform process in ECE, which had led to the redeployment of some resources to the Environment and Human Settlements Division.

### **I. ADOPTION OF THE AGENDA**

8. The agenda, as contained in document ECE/EB.AIR/52, was adopted.

### **II. MATTERS ARISING FROM THE FIFTY-SECOND SESSION OF THE ECONOMIC COMMISSION FOR EUROPE AND THE SPECIAL AND THIRD SESSIONS OF THE COMMITTEE ON ENVIRONMENTAL POLICY OF CONCERN TO THE EXECUTIVE BODY**

9. The Director of the Environment and Human Settlements Division, Mr. K. Bärlund, informed the Executive Body of preparations for the Ministerial Conference "Environment for Europe", to be held in Aarhus (Denmark), from 23 to 25 June 1998. In particular, he referred to the envisaged special session of the Executive Body, to be held in conjunction with the Conference, for the adoption and signature of one or two protocols under the Convention. Key items on the agenda of the Conference itself included the possible adoption and signature of the Convention on Access to

Environmental Information and Public Participation in Environmental Decision-making, an NGO forum on the same subject, biodiversity, on energy conservation initiative, a strategy to phase out leaded fuel in Europe, changing consumption patterns, environment and economics, cleaner production and sustainable environmental management in enterprises, and the future of the Environment for Europe process.

10. He also highlighted the need for closer cooperation on subjects of common interest among the ECE environmental conventions in an effort to achieve synergies, and reported on the plans for a workshop on this subject in late 1998. He invited the Executive Body to take an active part in the workshop to share its recognized experience for the benefit of other conventions.

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

#### **A. 1997 annual review**

11. The secretariat introduced the draft 1997 annual review on strategies and policies for air pollution abatement (EB.AIR/1997/1), as well as the documents on emission data (EB.AIR/GE.1/1997/3 and Add.1) which updated the 1994 major review and the 1995 and 1996 annual reviews. Up-to-date emission data tables incorporating the amendments listed in the addendum were circulated to the delegations.

12. Delegations provided corrections and amendments or indicated that additional information would be submitted to the secretariat in writing. Updates provided by Parties but submitted too late to be included in the current draft would be incorporated into a corrigendum. Since many delegations had been late in submitting information, the secretariat stressed the importance of receiving submissions from Parties on time.

13. The secretariat informed the Executive Body that 11 Parties had ratified the 1994 Oslo Protocol on Further Reduction of Sulphur Emissions. The delegation of Switzerland announced that it, too, had recently ratified the Protocol, and the delegations of Austria, Germany, Slovakia, and Slovenia informed the Executive Body that they had completed or were about to complete the necessary steps for the ratification of the Protocol.

14. Some delegations stressed the need for condensing and homogenizing the information provided by national governments for the major and annual reviews. Information submitted to the secretariat varied from very concise to very lengthy responses. Delegations questioned the need to have annual reviews. To lessen the burden on both national governments and the secretariat, many delegations suggested reducing their frequency.

15. The Executive Body:

(a) Adopted the 1997 annual review on strategies and policies for air pollution abatement as amended;

(b) Decided to derestrict the 1997 annual review once the corrections and additional information provided to the secretariat before 15 January 1998 had been included;

(c) Decided that the review would be conducted every second year rather than every year. These reviews should focus mainly on major new developments in air pollution abatement;

(d) Decided that the secretariat in cooperation with the Compliance Committee would carry out future reviews of strategies and policies, including revisions of the questionnaire.

B. Draft outline for the 1998 major review

16. The secretariat introduced the draft outline for the 1998 major review (EB.AIR/1997/2). The outline focused on the provisions of the protocols to the Convention. The review would not include the status of implementation of the 1985 Helsinki Protocol. Instead, it would concentrate on further sulphur emission reductions achieved by Parties pending the entry into force of the 1994 Oslo Protocol. A questionnaire would be sent in late February or early March 1998 to Parties requesting information. The deadline for the submission was 1 June 1998.

17. Delegations provided corrections and amendments to the outline. One delegation suggested including a comparison between environmental and economic trends, if feasible. Delegations also proposed, as part of the questionnaire, to request information on which national programmes and/or measures were the most effective. The main corrections to the outline included: adding a map of critical loads of nutrient nitrogen in the figures; adding in section A of chapter III (Regulatory provisions) an item concerning product regulations; adding to chapter III, a section E entitled "Other means" with three items: (i) market incentives such as labelling and procurement policies; (ii) voluntary agreements; and (iii) management schemes such as ISO 14000 and Eco-management and Audit Scheme (EMAS).

18. Some delegations suggested deleting the text concerning information on CO<sub>2</sub> emissions and on energy consumption, especially in cases where the national territories went beyond the area covered by EMEP. However, many delegations felt that this kind of information was useful and that it provided good indicators of environmental quality, and of the effectiveness of programmes and measures to reduce pollution. The Chairman urged countries that might have difficulties to find practical solutions and to do their best to provide such information.

19. The Executive Body:

(a) Adopted the outline for the 1998 major review as amended;

(b) Requested the secretariat to prepare a questionnaire based on the outline and the suggestions made by delegations, including multiple choice-type questions and focusing on recent developments.

#### IV. ACTIVITIES OF THE WORKING GROUP ON STRATEGIES

20. Mr. L. BJÖRKBOM (Sweden), Chairman of the Working Group on Strategies, introduced the reports of its nineteenth, twentieth, twenty-first, twenty-second and twenty-third sessions (EB.AIR/WG.5/40, 42, 44, 46 and 48). He stressed that the year had seen an exceptionally heavy workload and expressed his appreciation to all delegations and to the secretariat for their valuable support.

21. He reported on progress in the preparation of a draft protocol on persistent organic pollutants, including the results of the meeting of heads of delegation to the Working Group on Strategies on 14-15 December 1997. The main outstanding issues of a political character that remained in the preliminary draft protocol (EB.AIR/WG.5/48, appendix I) had been resolved by the heads of delegation. He was, therefore, confident that the protocol could be finalized at the session of the Working Group on Strategies scheduled for 11-13 February 1998 and thus be ready for adoption and signature at the special session of the Executive Body at the Ministerial Conference "Environment for Europe" in Aarhus (Denmark) in June. Mr. Björkbom informed the Executive Body that, as a result of some of the agreements reached by the heads of delegation, there would be a need for a special session of the Executive Body prior to the meeting in Aarhus, to adopt a decision on the information to be submitted and the procedure for adding substances. He suggested that the session could be held in conjunction with the session of the Working Group on Strategies scheduled for 17-21 March 1998.

22. Mr. Björkbom also reported on the progress in the preparation of a draft protocol on heavy metals and referred to the draft composite negotiating text (EB.AIR/WG.5/R.81/Rev.1). He emphasized that the Working Group on Strategies had not been able to devote as much time to these negotiations as to those negotiations on POPs, but he expected that the protocol could also be finalized for adoption in Aarhus in June 1998. Many of the issues resolved for the POPs protocol would also help to reach agreement on the heavy metals protocol and a full week of negotiations could be devoted to heavy metals at the session scheduled for 19-23 January.

23. Concerning the work on a protocol on nitrogen oxides and related substances, Mr. Björkbom reported that it had so far focused on the technical preparations. A composite negotiating text (EB.AIR/WG.5/R.80) had been prepared as a basis for further negotiations, but the task of developing the substantive basis for this first multi-pollutant/multi-effect protocol was very demanding. Most of the technical input came from EMEP and from effect-related bodies under the Convention and all of this information was brought together in the Task Force on Integrated Assessment Modelling. Mr. Björkbom stressed that the Working Group on Strategies relied on the support it received from the International Institute for Applied Systems Analysis (IIASA) and that no resources had been set aside for integrated assessment modelling within the framework of the Convention. He emphasized that the lack of long-term finance for the work by IIASA could seriously threaten the review of the protocols to the Convention and might jeopardize the finalization of the multi-pollutant/multi-effect protocol. The Executive Body should explore concrete measures to guarantee the long-term support of the scientific community that cooperated at present. Mr. Björkbom drew the

attention of the Executive Body to the recommendation by the Working Group on Strategies made at its twenty-second session (EB.AIR/WG.5/46, para. 16 (f)) to extend its mandate to cover also sulphur in the negotiations.

24. The Chairman of the Working Group on Strategies introduced a draft decision on joint implementation under the Oslo Protocol on Further Reduction of Sulphur Emissions (EB.AIR/WG.5/R.57). The Working Group on Strategies at its twentieth session had recommended the Executive Body to adopt this decision, and to review it and the need for setting percentages in paragraphs 5 and 6, after experience had been gained (EB.AIR/WG.5/42, para. 59). He stressed that while proposals for specific joint implementation agreements could only be considered once the Oslo Protocol had entered into force, the Executive Body could already adopt the rules and conditions referred to in paragraph 7 of article 2 of the Oslo Protocol.

25. Finally, Mr. Björkbom introduced a draft Executive Body decision on the long-term financing of the international coordinating costs of the effect-oriented activities (EB.AIR/WG.5/R.71 and Corr.1), as amended by the Working Group on Strategies at its twenty-second session (EB.AIR/WG.5/46, para. 56).

26. The representative of UNEP reported on the preparations for a global agreement on POPs. He referred to decision 19/13C of the UNEP Governing Council of February 1997 that gave a mandate for global negotiations. In the decision, the UNEP Governing Council also recommended that due consideration should be given to the work on a POPs protocol under the Convention on Long-range Transboundary Air Pollution. In the run-up to the negotiations a series of regional and sub-regional awareness raising workshops had been prepared. Two had already been held and the UN/ECE secretariat had participated in both. The first meeting of the Intergovernmental Negotiating Committee for a global agreement on POPs was scheduled for 29 June to 3 July 1998. In concluding, the UNEP representative emphasized that the POPs protocol would be of great benefit to the global work and called upon UN/ECE member States to support the preparations for a global POPs convention.

27. The delegation of Canada announced that it had offered to host the first meeting of the International Negotiating Committee and was currently discussing the details.

28. In the ensuing discussion, many delegations expressed their satisfaction with the progress achieved in the preparations for the three new protocols.

29. The representative of the European Community informed the Executive Body about progress in its work related to the multi-pollutant/multi-effect protocol. Its Council had just adopted its acidification strategy, which included numerous references to the work under the Convention, including the agreement to finalize the ratification procedure for the Oslo Protocol. Work on an ozone strategy was under way and expected to be finalized in the summer of 1998. Subsequently, an emission ceilings directive covering nitrogen oxides, volatile organic compounds and sulphur would be prepared. A proposal for this was expected to be ready in late 1998 or early 1999. The EC work had relied heavily on the expertise of IIASA and the data prepared in the framework of the Convention. The EC was satisfied that the funding that it

had provided for IIASA to undertake the work had also benefited progress in the modelling for the preparation of the multi-pollutant/multi-effect protocol.

30. The delegation of the United Kingdom informed the Executive Body that it was still in the process of reviewing the cost data for nitrogen oxides and ammonia and that it hoped to finalize its review very soon, once it had received additional information from IIASA.

31. The delegation of the Russian Federation noted that it was supporting the work to find a cost-effective emission abatement strategy for all of Europe. It emphasized, however, that this work, at present, did not look sufficiently either at the transboundary component of air pollution effects on ecosystems and, in particular, on human health, or at the distribution of the costs of abatement. In particular, it should be ensured that the expenditure required of the countries with economies in transition should not exceed acceptable limits. The delegation therefore reiterated its request to consider non-optimized emission abatement scenarios at the same time as least-cost scenarios.

32. The delegation of Hungary proposed that integrated assessment model calculations on the optimization of emission reductions for Europe should be carried out with and without the inclusion of further sulphur emission reductions.

33. Several delegations emphasized that the fact that further reducing sulphur could be a more cost-effective way of reducing acidification should be considered in the preparation of a protocol on nitrogen oxides and related substances. Some noted that this information could be used for the review of the Oslo Protocol that was scheduled to take place once the Protocol had entered into force. Other delegations noted that Parties might prefer to opt for further reductions in emissions of sulphur instead of nitrogen compounds, if this turned out to be cheaper.

34. The secretariat reported on the status of contributions to the effect-oriented activities in 1997. As a result of the pledging of voluntary contributions at the fourteenth session of the Executive Body, all but two Parties (Austria and Belgium) that had pledged contributions had actually paid into the trust fund. The delegation of Belgium informed the Executive Body, that its payment was on its way. The delegation of Austria stated that it would attempt to initiate a payment very soon. The delegation of EC informed the Executive Body that it had succeeded to release ECU 150,000 as a voluntary contribution to the effect-oriented activities.

35. The delegation of Germany stated that, so far, it had made voluntary contributions totalling US\$ 27,700 to ICP Forests. In addition, Germany had provided contributions in kind worth about US\$ 100,000. Germany planned to continue to make similar contributions for a specified purpose in the future, provided that the situation of the Federal budget remained stable and ICP Forests continued to receive voluntary contributions in cash at least equivalent to what it had received so far. Germany was not in a position to agree to switching to legally binding contributions within the framework of a protocol. It could basically agree to a non-legally binding decision of the Executive Body on financing if this decision ensured that the form and the



level of Germany's contribution remained unchanged. The delegation also suggested examining alternative financial sources, such as the World Bank, the European Bank for Reconstruction and Development (EBRD), or the PHARE and TACIS programmes of EC.

36. The delegation of the United Kingdom, which hosts the coordinating centre for ICP Crops, noted that, because of existing financial contracts with the institute serving as coordinating centre, it was at present difficult, if not impossible, for it to provide voluntary financing through a trust fund. It referred to the agreement reached at the sixteenth session of the Working Group on Effects (EB.AIR/WG.1/1997/2, para. 70 (b), and para. 65 (1) below).

37. The delegation of Norway drew attention to the risk of a charge for administrative costs being deducted from contributions to the effect-oriented activities if the funds were to be channelled through the United Nations Trust Fund, as foreseen in paragraph 6 of the draft decision. It proposed to change the decision so that any loss of funds would be kept to a minimum.

38. Several delegations informed the Executive Body that they had not or not yet received approval from their Governments to accept the proposed draft decision. One delegation suggested that its country should be deleted from the list in annex II and added to the footnote along with Canada and the United States. Another delegation stated that it preferred to contribute in kind.

39. Many delegations stated that they were ready to adopt the draft decision. They expressed their wish that the programme should become genuinely cooperative and referred to the extremely useful results that the Convention drew from the programmes.

40. At the initiative of the Chairman of the Executive Body, the following Parties pledged to contribute financially to the effect-oriented activities in 1998: Canada, the Netherlands, Switzerland and EC. The delegation of Spain indicated that it would explore the possibility of making a contribution. The delegation of Switzerland indicated that it intended to continue its contribution to IIASA for its integrated assessment modelling activities as in 1997.

41. The Executive Body:

(a) Took note of the reports of the Working Group on Strategies (EB.AIR/WG.5/40, 42, 44, 46 and 48), expressing its appreciation for the good progress achieved;

(b) Requested the Working Group on Strategies to finalize the negotiations on the protocols on persistent organic pollutants and on heavy metals in due time for their adoption and signature at a special session of the Executive Body in conjunction with the Ministerial Conference in Aarhus (Denmark) in June 1998;

(c) Expressed its hope that the POPs protocol would stimulate rapid and good progress in the work on a worldwide agreement on POPs;

(d) Requested the Working Group on Strategies to aim at finalizing the protocol on nitrogen oxides and related substances in early 1999;

(e) Decided to request the Working Group on Strategies to also consider cost-effective emission reductions of sulphur in the preparations for a multi-pollutant/multi-effect protocol and use this information in the negotiations;

(f) Adopted decision 1997/1 on joint implementation under the Oslo Protocol, contained in annex I below;

(g) Noted that at this stage there was no consensus on a draft decision, but that the objective of establishing a long-term financial basis for the effect-oriented activities still received unanimous support;

(h) Requested its Chairman together with the Bureau to pursue its attempts to widen the support for a stable financial mechanism for the core activities under the Convention, including, besides EMEP, the effect-oriented activities and integrated assessment modelling, and agreed to revert to this issue at its special session at ministerial level in Aarhus (Denmark) in June 1998;

(i) Urged delegations to strengthen their efforts to gain support from their Governments for a mechanism that would ensure a stable financial basis for the core activities under the Convention; and

(j) Urged Parties to make voluntary contributions to the effect-oriented activities in 1998, using the indicative scale of contributions as annexed to the report of the twenty-second session of the Working Group on Strategies (EB.AIR/WG.5/46, annex I).

## V. FUTURE PRIORITIES

42. On behalf of the Bureau, the Chairman introduced a note on future priorities (EB.AIR/1997/3) for medium- and long-term work under the Convention which could be envisaged once the three protocols under preparation had been finalized. He also made available the text of an additional paragraph to be inserted between present paragraphs 4 and 5.

43. Many delegations supported the Bureau's assessment of general needs and priorities, in particular regarding the suggested main tasks: review and extension of existing protocols; and implementation of and compliance with existing agreements. Several delegations stressed the need for securing the core programmes under the Convention, that is, effect-oriented activities, long-range atmospheric transport monitoring, and integrated assessment modelling.

44. In the discussion, delegations stated, *inter alia*, that:

- Integrated assessment modelling would remain a key activity and would require financial backing, including financial support for such activities at IIASA;

- "Economic benefit evaluations associated with various strategies" should be linked with "Integrated assessment modelling" and "Emission projections and structural changes";
- The development of joint strategies would require enhanced coordination with other bodies, e.g. the European Union, the Baltic Marine Environment Protection Commission (HELCOM), the Oslo-Paris Commission for the Protection of the Marine Environment of the North-East Atlantic (OSPARCOM), the Barcelona Convention secretariat, the Organisation for Economic Co-operation and Development (OECD) and the North Sea initiatives;
- An institutional framework for risk assessments regarding persistent organic pollutants should be identified;
- Mechanisms for helping Parties to adopt, ratify and implement protocols should be explored;
- The structure of work of the Executive Body itself should be reviewed with a view to achieving an efficient and timely generation and flow of information on effects, long-range atmospheric transport, modelling, techniques, costs, etc.;
- The problems and achievements under the Convention should be analysed and promotional information activities should be prepared to raise its profile, using the Ministerial Conference "Environment for Europe" and other events as vehicles;
- Technical and other information should be disseminated to improve implementation.

45. Regarding the possible development of new protocols for new pollutants, delegations were reluctant to take any firm position at this stage. While it was recognized that particulate matter had both major health implications and had a transboundary dimension, it was stated that sources, atmospheric transport and effects should be assessed before any decision was taken on whether particulate matter was sufficiently covered by existing protocols or a new protocol was required. Such an assessment could be carried out within the existing institutional framework under the Executive Body. Many delegations, in referring to particulate matter, proposed that a joint task force with the World Health Organization's European Centre for Environment and Health (WHO/ECEH) could be a useful forum for addressing scientific, health-related issues. One delegation suggested that organometallic compounds might be a candidate for future negotiations.

46. The Executive Body:

(a) Endorsed the note by the Bureau on future priorities (EB.AIR/1997/3), and the following additional paragraph to be inserted between paragraphs 4 and 5:

"The Bureau believes that the structure and activities of the Convention must continue to evolve and develop in the context of changing international institutions and environmental law. It is

essential that the Convention should apply its resources in those areas in which the greatest benefits for human health and the environment can be obtained and that the duplication of effort should be avoided. It is essential that the secretariat should be provided with adequate resources to represent the Convention in appropriate international forums."

(b) Requested delegations to provide written comments to the secretariat by 23 January 1998 on the main weaknesses of past and present structures and working methods and suggestions for improvements of maximum one page per item, for subsequent compilation and review by the Bureau;

(c) Requested its Bureau to prepare, on the basis of the note on future priorities and the discussions at the present session, a proposal for organizing the Executive Body's work after the completion of ongoing negotiations, including consideration of how to secure funding for core activities, for consideration by the Executive Body at its sixteenth session;

(d) Requested the Bureau to prepare a communication plan for the short and medium term and to define promotional activities geared towards the Ministerial Conference "Environment for Europe".

#### **VI. EXPERT GROUP ON IMPLEMENTATION**

47. Mr. Patrick SZÉLL (United Kingdom), Chairman of the Expert Group on Implementation, introduced its second report (EB.AIR/1997/4) and gave an overview of the proposed compliance regime. He drew the attention of the Executive Body to some of its key features. The compliance regime developed by the Expert Group was based on the provision on compliance made for the 1994 Protocol on Further Reduction of Sulphur Emissions. It would apply to existing and future protocols to the Convention but not to the Convention itself.

48. The Chairman of the Executive Body reminded delegations of the high priority given to the Implementation Committee. Delegations provided some corrections to the draft decision and to its annex on structure, functions and procedures. The Chairman of the Expert Group stressed, for clarification, that only a Party to the protocol in question could review the compliance of another Party to that same protocol. It was understood by the delegations that the Implementation Committee's proceedings were meant to be closed meetings and that the Executive Body's decisions concerning compliance were not legally binding unless a provision in the protocol in question rendered them so.

49. Ms. Kirsten Hillman (Canada), designated Chairperson of the Implementation Committee, proposed a decision to be taken by the Parties to the 1991 Protocol concerning the Control of Emissions of Volatile Organic Compounds or their Transboundary Fluxes, which was unanimously accepted.

50. As a result of the discussion, the Executive Body:

(a) Took note with appreciation of the report (EB.AIR/1997/4) and the excellent work done by the Expert Group on Implementation;

(b) Modified the proposed text for a model article on compliance for the protocols on persistent organic pollutants and on heavy metals and for any future protocols (annex II below);

(c) Deleted paragraph 14 of the report of the Expert Group on Implementation (EB.AIR/1997/4);

(d) Adopted decision 1997/2 concerning the Implementation Committee, its structure and functions and procedures for the review of compliance, as annexed to this report (annex III below);

(e) Established the Implementation Committee and decided that on an interim basis the number of Committee members would be increased by one;

(f) Elected to the Implementation Committee:

- Ms. Kirsten Hillman (Canada) as Chairperson for a one-year term;
- Mr. Bohuslav BRIX (Czech Republic), Ms. Marina GONATAS (United States), and Ms. Nataly KARPOVA (Russian Federation) for a one-year term; and
- Mr. Harald DOVLAND (Norway), Mr. Ramón GUARDANS (Spain), Mr. Dieter JOST (Germany), Mr. Patrick SZÉLL (United Kingdom) and Mr. Stanislaw WAJDA (Poland) for a two-year term;

(g) Adopted decision 1997/3 on compliance monitoring for the VOC Protocol, set out in annex IV below.

## VII. PROGRESS IN SELECTED AREAS OF COOPERATION

### A. Cooperative programme for monitoring and evaluation of the long-range transmission of air pollutants in Europe (EMEP)

51. Mr. M. Williams (United Kingdom), Chairman of the EMEP Steering Body, introduced the report of its twenty-first session (EB.AIR/GE.1/1997/2). He also informed the Executive Body that to improve the possibilities for using the EMEP results, most of the report, including receiver-emitter matrices for sulphur and nitrogen deposition, was available at the secretariat in electronic form. The report had already been circulated by e-mail to those Steering Body members who had an e-mail address, and would also be circulated on request to any interested Executive Body members. He encouraged delegates to use the data, which were now, for the first time, easy to access. Moreover, the Chairman announced that the emission data and the joint EMEP/CORINAIR Atmospheric Emission Inventory Guidebook were available on the Internet on the homepages of ECE and the European Environment Agency (<http://www.unece.org> and <http://www.eea.eu.int>), and the Guidebook also on CD-ROM.

52. Mr. Williams drew the attention of the Executive Body to the Parties' progress in reporting their emission data and the state of the emission database at the Meteorological Synthesizing Centre-West (MSC-W). In 1996 Parties had for the first time, been requested to report on heavy metal (HM)

and persistent organic pollutant (POP) emissions. According to the updated tables circulated at the session, 24 and 16 Parties, respectively, were able to report data for selected HMs and POPs. Mr. Williams stressed the need to improve this situation, and to continue to improve the reporting on the emissions of other pollutants, in particular ammonia and non-methane volatile organic compounds. As agreed in the work-plan, and taking into account the Steering Body's decision to apply the draft reporting guidelines on a trial basis, the secretariat had, in November, circulated a new request for emission data (including a diskette for electronic reporting), to which Parties should reply by the end of December. Furthermore, Mr. Williams drew the attention of the Executive Body to the importance of international shipping emissions to acidifying deposition in Europe.

53. Mr. Williams reported also on the progress of MSC-W in modelling acidifying pollutants and photochemical oxidants. Major progress was achieved in developing and applying the multi-layer Eulerian model for acidifying pollutants with a 50-km resolution. The 1992 source-receptor matrices for sulphur and nitrogen were attached to the Steering Body's report to make it possible to compare them with the results of the Lagrangian model which has so far been used to calculate the matrices. MSC-W intended to finalize the Eulerian oxidant model during 1998. The Bureau of the Steering Body would consider how best to use this model in the context of the multi-pollutant protocol. The Executive Body was informed about the reorganization of the Meteorological Synthesizing Centre-East (MSC-E). It had fully implemented the division of work between the meteorological centres and, consequently, concentrated only on modelling HMs and POPs. MSC-E had made progress in the basic scientific modelling work and been able to present preliminary results for selected HMs and POPs as described in detail in the Steering Body's report. The Chemical Coordinating Centre (CCC) had continued its efforts to further improve the quality assurance of monitoring data. The Bureau would consider making the EMEP monitoring data available on the Internet as soon as possible. At its twenty-first session, the Steering Body had also provisionally considered its long-term goals. Mr. Williams invited the delegates to participate actively in the further planning of the EMEP work during the first quarter of 1998.

54. The representative of Cyprus requested the meteorological centres to include the results of Cyprus in their reports. Both centres agreed to do so.

55. As a result of the discussion, the Executive Body:

(a) Took note with appreciation of the report on the twenty-first session of the Steering Body and the modelling and monitoring results annexed to it (EB.AIR/GE.1/1997/2);

(b) Took note of the emission data and the progress in reporting and quality control of these data (EB.AIR/GE.1/1997/3 and Add.1) and reminded the Parties to report emissions in due time, as requested by the secretariat, fill in gaps in the data and carefully check data consistency;

(c) Encouraged Parties to apply the new draft reporting guidelines (EB.AIR/GE.1/1997/5) on a trial basis, as feasible, in an effort to improve the quality of emission data, and provide comments on these guidelines to the secretariat by the end of March 1998;

(d) Drew the attention of the Parties to their responsibility to maintain the necessary monitoring network and expand it to cover the whole EMEP area; encouraged the Parties to improve further their EMEP monitoring so as to improve the quality of measurements, and to nominate, if they had not yet done so, their national quality assurance managers; and reminded them to report monitoring data in due time;

(e) Encouraged EMEP to continue cooperation on emissions, atmospheric monitoring and modelling with the regional marine commissions (HELCOM, OSPARCOM and the Barcelona Convention);

(f) Requested the Steering Body, with the assistance of its Bureau and the secretariat, to consider further the visions of the EMEP work until 2005/2010 and to prepare the seventh phase for the years 1999-2002.

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

56. Mr. K. Bull (United Kingdom), Chairman of the Working Group on Effects, introduced the report on the sixteenth session of the Working Group (EB.AIR/WG.1/1997/2). He reviewed the results achieved by the Working Group on Effects, the International Cooperative Programmes and the Mapping Programme, and stressed their substantive contribution to the implementation of the Convention and the preparation of the new NO<sub>x</sub> protocol (EB.AIR/1997/5, paras. 15-30).

57. He noted, in particular:

(a) The progress in the mapping of critical levels and loads and the increased number of national contributions to the preparation of the European critical loads maps;

(b) The approval, by the Working Group on Effects, of the updated maps of critical loads and exceedances of sulphur and nitrogen;

(c) The recent comments concerning the critical loads data used for developing a multi-pollutant multi-effect protocol, implying, in particular, that there was no centrally available database and that there was a lack of transparency and accountability;

(d) The progress made in further drawing and updating the level II maps of critical levels of ozone for crops;

(e) The development of an alternative approach to setting gap closure targets, based on accumulated exceedances;

(f) The results of the Bad Harzburg workshop on critical limits and effects-based approaches for heavy metals and persistent organic pollutants, and the need for further knowledge and the development of relevant methodologies;

(g) The publication of a number of technical reports on specific topics, as well as the following summarizing reports: (i) Ten years of monitoring forest condition in Europe; (ii) The nine-year report: acidification of surface water in Europe and North America -- long-term

developments (1980s and 1990s); and (iii) Calculation and mapping of critical thresholds in Europe: status report 1997 of the Coordination Center for Effects;

(h) The publication of the report on ten years of monitoring forest condition in Europe and the concern expressed by the Working Group on Effects about the non-significance of relationships reported in the report between crown condition and air pollution;

(i) The preparation of the 1998 substantive report on past and future trends in the atmospheric transport and effects of sulphur and nitrogen;

(j) The outcome of the discussions with representatives of the WHO/ECEH aimed at finding ways and means of further intensifying cooperation in addressing the health effects of long-range transboundary pollution, and the proposal to establish a joint task force of WHO/ECEH and the Executive Body to deal, as a priority, with the health aspects of fine particulates.

58. He also noted the continuing need to regularly update the objectives and the methods of work of the individual programmes, in view of the changing priorities of the Executive Body and, to this end, the preparation of a note on future orientation of effect-oriented activities (EB.AIR/WG.1/1997/13) which, once further elaborated, might provide a strategic long-term plan for the development of the Working Group on Effects's activities. He underlined, in this context, the importance of the independent external review of the International Cooperative Programmes and the Mapping Programme, planned for the second half of 1998, and its timeliness.

59. He reiterated the crucial importance of the work carried out by the National Focal Points, and of the continuing support provided by the lead countries and coordinating centres.

60. The delegation of Spain provided information on a workshop on data analysis for modelling and assessment of the biogeochemical effects of air pollution on temperate ecosystems, organized in cooperation with the Government of Finland and ICP Integrated Monitoring.

61. The Executive Body welcomed the important results achieved by the Working Group on Effects and its subsidiary bodies in implementing the effect-oriented activities, which provided an important input for the effective implementation of the Convention.

62. It also affirmed the need for wider dissemination of critical loads data, which were the property of the Parties. It recognized, however, the possible resource implications, as well as the need to define general rules for data release.

63. The Executive Body held that it was up to the Task Force for ICP Forests and the Working Group on Effects to further consider the possible effective use to which level I data could be put in the context of the further development of the programme's monitoring activities. Nevertheless, the Executive Body stressed that these activities should fully correspond to the



needs of the Convention. To this end it was underlined that in the future, particularly in reporting results, special emphasis should be laid on level II.

64. The Executive Body welcomed the proposal to establish a joint task force with WHO/ECEH to deal with the health aspects of fine particulates, but stressed that studied issues should be directly related to the long-range transport of air pollutants and that every effort should be made to avoid any undue duplication of work.

65. As a result of the presentation and the discussions, the Executive Body:

(a) Took note with appreciation of the report of the sixteenth session of the Working Group on Effects (EB.AIR/WG.1/1997/2);

(b) Took note of the important results of the International Cooperative Programmes and the Mapping Programme, and their substantive contribution to the effective implementation of the Convention and the preparation of a new NOx protocol, as presented in the 1997 joint report of the International Cooperative Programmes and the Mapping Programme (EB.AIR/WG.1/1997/3);

(c) Endorsed the updated European maps of critical loads and exceedances of sulphur and nitrogen (EB.AIR/WG.1/1997/4) prepared on the basis of an increased number of national contributions;

(d) Welcomed the progress made in the preparation of level II maps of critical levels of ozone for crops;

(e) Agreed that data used for the preparation of the multi-pollutant, multi-effect protocol should be transparent and made available to interested parties, and requested the Bureau of the Working Group on Effects to draw up draft rules for data release and to submit them for consideration to the Executive Body in March 1998;

(f) Noted the plans of the ICP Forests Task Force to evaluate in depth the programme's objectives, organizational structure, scope of activities and methods of work, in order to ensure its effective operation (EB.AIR/WG.1/1997/2, para. 24 (i));

(g) Approved the executive summary of the nine-year report: acidification of surface waters in Europe and North America -- long-term developments (1980s and 1990s) (EB.AIR/WG.1/1997/7), and noted that the trends in water chemistry and biota presented in it showed recovery from acidification in some parts of Europe, a recovery related to the decrease in acidifying deposition, in particular of sulphur compounds;

(h) Endorsed the outline for the 1998 substantive report consisting of the following chapters: (i) introduction; (ii) pollution trends; (iii) empirical trends; (iv) modelled trends; and (v) conclusions and recommendations;

(i) Took note of the report prepared by WHO/ECEH on particulate matter (EB.AIR/WG.1/1997/12) and expressed its satisfaction with the effective cooperation with WHO/EURO;

(j) Agreed to set up a joint task force with WHO/ECEH to address the health effects of long-range transboundary air pollution, giving top priority to fine particulates, and requested the Working Group on Effects to prepare terms of reference for it;

(k) Took note of the plans of the Working Group on Effects to further update and develop the effect-oriented activities, and agreed that an independent review of the effect-oriented activities should take place in the second half of 1998;

(l) Took note of document EB.AIR/WG.1/1997/14 on the financing of effect-oriented activities and noted that direct financial contributions of lead countries or the host countries to the coordinating centres, if duly documented and officially reported to the Bureau and to the secretariat, would be considered as voluntary contributions towards funding the effect-oriented activities under the Convention and would be recorded as such.

### C. Technologies for emission control

66. Mr. L. LINDAU (Sweden), Chairman of the Working Group on Abatement Techniques, introduced the report on its fifth session (EB.AIR/WG.6/10). In particular, he reported on the ongoing work to prepare on and/or revise the technical annexes on abatement techniques to reduce emissions of ammonia and of VOCs and NOx within the expert group on ammonia led by United Kingdom and the Task Forces on Assessment of Control Options/Techniques for VOCs and NOx led by Germany.

67. He invited the Executive Body to endorse the draft conclusions and recommendations of the Sixth Seminar on Control Technology for Emissions from Stationary Sources, held in Budapest from 14 to 17 October 1996 (EB.AIR/SEM.3/3), the revised draft guidelines on options for air pollution abatement regulation in countries in transition (EB.AIR/WG.6/R.29/Rev.1), the revised conclusions and draft recommendations related to the adaptation of legal frameworks for VOC abatement in countries in transition (EB.AIR/WG.6/R.39/Rev.1), and, finally, the technical note on gas-engines in co-generation plants and control options and techniques for the use of solvents (EB.AIR/WG.6/R.40/Rev.1), based on the discussion papers submitted to the Sixth Seminar.

68. The delegation of the Netherlands stressed the importance of preparing draft technical annexes on control options/techniques for different pollutants and of submitting them in due time as input for negotiations on the protocol on nitrogen oxides and related substances.

69. The secretariat informed the Executive Body that the Executive Secretary of the ECE had circulated to the Parties on 25 September 1997 the revision of Annex III to the 1991 Geneva Protocol, related to control technologies for emissions of VOCs from selected mobile sources other than road vehicles (EB.AIR/WG.6/R.26/Rev.1), adopted by the Executive Body at its fourteenth session, as the had Protocol entered into force on 29 September 1997.

70. The Executive Body:

(a) Took note with appreciation of the report on the fifth session of the Working Group on Abatement Techniques (EB.AIR/WG.6/10);

(b) Decided to carry out further work on control techniques for emissions of reduced nitrogen, including industrial sources, to be integrated into the final report by the expert group, led by the United Kingdom, and to prepare draft technical annex(es) on abatement techniques for emissions of ammonia for review at the sixth session of the Working Group on Abatement Techniques and subsequently by the Working Group on Strategies, according to established practice;

(c) Took note of the progress made by the Task Forces on the Assessment of Abatement Options/Techniques for VOCs and NOx and requested them to prepare, on the basis of their work, draft technical annexes on abatement options/techniques for emissions of VOCs and NOx from stationary sources and draft annexes on emission limit values for those pollutants, where appropriate, for review at the sixth session of the Working Group on Abatement Techniques and subsequently by the Working Group on Strategies, according to established practice. To achieve a more balanced representation in the work of the Task Forces, the Executive Body called for a wider participation by experts from countries in transition;

(d) Endorsed the revised draft guidelines on options for air pollution abatement regulation in countries in transition (EB.AIR/WG.6/R.29/Rev.1) for circulation to countries in transition together with selected protocols to the Convention and EU directives;

(e) Endorsed the revised conclusions and draft recommendations related to the adaptation of legal frameworks for VOC abatement in countries in transition (EB.AIR/WG.6/R.39/Rev.1) for circulation to all Parties to the Convention;

(f) Invited Parties to organize workshops to address air pollution problems within selected sectors based on the needs of countries in transition and focused on research and development and industrial cooperation;

(g) Endorsed and derestricted the conclusions and recommendations of the Sixth Seminar on Control Technology for Emissions from Stationary Sources (EB.AIR/SEM.3/3, annexes I, II and III);

(h) Endorsed the technical note containing a summary of discussion papers on gas-engines in co-generation plants and control options and techniques for the use of solvents submitted to the Sixth Seminar (EB.AIR/WG.6/R.40/Rev.1) and decided to publish it in the Air Pollution Studies series.

**VIII. WORK-PLAN**

71. The secretariat introduced the draft work-plan for the implementation of the Convention (EB.AIR/1997/6), amended to reflect the discussion and decisions taken by the Executive Body earlier in the present session.

72. Ms. Kirsten Hillman (Canada), Chairperson of the Implementation Committee, introduced a new item 1.2 on compliance, which set out the activities of the Implementation Committee.

73. The Executive Body adopted its work-plan as contained in annex V below.

74. The Executive Body tentatively scheduled its sixteenth session from 7 to 11 December 1998. Two special sessions of the Executive Body would be held in the first half of 1998 (19-20 March 1998 in Geneva and 22-23 June 1998 in Aarhus, Denmark). A provisional list of 1998 meetings is contained in annex VI below.

#### **IX. ACTIVITIES OF ECE BODIES AND INTERNATIONAL ORGANIZATIONS RELEVANT TO THE CONVENTION**

75. The secretariat informed the Executive Body about the ongoing activities of the principal subsidiary bodies of ECE with relevance to its work-plan, in particular the creation of the Committee on Sustainable Energy to succeed to the former Committee on Energy, the status of the ECE/FAO Temperate and Boreal Forest Resource Assessment 2000 and its relation to ICP-Forests, and the latest amendments to ECE Regulations 83, 85 and 101 aimed at vehicles equipped with engines fuelled by LPG and CNG and used for the carriage of passengers and goods.

76. The secretariat also provided information on the most relevant activities of other international organizations, particularly the International Maritime Organization (IMO), the International Civil Aviation Organization (ICAO) and the European Environment Agency (EEA).

77. The International Conference of Parties to the International Convention for the Prevention of Pollution from Ships of 1973, as modified by the Protocol of 1978 relating thereto, so-called MARPOL 73/78, had taken place in London from 15 to 26 September 1997. It had considered and adopted the Protocol of 1997 to amend MARPOL 73/78 by adding a new annex on Regulations for the Prevention of Air Pollution from Ships. The annex focused on ships of at least 400 gross tonnage and required the issue of an international air pollution prevention certificate covering ozone-depleting substances, nitrogen oxides and VOCs. It set the maximum sulphur content of any fuel oil used on board ships at 4.5% m/m and provided a legal basis for establishing so-called sulphur oxides emission control areas, where stricter fuel standards were required (1.5% m/m). The Baltic Sea area had already been designated as such.

78. EEA had produced data on the state and trends of such problems as acidification, eutrophication, photo-chemical oxidant formation and emissions of heavy metals and POPs and on their relation to human health and the environment. This information was included in the EEA Monograph entitled "Air Pollution in Europe 1997".

79. ICAO was considering whether or not to tighten the present standards for NOx and was seeking to identify a rational common basis on which States wishing to introduce environmental levies on air transport could do so. The ICAO Council had strongly recommended that any environmental levies on air

transport which States might introduce should be in the form of charges rather than taxes and that the funds so collected should be applied to mitigating the environmental impact of aircraft engine emissions.

80. The representative of the World Meteorological Organization (WMO) distributed a note on its ongoing activities in relation to the Convention. He also recalled the cooperation between EMEP and WMO since 1976 and ensured further WMO support for the implementation of the work-plan under the Convention.

#### **X. FINANCIAL ISSUES**

81. The secretariat introduced document EB.AIR/1997/7 on the financial requirements for the implementation of EMEP. Two Parties to the Convention, Latvia and Malta, had become Parties to the EMEP Protocol in 1997 (in table 3 of EB.AIR/1997/7, Latvia should be in the upper part of the table instead of Lithuania). In particular, the secretariat drew the attention of the Executive Body to the status of the Trust Fund. For the first time this year the reimbursements for the second half of 1997 could not be fully made from the Trust Fund to the EMEP centres as budgeted, due to late payments and arrears. The secretariat also drew the Executive Body's attention to the considerable extrabudgetary contributions needed to carry out the work agreed in the work-plans, in particular at MSC-W. The secretariat also informed the Executive Body that the 1998-2000 United Nations scale of assessments was not yet available to calculate Parties' mandatory contributions, and for this reason the 1998 contributions were based on the 1997 scale. The new scales could be applied for 1999, if available. Furthermore, the Steering Body and its Bureau had thoroughly considered the EMEP centres' budgeting principles. It had requested its Bureau to continue, with the assistance of the United Nations auditors, to develop the budgeting procedures and follow-up mechanisms for EMEP.

82. In the ensuing discussion, several delegations informed the Executive Body about their 1997 mandatory contributions to EMEP which were not yet indicated in table 1 of EB.AIR/1997/7. The delegation of the Russian Federation informed the Executive Body that it had paid both its mandatory and its pledged contributions to MSC-E at the beginning of 1997, and would confirm this also in writing to the secretariat. In this context, it also expressed its intention to support the EMEP work through the Trust Fund starting in 1998 as agreed.

83. The delegation of the Russian Federation also drew the attention of the Executive Body to a translation error in paragraph 11 of EB.AIR/1997/7, where in the second sentence MSC-W should read MSC-E.

84. The Executive Body took note with appreciation of Norway's extrabudgetary contributions to MSC-W as the centre's host country.

85. Taking into account the views and the reservations expressed by several delegations concerning any increases in the 1998 and 1999 budgets, the Executive Body:

(a) Approved provisionally the detailed 1998 EMEP budget as proposed by the Steering Body (EB.AIR/GE.1/1997/2, para. 45 (m)); and decided that the 1998 mandatory contributions in United States dollars would be calculated on the basis of the total budget of US\$ 1,855,000, using the 1997 United Nations scale of assessment for cost-sharing. The programme support cost in 1998 (3%) would be covered by reducing each centre's budget by 3% as given in tables 3 and 2 (option B) in EB.AIR/1997/7. The Chairman invited Parties to make voluntary contributions to cover the 3% shortfall;

(b) Agreed that, taking into account that the 1999 budget year would be the first of the seventh phase, the Steering Body should, with the assistance of its Bureau, consider the details of the centres' 1999 budgets and their work-plans for approval by the Executive Body at its sixteenth session; requested the Steering Body and its Bureau to prepare two optional budgets for 1999, one based on a 10% increase and another on no increase in the total budget compared to 1998, and to indicate the implications for the work programme in each option; and requested the secretariat to inform the Executive Body about the 1999 mandatory contributions in United States dollars at the special session in March 1998;

(c) Urged Parties to pay their arrears to the Trust Fund, and recommended that Parties should pay their contributions in cash to the Trust Fund as early as possible during the fiscal year;

(d) Mandated its Bureau to explore options for a new Trust Fund arrangement to be put in place if the costs of the present arrangement with United Nations Headquarters should rise substantially.

86. Taking into account that in 1998 MSC-E would for the first time be financed through the Trust Fund, the Executive Body agreed that MSC-E would use the available voluntary contributions from the Russian Federation to carry out its workplan until it received payments from the Trust Fund.

87. The representative of MSC-W drew the attention of the Executive Body to the irregularity of the payments to the Centre over the years due to the late issuance of allotment advice from United Nations Headquarters. He requested the Bureau of the Executive Body to address this matter urgently.

88. The Executive Body urged Parties to make voluntary contributions to the Trust Fund (TFACT) for funding the participation of experts from countries with economies in transition at meetings under the Executive Body (see paragraph 89 below).

#### **XI. OTHER BUSINESS**

89. The secretariat introduced a proposal by the Bureau on the facilitation of participation of countries with economies in transition (EB.AIR/1997/8), reflecting their new circumstances. The Executive Body endorsed the proposal, as contained in annex VII below.

90. The secretariat informed the Executive Body that Heads of delegation would receive copies of the current ECE mailing list (EB.AIR) for review and correction in January. It announced that the publication of the Convention

and its protocols would be issued also in French in the very near future. It further informed the Executive Body of the recently updated secretariat homepage (<http://www.unece.org>).

91. The Chairman informed the Executive Body of plans for compiling information material for the Ministerial Conference "Environment for Europe", and invited Parties to provide input to the secretariat as soon as possible.

#### **XII. ELECTION OF OFFICERS**

92. Mr. J. Thompson (Norway) was re-elected Chairman; Messrs. J. Beale (United States), L. Björkbom (Sweden), K. Bull (United Kingdom), R. Görden (Germany), L. Lindau (Sweden), M. Williams (United Kingdom) and J. Zurek (Poland) were re-elected Vice-Chairmen. The Executive Body also re-elected Mr. L. Björkbom as Chairman of the Working Group on Strategies, and Mr. L. Lindau as Chairman of the Working Group on Abatement Techniques.

#### **XIII. ADOPTION OF THE REPORT**

93. The Executive Body adopted for general distribution the report of its fifteenth session on 19 December 1997.

Annex I

**DECISION 1997/1 ON RULES AND CONDITIONS FOR JOINT IMPLEMENTATION  
UNDER THE OSLO PROTOCOL**

The Executive Body,

Referring to article 2, paragraph 7, of the 1994 Oslo Protocol on Further Reduction of Sulphur Emissions, calling upon the Executive Body to elaborate and adopt rules and conditions for joint implementation,

Noting that no obligations other than those set out in annex II to the Protocol shall be affected, and that joint implementation shall not affect the reviews foreseen under article 8, paragraph 2,

Recalling that these rules and conditions shall ensure the fulfilment of the obligations set out in article 2, paragraph 2, and also promote the achievement of the environmental objectives set out in article 2, paragraph 1,

Decides to adopt the Rules and Conditions for Joint Implementation set out below.

**Rules and Conditions for Joint Implementation**

1. For the purposes of these rules and conditions,
  - "Parties" means, unless the context otherwise requires, the Parties to the 1994 Oslo Protocol on Further Reduction of Sulphur Emissions;
  - "Deposition" means the sulphur deposition as calculated by EMEP;
  - "Joint implementation agreement" means an agreement between two or more Parties to cooperate to implement their emission reduction obligations;
  - "Third party" is a Party which is not party to the joint implementation agreement in question.
2. Only Parties to the Protocol may enter into a joint implementation agreement.
3. A proposal for a joint implementation agreement shall, as a minimum:
  - (a) Specify the part of its emission reduction obligation (expressed as kilotonnes of SO<sub>2</sub>) in accordance with the Protocol which one Party will implement through reductions carried out by another Party;
  - (b) Specify the emission reduction (expressed as kilotonnes of SO<sub>2</sub>) which the other Party will undertake in addition to its emission reduction obligation in accordance with the Protocol;
  - (c) Specify the duration of the agreement;



(d) Contain an assessment of the deposition impact of the agreement, detailing the changes in total national depositions, in deposition at grid cell resolution and in ecosystem protection as calculated by EMEP using a multi-year average; and

(e) Indicate the level of the expected cost savings resulting from the agreement and the means of compensation chosen.

4. A joint implementation agreement shall lead to a decrease in the difference between depositions of sulphur resulting from the emission ceilings listed in annex II to the Protocol and the critical sulphur depositions within the geographical scope of EMEP.

5. Joint implementation agreements shall not lead to a change in total national deposition for third parties of more than x \*/ per cent compared with the deposition resulting from the emission ceilings listed in annex II to the Protocol.

6. Joint implementation agreements shall not lead to a change in deposition at grid cell level for third parties of more than y \*/ per cent compared with the deposition resulting from the emission ceilings listed in annex II to the Protocol.

7. The deposition change for a party to a joint implementation agreement resulting from that agreement shall not be part of the calculation of its deposition change resulting from other joint implementation agreements to which it is a third party.

8. Proposals for joint implementation agreements, containing the information specified in paragraph 3 above, shall be submitted in writing to the secretariat, which shall communicate them to all Parties. Any cost associated with the submission of the proposal shall be borne by the parties to the proposed joint implementation agreement. The Parties shall consider the proposed joint implementation agreements at the next session of the Executive Body, provided that those proposals have been circulated by the secretariat to the Parties at least ninety days in advance. Parties to a proposed joint implementation agreement should notify and consult the most affected third parties well before the submission of their proposal.

9. If several proposals have been received by the secretariat for consideration at a session of the Executive Body, they shall be considered in the order in which they were received.

10. The proposals for joint implementation agreements shall be adopted by consensus of the Parties present at a session of the Executive Body, taking into consideration the conditions contained in paragraphs 4 to 7 above.

11. The secretariat shall keep a record of joint implementation agreements. The joint implementation agreements shall be reported on and monitored in accordance with articles 4 and 5 of the Protocol.

12. Compliance and disputes between Parties that have entered into joint implementation agreements or between these Parties and third parties, shall be dealt with in accordance with articles 7 and 9 of the Protocol.

13. If a Party is in non-compliance with the emission reduction obligation arising from a joint implementation agreement, this agreement shall be considered terminated.

Note:

\*/ The percentages shall be defined after some experience with the scheme has been gained. In the meantime they will have to be determined on an ad hoc basis.

Annex II

**MODEL ARTICLE ON COMPLIANCE**

Compliance by the Parties with their obligations under the present Protocol shall be reviewed regularly. The Implementation Committee established by decision 1997/2 of the Executive Body at its fifteenth session shall carry out such reviews and report to the Executive Body in accordance with the terms of the annex to that decision, including any amendments thereto.

Annex III

**DECISION 1997/2 CONCERNING THE IMPLEMENTATION COMMITTEE, ITS STRUCTURE  
AND FUNCTIONS AND PROCEDURES FOR REVIEW OF COMPLIANCE**

The Executive Body,

Determined to promote and improve compliance with the existing protocols to the 1979 Convention on Long-range Transboundary Air Pollution,

Recalling article 10, paragraph 2, of the Convention, as well as article 7 of the 1994 Protocol on Further Reduction of Sulphur Emissions and article 3, paragraph 3, of the 1991 Protocol concerning the Control of Emissions of Volatile Organic Compounds or their Transboundary Fluxes,

1. Establishes the Implementation Committee for the review of compliance by the Parties with their obligations under the protocols to the Convention;
2. Decides that the structure and functions of the Implementation Committee and the procedures for review of compliance shall be those set out in the annex to this decision;
3. Urges the Parties to the 1994 Protocol on Further Reduction of Sulphur Emissions to decide that the structure, functions and procedures set out in the annex to this decision shall apply for the review of compliance with article 7, paragraph 3, of that Protocol, in place of the regime adopted at the special session of the Executive Body in Oslo on 14 June 1994;
4. Urges the Parties to the 1991 Protocol concerning the Control of Emissions of Volatile Organic Compounds or their Transboundary Fluxes to decide to use the Implementation Committee established by this decision for the purposes of article 3, paragraph 3, of that Protocol and to apply the structure, functions and procedures set out in the annex to this decision to monitor compliance with that Protocol;
5. Resolves that the Implementation Committee as well as the structure, functions and procedures set out in the annex to this decision shall be available for the review of compliance with future protocols in accordance with the terms of such protocols and of any decisions of the Parties thereto.

Annex

**STRUCTURE AND FUNCTIONS OF THE IMPLEMENTATION COMMITTEE AND  
PROCEDURES FOR REVIEW OF COMPLIANCE**

Structure

1. The Committee shall consist of eight Parties to the Convention; each member of the Committee shall be a Party to at least one protocol. The Parties, meeting within the Executive Body, shall, as soon as practicable, elect four Parties to the Committee for a term of two years and four Parties for a term of one year. At each session thereafter, the Executive Body shall elect four new Parties for a term of two years. Outgoing Parties may be re-elected for one consecutive term, unless in a given case the Executive Body decides otherwise. The Committee shall elect its own Chairman and Vice-Chairman.

Meetings

2. The Committee shall, unless it decides otherwise, meet twice a year. The secretariat shall arrange for and service its meetings.

Functions of the Committee

3. The Committee shall:

(a) Review periodically compliance by the Parties with the reporting requirements of the protocols;

(b) Consider any submission or referral made in accordance with paragraphs 4 and 5 below with a view to securing a constructive solution;

(c) Be satisfied, before considering such a submission or referral, that the quality of data reported by a Party has been evaluated by a relevant technical body under the Executive Body and/or, where appropriate, by an expert nominated by the Bureau of the Executive Body; and

(d) Prepare, at the request of the Executive Body, and based on any relevant experience acquired in the performance of its functions under subparagraphs (a), (b) and (c) above, a report on compliance with or implementation of specified obligations in an individual protocol.

Submissions by Parties

4. A submission may be brought before the Committee by:

(a) One or more Parties to a protocol that have reservations about another Party's compliance with its obligations under that instrument. Such a submission shall be addressed in writing to the secretariat and supported by corroborating information. The secretariat shall, within two weeks of receiving a submission, send a copy of it to the Party whose compliance is at issue. Any reply and information in support thereof shall be submitted to the secretariat and to the Parties involved within three months or such longer period as the circumstances of a particular case may require. The secretariat

shall transmit the submission and the reply, as well as all corroborating and supporting information, to the Committee, which shall consider the matter as soon as practicable; or

(b) A Party that concludes that, despite its best endeavours, it is or will be unable to comply fully with its obligations under a protocol. Such a submission shall be addressed in writing to the secretariat and explain, in particular, the specific circumstances that the Party considers to be the cause of its non-compliance. The secretariat shall transmit the submission to the Committee, which shall consider it as soon as practicable.

#### Referrals by the secretariat

5. Where the secretariat, in particular upon reviewing the reports submitted in accordance with a protocol's reporting requirements, becomes aware of possible non-compliance by a Party with its obligations, it may request the Party concerned to furnish necessary information about the matter. If there is no response or the matter is not resolved within three months or such longer period as the circumstances of the matter may require, the secretariat shall bring the matter to the attention of the Committee.

#### Information gathering

6. To assist the performance of its functions under paragraph 3 above, the Committee may:

(a) Request further information on matters under its consideration, through the secretariat;

(b) Undertake, at the invitation of the Party concerned, information gathering in the territory of that Party; and

(c) Consider any information forwarded by the secretariat concerning compliance with the protocols.

7. The Committee shall ensure the confidentiality of any information that has been provided to it in confidence.

#### Entitlement to participate

8. A Party in respect of which a submission or referral is made shall be entitled to participate in the consideration by the Committee of that submission or referral, but shall not take part in the preparation and adoption of any report or recommendations of the Committee in accordance with paragraph 9 below.

#### Committee report to the Executive Body

9. The Committee shall report at least once a year on its activities to the Executive Body and make such recommendations as it considers appropriate, taking into account the circumstances of the matter, regarding compliance with the protocols. Each report shall be finalized by the Committee no later than ten weeks in advance of the session of the Executive Body at which it is to be considered.

Competence of Committee members

10. Only those Committee members that are Parties to the protocol in respect of which compliance procedures in accordance with paragraphs 3, 6, 7 and 9 above are being undertaken may participate in those procedures. If as a result of the operation of this paragraph the size of the Committee is reduced to five members or less, the Committee shall forthwith refer the matter in question to the Executive Body.

Consideration by the Executive Body

11. The Parties to the protocol concerned, meeting within the Executive Body, may, upon consideration of a report and any recommendations of the Committee, decide upon measures of a non-discriminatory nature to bring about full compliance with the protocol in question, including measures to assist a Party's compliance. Any such decision shall be taken by consensus.

Relationship to settlement of disputes

12. Application of the present compliance procedures shall be without prejudice to the settlement of disputes provisions of the protocols.

Annex IV

**DECISION 1997/3 ON COMPLIANCE MONITORING FOR THE VOC PROTOCOL**

The Parties to the 1991 Protocol concerning the Control of Emissions of Volatile Organic Compounds or their Transboundary Fluxes meeting within the Executive Body decide to use the Implementation Committee established by the Executive Body at its fifteenth session for the purposes of article 3, paragraph 3, of that Protocol and to apply the structure, functions and procedures set out in the annex to the decision of the Executive Body establishing the Implementation Committee to monitor compliance with that Protocol.



Annex V

**1998 WORK-PLAN FOR THE IMPLEMENTATION OF THE CONVENTION**

**1. STRATEGIES AND POLICIES**

**1.1 REVIEW OF STRATEGIES AND POLICIES**

Objective: To give a comprehensive overview of national and international strategies and policies, including legislation in force and emission levels, in order to evaluate the status of implementation of the Convention and its protocols (major review). To review recent developments in national abatement strategies and policies of Parties, and Signatories, giving special attention to the review of the status of implementation of the protocols (update). The reviews will be carried out every two years alternating between a major review and an update.

Method of work: The secretariat will prepare a draft review (major review or update) based on the information provided by Parties, and by Signatories, and from other official sources, to be reviewed by the Implementation Committee and then submitted for consideration by the Executive Body. In the interest of achieving uniformity, national presentations of information on strategies and policies should conform to the outline approved by the Executive Body (EB.AIR/1997/2, as amended) and to a questionnaire to be prepared by the secretariat with the assistance of the Implementation Committee. The questionnaire will use as a basis the outline adopted by the Executive Body and the obligations of Parties set out in the protocols to the Convention. Reporting on current and projected emission data is detailed in 2.3.

Time schedule: The major review and update will be prepared alternatively every two years. The next major review will be prepared in 1998; the next update in 2000. The draft 1998 major review will be prepared by the secretariat and reviewed by the Implementation Committee prior to its consideration by the Executive Body at its sixteenth session. It will be based on the outline (EB.AIR/1997/2), updated to take into account recent developments and the work undertaken to review the implementation of the protocols.

**1.2 COMPLIANCE**

Objective: To review compliance by the Parties with their obligations under the protocols to the Convention.

Method of work: The Implementation Committee will develop a work-plan for its activities based on the structure, functions and procedures adopted by the Executive Body at its fifteenth session (decision 1997/2, annex). The Implementation Committee will set its own internal working procedures. Its activities will take into account the requirements of the Executive Body and the cases to be reviewed.

Time schedule: The Implementation Committee will develop a work-plan for its activities for consideration and approval by the Executive Body at its sixteenth session.

### **1.3 PREPARATION OF A PROTOCOL TO REDUCE EMISSIONS OF NITROGEN COMPOUNDS AND RELATED SUBSTANCES**

Objective: To prepare a protocol using a multi-pollutant approach and addressing photochemical pollution, acidification and eutrophication.

Method of work: The Working Group on Strategies will continue negotiations on a draft protocol using as a basis the information it receives from its Task Forces and from other subsidiary bodies, as well as any proposals submitted by Parties. In its efforts it will also take into account cost-effective measures to reduce sulphur emissions.

Time schedule:

(a) Twenty-sixth session of the Working Group on Strategies, Geneva, 16-20 March 1998;

(b) Conference on nitrogen, 23-27 March 1998, Netherlands;

(c) Twenty-seventh session of the Working Group on Strategies, Geneva, 8-12 June 1998;

(d) Twenty-eighth session of the Working Group on Strategies, 31 August-4 September 1998;

(e) Submission of a draft protocol or a report on progress to the Executive Body at its sixteenth session.

### **1.4 PERSISTENT ORGANIC POLLUTANTS**

Objective: To finalize a draft protocol on persistent organic pollutants, initially focusing on those substances of the highest priority, and establishing a framework for the addition of other substances.

Method of work: The Working Group on Strategies will finalize negotiations on a draft protocol on persistent organic pollutants on the basis of the results of its twenty-third session and the results of the meeting of heads of delegation on 14-15 December 1997, and taking into account the advice that it has received from legal experts.

Time schedule:

(a) Twenty-fifth session of the Working Group on Strategies, Geneva, 11-13 February 1998;

(b) Submission of a draft protocol to the Executive Body at its special session in Aarhus (Denmark) in June 1998.

### **1.5 HEAVY METALS**

Objective: To finalize a draft protocol on heavy metals, initially focusing on cadmium, lead and mercury, and establishing a framework for the addition of other heavy metals.

Method of work: The Working Group on Strategies will finalize negotiations on a draft protocol on heavy metals on the basis of the results of its twenty-second session and taking into account further work on the technical annexes undertaken by a group of designated experts, as well as advice that it has received from legal experts.

Time schedule:

(a) Twenty-fourth session of the Working Group on Strategies, Geneva, 19-23 January 1998;

(b) A further session of the Working Group may be devoted to negotiations if necessary;

(c) Submission of a draft protocol to the Executive Body in 1998, possibly at a special session in Aarhus (Denmark) in June 1998.

## **1.6 ECONOMIC AND FINANCIAL ISSUES**

### **1.6.1 Integrated assessment modelling**

Objective: To further develop modelling for the evaluation of scenarios on cost-effective reduction of acidification, eutrophication, photochemical oxidant pollution and related phenomena through: (i) full incorporation of SO<sub>2</sub>, NO<sub>x</sub>, NH<sub>3</sub> and VOCs in the models; (ii) further investigation of the abatement potential in the energy, transport and agricultural sectors, also considering structural measures; and (iii) further analysis of model robustness and uncertainties.

Method of work: The two international institutes, the International Institute for Applied Systems Analysis (IIASA) and the Stockholm Environment Institute (SEI), and national modelling groups will continue their work on the analysis of effect-oriented and least-cost abatement strategies under the guidance of the Task Force on Integrated Assessment Modelling, led by the Netherlands. The Task Force will cooperate closely with the Task Force on Economic Aspects of Abatement Strategies, the Task Force on Emission Inventories and the Working Group on Abatement Techniques. Where appropriate, modelling groups will incorporate into their models, data made available by EMEP, the Working Group on Effects and other subsidiary bodies of the Executive Body. Based on cooperation with the World Health Organization and the European Environment Agency's Topic Centre on Air Quality, the modelling work will also cover the exposure of urban and rural populations to excess ozone and, if possible, the potential health risks of the other pollutants considered.

Time schedule:

(a) Twenty-first meeting of the Task Force, 25-27 May 1998, Helsinki, Finland;

(b) Twenty-second meeting of the Task Force, 2-4 November 1998, London, United Kingdom;

(c) Progress reports to the Working Group on Strategies in 1998.

### 1.6.2 Economic aspects of abatement strategies

Objective: To support the Working Group on Strategies in the development of existing and new agreements; to make the implementation of agreements more cost-effective; and to promote an exchange of experience between national experts concerning, in particular, the application of economic instruments.

Method of work: The Task Force on Economic Aspects of Abatement Strategies, led by the United Kingdom, will, in close cooperation with the Working Group on Effects, the Task Force on Integrated Assessment Modelling and other relevant subsidiary bodies, as a first priority, perform work on the economic evaluation of damage caused by different air pollutants, in particular for the purpose of advising the Working Group on Strategies on the best assessment of damage avoidance associated with emission reduction scenarios. It will comment, as appropriate, on the derivation and interpretation of cost functions. It will further investigate the following items:

(a) Economic evaluation of damage: monetary valuation of benefits and secondary benefits of abating acidifying, ozone-forming and eutrophying substances, through the development of dose-response functions, stock-at-risk data and economic unit values for health effects; buildings/materials including cultural and historic monuments; crops; ecosystem effects (forests, freshwaters) and visibility; similar work on heavy metals and persistent organic pollutants will be pursued, as relevant for those substances;

(b) National economic instruments: evaluation of national experiences in the application of taxes, charges, and emission trading schemes for the preparation of a guidance document, possibly a protocol annex, on economic instruments; international harmonization of economic instruments;

(c) International instruments (joint implementation, burden sharing).

#### Time schedule:

(a) Thirteenth meeting of the Task Force, 28-29 May 1998, Helsinki, Finland;

(b) Fourteenth meeting of the Task Force, 5-6 November 1998, London, United Kingdom;

(c) Progress reports to the Working Group on Strategies in 1998.

### 1.7 **PREPARATION OF A MECHANISM FOR MANDATORY INTERNATIONAL COST-SHARING FOR THE FUNDING OF THE EFFECT-ORIENTED ACTIVITIES**

Objective: To develop a stable, long-term mechanism for ensuring sufficient funding for the necessary international coordination of the International Cooperative Programmes and the Mapping Programme.

Method of Work: The Bureau of the Executive Body will pursue its attempts to widen support for a stable financial basis for the effect-oriented activities and for integrated assessment modelling, and prepare for the issue to be taken up at the ministerial level at the special session of the Executive Body in

Aarhus (Denmark) in June 1998. Parties undertake to explore with their Governments ways and means of ensuring such a stable financial basis.

Time schedule:

- (a) Meetings of the Bureau of the Executive Body in the first half of 1998;
- (b) Special session of the Executive Body in Aarhus (Denmark) in June 1998.

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

The work-plan of EMEP for 1998 is based on the programme for the sixth phase of EMEP 1995-1998 and the budget for 1998 (EB.AIR/GE.1/24, annex IV and EB.AIR/GE.1/1997/2, annex IV).

The programme is implemented by the Parties together with the Chemical Coordinating Centre (CCC) and the Meteorological Synthesizing Centres (MSC-E and MSC-W) and in cooperation with the World Meteorological Organization (WMO). The Bureau of the EMEP Steering Body helps actively in assessing and directing the EMEP programme. In 1998, the Bureau, in cooperation with the EMEP centres and taking into account the views presented at the twenty-first session of the Steering Body and at the fifteenth session of the Executive Body (inter alia, concerning the future work on particles), will prepare a draft long-term programme (seventh phase) for the EMEP programme (1999-2005), and submit it to the Steering Body. A particular effort will be made to improve the dissemination of emission data and monitoring and modelling results through the Internet.

**2.1 CHEMICAL PART**

Objective: The objective of the EMEP monitoring activities is to provide information on acidifying compounds, ozone and volatile organic compounds (VOCs) and gather and evaluate available information on heavy metals (HMs) and persistent organic pollutants (POPs).

Method of work: CCC will coordinate and develop measurements and their quality assurance, data reporting and the monitoring database. CCC will carry out data processing, evaluation, and reporting. The basic monitoring programme of EMEP, covering acidifying compounds and ozone, will be continued as outlined in the programme for the sixth phase. Also, measurements of volatile organic compounds (VOCs) will be continued. Participating countries are expected to take over the analysis. CCC will supplement their national activities, particularly with respect to the analysis of aldehydes and ketones. CCC will also organize the VOC-related quality assurance activities, such as parallel analyses and distribution of reference material, and perform laboratory comparisons. CCC will continue improving the collection of ozone, HM and POP measurement results for the EMEP monitoring database from existing national and other international networks. Based on recommendations from the EMEP expert meeting on POPs in air and precipitation (Lillehammer (Norway) in November 1997), methods for sampling, sample preparation and analysis will be included in the EMEP manual.

Time schedule:

(a) The Parties will report their basic EMEP programme and VOC monitoring results, and available HM and POP results, to CCC in a standardized format, as guided by CCC, twice a year: by 1 December data from January to June, and by 1 June data from July to December. CCC will report the final results from the 1996 basic measurements, including a summary on major measurement observations, as well as the results of VOC, HM and POP measurements, to the Steering Body at its twenty-second session;

(b) CCC, in cooperation with participating laboratories, WMO and other international programmes, will continue the implementation of the quality assurance of EMEP measurements and measurements of HMs and POPs, focusing on the complete quality system. HMs in precipitation will be included in the annual interlaboratory comparisons. It will report on quality assurance activities to the Steering Body at its twenty-second session;

(c) CCC, in cooperation with other programmes that have procedures for monitoring data, such as the WMO Global Atmospheric Watch programme, will disseminate methods to interpret chemical measurements, either through the Internet or a workshop;

(d) CCC, in cooperation with the meteorological synthesizing centres and participating countries, will continue the evaluation of data completeness and station site representativeness, possibly with the assistance of outside experts, and, in cooperation with the Bureau, participate in the further development of a long-term monitoring strategy;

(e) The EMEP/WMO Workshop on data analysis and interpretation will take place in Finland in autumn 1998;

(f) An expert meeting will be organized, in early 1998, on the EMEP quality system with national quality assurance managers and other quality assurance officers.

## **2.2 METEOROLOGICAL PART**

Objective: The objectives of the EMEP modelling activities are to produce information on annual transboundary fluxes, concentrations and depositions of sulphur and nitrogen compounds over Europe, to evaluate short- and long-term exposures to and calculate long-term country-to-country matrices for photochemical oxidants and to continue the development of models for the assessment of the transport and source-receptor relationships of HMs and POPs.

Method of work:

MSC-W, having the main responsibility for modelling acidifying pollutants and photochemical oxidants, will in 1998:

- Calculate the annual transboundary transport of sulphur and nitrogen compounds using the 50 km x 50 km EMEP models;

- Calculate the short-term and long-term exposures to photochemical oxidants for vegetation periods, and the potential exposure of humans;
- Further evaluate the O<sub>3</sub>-NO<sub>x</sub>-VOC relationships in conjunction with the critical levels for O<sub>3</sub> and the critical loads of nitrogen, and investigate the robustness of the EMEP model calculations of the accumulated ozone threshold AOT40, AOT60 and other relevant indicators of effects on human health;
- Evaluate and compare source-receptor relationships produced by the 50 km x 50 km Eulerian model and by the 150 km x 150 km Lagrangian model;
- Compare the Lagrangian and the multi-layer ozone models. Aim at an optimal chemical and numerical scheme for the multi-level model based on the EMEP chemistry and the chemical mechanism developed at the University of Oslo;
- Continue the development of a coupled acid rain and photochemical model, improving the nitrogen chemistry and parametrization of the wet scavenging processes; and conduct scenario analysis with a coupled acid rain and photochemical model;
- Continue to prepare long-term meteorological data sets in the 50 km X 50 km grid; and
- Investigate mass-conserving properties of the transport schemes.

The possible voluntary contributions from the United States would be used to support multi-level modelling activities at MSC-W.

MSC-E, having the main responsibility for EMEP modelling work for HMs and preparatory modelling work for POPs, will in 1998:

- Develop further the operational model of, specifically, lead and cadmium, including improvement of parametrization, testing of various schemes of dry deposition, scientific multi-layer model runs and validation of the model;
- Calculate the provisional annual transboundary transport of lead and cadmium for 1990-1996;
- Develop a multi-layer Eulerian model of mercury, including the chemical transformation scheme, scavenging, re-emission from sea and land surface and transport;
- Carry out intercomparison of models for cadmium, as done for lead, and prepare the intercomparisons for other heavy metals;
- Develop further multi-layer Eulerian models for selected POPs including the division between aerosol and gaseous phases, testing of dry deposition schemes, scavenging, degradation and re-emission processes;

- Make tentative calculations of concentrations and depositions of selected POPs and country-to-country transport estimates;
- Carry out preparatory work for the intercomparison of various POP models.

MSC-E will also guide and supervise the three remaining projects carried out by Belarus, Bulgaria and Ukraine as contributions in kind to its work. With extrabudgetary financial support from WMO, MSC-E will make a preliminary assessment on the atmospheric deposition of mercury and some POPs on the Mediterranean Sea.

The meteorological synthesizing centres will continue the exchange of scientific and technical information between themselves (including the evaluation of contributions in kind), and with CCC, and meet all together at least once a year.

Time schedule:

(a) Calculations for the long-range transmission of sulphur and nitrogen compounds based on 1996 emission data will be reported by MSC-W to the Steering Body at its twenty-second session;

(b) The Lagrangian and Eulerian acid deposition and photochemical models will be further improved and methods for evaluating the model results will be developed on a continuous basis. Exceedances of critical loads/levels and depositions in different future emission scenarios will be calculated and support given to the work on a multi-pollutant/multi-effect protocol. The results will be reported by MSC-W to the Steering Body at its twenty-second session;

(c) The results of further development of multi-layer Eulerian models for Pb, Cd, Hg and selected POPs, including calculations for the long-range transmission of lead and preliminary calculations for Hg and selected POPs, will be reported by MSC-E to the Steering Body at its twenty-second session;

(d) Intercomparison and validation of currently available long-range transport models of Cd and preparation for the intercomparison of other heavy metals and POPs models will be presented by MSC-E to the Steering Body at its twenty-second session;

(e) In cooperation with CCC, continued attention will also be devoted to the quality assurance of input data to all model calculations, e.g. emission fields, chemical and physical parameters and observational data, and to the comprehensive analysis and presentation of data. The centres will present their reports on the work done to the Steering Body at its twenty-second session;

(f) An expert meeting on modelling of POPs and HMs will be organized with the support of WMO in late 1998 (or possibly early 1999);

(g) An expert meeting for the evaluation of contributions in kind in 1997 will be organized by MSC-E in February 1998. This meeting could consider the remaining proposals for 1999.



### 2.3 EMISSION INVENTORIES

Objective: The objective of the EMEP emission inventory activities is to assist the Parties to fulfil their reporting tasks, control the quality of reported emission data, report the available data and evaluate emission inventory requirements under the Convention to ensure an adequate flow of reliable information on emissions and emissions projections, giving particular attention to the emission inventories of heavy metals and POPs.

Method of work: All Parties will submit relevant national annual emission data from the territories covered by EMEP, in accordance with the guidance given by the Steering Body and the Executive Body and making use of the Atmospheric Emission Inventory Guidebook.

Based on the official emission data received by the secretariat, MSC-W will update the emission database. MSC-W will also develop further methods and a scientific basis for compliance monitoring and verifying emission data and controlling their quality. MSC-W will participate in the expert panel on natural emissions under the Task Force on Emission Inventories. Cooperation with CCC, MSC-E, the European Environment Agency's Topic Centre on Air Emissions and the secretariat will be continued. MSC-E will organize training (in Russian) for the Commonwealth of Independent States and other interested east European countries in the use of the Guidebook, using its 1997 Russian translation. CCC will make further expert estimates (for use in model runs at MSC-E) on the emissions of agreed HMs and POPs and assess the quality of the existing inventories together with the meteorological centres and in consultation with the experts of the Task Force on Emission Inventories.

The Task Force on Emission Inventories co-chaired by the United Kingdom and the European Environment Agency (EEA) will:

- (a) Provide a technical forum to discuss, exchange information and harmonize emission data, including emission factors, methodologies, projection models and guidelines;
- (b) Conduct an in-depth evaluation of emission factors and methodologies in current operation;
- (c) Cooperate with the Task Force on Integrated Assessment Modelling and the Working Group on Abatement Techniques; and
- (d) Cooperate with other international organizations working on emission inventories and projections, with the aim of harmonizing methodologies and avoiding duplication of work.

Time schedule:

- (a) The Parties will report their 1997 emission data (national totals and source categories) for SO<sub>x</sub>, NO<sub>x</sub>, NMVOCs, CH<sub>4</sub>, NH<sub>3</sub>, CO, HMs (priority metals: Cd, Hg and Pb) and selected POPs and possible updates of previous figures to the secretariat by 31 December 1998. In selecting POPs, the secretariat will take into account progress in the protocol negotiations. The first quality control of the national totals will be performed within three months after receipt of the data, which is also the deadline for Parties to complete data

(if missing) with respect to source classification. For CO<sub>2</sub>, the same data as reported under the United Nations Framework Convention on Climate Change should be submitted. MSC-W will report on emissions and the status of verification to the Bureau in spring 1998 and to the Steering Body at its twenty-second session. The latest data will also be made available to the Executive Body at its sixteenth session for consideration in the context of strategies and policies;

(b) The seventh meeting of the Task Force will be held in Wismar, Germany, from 18 to 22 May 1998.

#### **2.4 COOPERATION BETWEEN EMEP AND OTHER MONITORING AND MODELLING PROJECTS**

Objective: Projects related to the long-range transport of air pollution will be carried out also in North America and by several international organizations or programmes: World Health Organization (WHO), WMO, European Environment Agency (EEA) and its Topic Centres on Air Quality and Air Emissions, the Baltic Marine Environment Protection Commission (HELCOM), the Oslo-Paris Commission for the Protection of the Marine Environment of the North-East Atlantic (OSPARCOM), WMO Mediterranean Pollution Programme (MEDPOL), the European Experiment on Transport and Transformation of Environmentally Relevant Trace Constituents in the Troposphere Over Europe (EUROTRAC), the Arctic Monitoring and Assessment Programme (AMAP). It is important to continue to coordinate effectively and to exchange information so as to avoid unnecessary duplication of effort.

Method of work: The exchange of information with related projects will be continued. Important fields within EMEP are, inter alia, sampling methods, analytical procedures, quality assurance, verification of emission data and model intercomparisons.

#### Time schedule:

(a) The Steering Body will consider the results of the North American activities and of relevant projects in other international organizations, and take them into account in the development of EMEP;

(b) Cooperation between HELCOM and EMEP on emission data and atmospheric monitoring and modelling will be continued, as agreed at the twentieth session of the Steering Body (EB.AIR/GE.1/R.110, annex);

(c) Cooperation between OSPARCOM and EMEP on emission data and atmospheric monitoring and modelling will be further developed, as agreed at the twentieth session of the Steering Body.

### **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

Objective: To review annually the activities of the International Cooperative Programmes and the Mapping Programme and results achieved during the reporting period.

Method of work: The secretariat will prepare a draft annual summary report based on the information provided by the lead countries and the programme coordinating centres, including a list of future activities to be addressed by all programmes in response to the priority needs of the Executive Body, for consideration by the Working Group on Effects.

Time schedule:

(a) Submission of relevant information on the International Cooperative Programmes and the Mapping Programme to the secretariat (31 May 1998);

(b) Draft 1998 joint report of the International Cooperative Programmes and the Mapping Programme to the Working Group on Effects in 1998.

3.1.2 Major review of effects of major air pollutants

Objective: To review knowledge on the effects of selected air pollutants based on the results from the International Cooperative Programmes and the Mapping Programme, and other relevant data and knowledge. The next substantive report, to be completed in 1998, shall review past and future trends in the atmospheric transport and effects of sulphur and nitrogen.

Method of work: The Working Group on Effects at its sixteenth session approved the outline for the 1998 substantive report consisting of the following chapters: (i) introduction; (ii) atmospheric pollution trends; (iii) empirical trends; (iv) dynamic model trends and prediction; and (v) conclusions and recommendations.

Time schedule:

(a) Submission of draft contributions by the International Cooperative Programmes and the Mapping Programme to the Bureau of the Working Group in December 1997;

(b) Compilation of the first draft report by the Bureau by the end of January 1998;

(c) Submission of a draft substantive report to the Working Group on Effects in 1998.

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

Objective: To quantify the multi-pollutant effects in the changing pollution situation; to further analyse the trends in corrosion effects; to further develop dose/response functions quantifying the corrosion effects of nitrogen oxides and ozone on their own, and in combination with sulphur dioxide, under different environmental conditions, inter alia, as a basis for the economic evaluation of air pollution damage.

Method of work: 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.

The evaluation of effects is based on the results of a materials' exposure programme covering, to the extent possible, a wide geographical range and making full use of existing national programmes.

Time schedule:

(a) Final reports from individual sub-centres on dose-response relations based on statistical evaluation of results on corrosion effects of different materials after eight years of exposure, to the Working Group on Effects in 1998;

(b) The final report on the evaluation of trends in air pollution and the corrosion attack analysis for 1987-1995 to the Working Group on Effects in 1998;

(c) A progress report on the start of the new exposure programme on multi-pollutant effects and trends to the Working Group on Effects in 1998;

(d) A progress report on ongoing activities and plans for further advancing the economic evaluation of air pollution damage to materials and buildings to the Working Group on Effects in 1998;

(e) Workshop on the quantification of the effects of air pollutants on materials, 25-27 May 1998, Berlin, Germany;

(f) Fourteenth meeting of the Programme Task Force, 27-29 May 1998, Berlin, Germany.

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

Objective: To identify long-term trends and variations in the chemistry and biota of aquatic ecosystems owing to atmospheric pollutants, in order to provide, *inter alia*, information on the degree and geographical extent of acidification of surface waters; to yield more complete information on dose/response relationships under different geographical conditions and to correlate changes in depositions with the physical, chemical and biological status of lakes and streams.

Method of work: 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. It will base its work on existing programmes in participating countries and cooperate with designated national laboratories and institutes.

Time schedule:

(a) Presentation of the report on critical loads and levels assessing the representativeness of sites in ICP Waters, in particular in view of the needs of the second Sulphur Protocol (prepared in cooperation with the Coordination Center for Effects (CCE) at the National Institute of Public Health and Environmental Protection, Bilthoven, Netherlands) to the Working Group on Effects in 1998;

(b) A progress report on the evaluation of the results of the 1997 biological and chemical intercalibrations and on the preparation for and undertaking of the 1998 intercalibration exercises to the Working Group in 1998;

(c) Publication of the short version of the ICP Waters nine-year report;

(d) An updated progress report on the collection, processing and assessment of ICP Waters data to the Working Group on Effects in 1998;

(e) An updated progress report on the preparations for a joint workshop on biological monitoring methods (in cooperation with ICP Integrated Monitoring) to the Working Group in 1998;

(f) Workshop on biological assessment and monitoring; fourteenth meeting of the Programme Task Force, 12-16 October 1998, Zakopane, Poland.

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

Objective: To collect comprehensive and comparable data on changes in forests under actual environmental conditions (in particular air pollution, including acidifying deposition, as well as other stresses) and to determine cause-effect relationships.

Method of work: 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) is expected to provide more detailed information on the effects of air pollution on forests. Extensive large-scale monitoring (level I) is carried out in cooperation with the European Commission. Estimation of critical loads for monitoring sites will be continued in cooperation with the Mapping Programme. Further intensification of monitoring activities is being planned in cooperation with ICP Integrated Monitoring.

Time schedule:

(a) A progress report on the first evaluation of the intensive monitoring data from permanent sample plots (level II) to the Working Group on Effects in 1998;

(b) A summary report on the 1997 monitoring results (in particular on level II) and on the further development of level III monitoring activities (in cooperation with ICP Integrated Monitoring) to the Working Group in 1998;

(c) A report summarizing ways and means by which level I monitoring could meet the future requirements of the Convention, and containing further analysis of the 10-years level I data, the possibility of relating level I and level II monitoring, and the streamlining of level I monitoring sites, to the Working Group on Effects in 1998;

(d) A review of the scientific knowledge on the impact of air pollution on forests to the Working Group on Effects in 1998;

(e) A strategy paper on future priorities of ICP Forests in the field of monitoring, evaluation and reporting procedures to the Working Group on Effects in 1998;

(f) Fourteenth meeting of the Programme Task Force, early in June 1998 in Spain.

### **3.5 INTERNATIONAL COOPERATIVE PROGRAMME ON EFFECTS OF AIR POLLUTION AND OTHER STRESSES ON CROPS AND NON-WOOD PLANTS**

Objective: To evaluate the effects of air pollutants and other stresses on crops and non-wood plants; to identify realistic dose/response functions for a range of economically important crops, and for the range of crops at risk from air pollution; to validate and substantiate ozone critical levels for crops and non-wood plants; and to evaluate crops and non-wood plants as effective indicators of the potential for damage to natural ecosystems.

Method of work: A Programme Task Force, led by the United Kingdom, with the cooperation of the Programme's coordination centre (Nottingham Trent University, Nottingham, United Kingdom), is responsible for the detailed planning and coordination of the Programme, implemented with the cooperation of laboratories designated by participating Parties. Annual field experiments on selected crops and non-wood plants will continue and the programme results will be analysed and interpreted. A computer model is being developed to link injury and yield responses of plants to the physical and pollution climate. Data will be analysed to detect trends in ozone, climate data and effects (yield reduction and visible injury) in different climatic zones in Europe. Stocks at risk will be monitored. The Task Force will cooperate with other programmes and the Coordination Center for Effects in preparing preliminary maps of critical levels of ozone for crops and their exceedances and with the Task Force on Economic Aspects of Abatement Strategies on an economic assessment of crop losses due to ozone.

Time schedule:

(a) The 1998 annual status report on the achievements of the Programme to the Working Group on Effects in 1998;

(b) A progress report on incorporating level II factors into the critical levels for ozone and the development of exceedance maps (in collaboration with CCE, Task Force on Mapping and EMEP) to the Working Group in 1998;

(c) A progress report on establishing critical levels of ozone for natural and semi-natural vegetation to the Working Group in 1998;

(d) Workshop on using artificial neural networks to model environmental data, 13 January 1998, Wageningen, Netherlands;

(e) Eleventh meeting of the Programme Task Force, 14-16 January 1998, Wageningen, Netherlands.

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

Objective: To determine and predict the state of ecosystems (or catchments) and their changes in a long-term perspective, with respect to the regional variation and impact of air pollutants, especially nitrogen, sulphur and ozone, and including effects on biota.

Method of work: 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. Validated mathematical models will be used for the simulation of ecosystem responses. Monitoring activities and the collection, processing and evaluating of data, as well as the coordination of monitoring networks and harmonization of monitoring methods, will continue. Dynamic modelling, including the setting-up of projects to link geochemical models to biological effects models, and the application of the soil-vegetation-atmosphere-transfer (SVAT) model to selected integrated monitoring sites will continue.

Time schedule:

(a) Presentation of the Seventh Annual Report to the Working Group on Effects in 1998;

(b) Presentation of the final report of the EU/LIFE project, containing results on dynamic modelling and on the development of monitoring methods, to the Working Group on Effects in 1998;

(c) Presentation of the final version of the revised Manual for Integrated Monitoring to the Working Group on Effects in 1998;

(d) Continuing cooperation with ICP Forests on the further development of level III monitoring activities.

(e) Sixth meeting of the Programme Task Force, March/April 1998.

### **3.7 MAPPING OF CRITICAL LEVELS AND LOADS**

Objective: To determine critical levels and loads for forests, crops, natural vegetation, soil/groundwater and materials, with particular attention to the direct effects of air concentrations of SO<sub>2</sub>, NO<sub>2</sub> and O<sub>3</sub> and the indirect effects of long-term deposition of sulphur and nitrogen compounds, the mapping of geographical areas experiencing higher than critical levels and loads and the establishing of appropriate methods as a basis for assessing potential damage.

Method of work: A Task Force led by Germany is responsible for the detailed planning and coordination of activities. The Task Force will further use and integrate available and accepted data on critical levels and loads at the regional, national and local levels, drawing on current work of other task forces, International Cooperative Programmes and EMEP. The Coordination Center for Effects (CCE) gives scientific and technical support to the Task Force on Mapping, in collaboration with a Pilot Sub-centre, programme centres of other ICPs, and National Focal Points, by producing maps of critical loads

and levels and their exceedances for use by the Working Group on Effects and as required by the Working Group on Strategies and their task forces. Efforts will be made to quantify uncertainties in the critical load data. Workshops will be organized, as appropriate, for updating the mapping manual and methodology. National pilot programmes for the mapping of critical levels and loads on the basis of a common manual and methodology will continue. European stock-at-risk maps, based on European land-use maps, will be further developed.

Time schedule:

(a) Updated maps of the critical loads for acidity, sulphur and nitrogen to the Working Group on Effects in 1998;

(b) A progress report on the investigation into uncertainties in critical load maps to the Working Group in 1998;

(c) Circulation, by the Coordination Center for Effects by the end of January 1998, of a description of the accumulated exceedances approach to NFCs of the Mapping Programme and to national representatives in the Task Force on Mapping. This information should also be made available to the Working Group on Strategies;

(d) A draft report on the implications of using the accumulated exceedances approach for setting gap closure targets for integrated assessment modelling, to the Working Group on Effects in 1998;

(e) A draft report on options and proposed methods for making available the critical loads database used for the drafting of the proposed multi-pollutant, multi-effect protocol, to the Working Group on Effects in 1998;

(f) Report on the results of the workshop on critical limits and effects-based approaches for heavy metals and persistent organic pollutants (3-7 November 1997, Bad Harzburg, Germany) to the Working Group in 1998;

(g) Ninth CCE Workshop on mapping critical levels and loads; fourteenth meeting of the Task Force on Mapping, 11-15 May 1998, Kristiansand, Norway;

(h) Workshops on the methodology for the application of effects-based approaches for heavy metals and persistent organic pollutants, 1998.

### **3.8 EFFECTS OF AIR POLLUTANTS ON HUMAN HEALTH**

Objective: To prepare state-of-the-art reports on the direct and indirect effects of air pollutants on human health.

Method of work:

(a) WHO is invited to present relevant progress/technical reports to the Working Group on Effects for consideration, so that acquired knowledge of WHO can be applied in the further implementation of the Convention. Additional information/reports will be provided, when appropriate, by other



international organizations, interested Governments, and/or other subsidiary bodies under the Convention.

(b) A joint Task Force of WHO/European Centre for Environment and Health (ECEH) and the Executive Body, led by WHO/ECEH, will address the health aspects of long-range transboundary air pollutants and, starting with fine particulates, will prepare relevant reports for consideration by the Working Group on Effects. The reports should take into account the health effects of specific exposures to air pollution, in order to quantify the contribution of transboundary air pollution to human health risks and to define priorities that may serve as a guide for monitoring and abatement strategies.

Time schedule:

(a) Designation by Governments of experts to participate in the activities of the joint Task Force on the health aspects of fine particulates, by the end of February 1998;

(b) First meeting of the joint Task Force on the health aspects of fine particulates, summer 1998;

(c) Progress report on the health aspects of particulates related to existing and proposed protocols to the Convention, to the Working Group on Effects in 1998;

(d) Report on the updated and revised WHO Air Quality Guidelines for Europe to the Working Group on Effects in 1998;

(e) State-of-the-art reports/information by WHO/ECEH and/or interested Governments on the assessment of the health effects of fine particulate matter and aerosols to the Working Group in 1998.

#### **4. TECHNOLOGIES FOR EMISSION CONTROL**

Purpose: The Executive Body, through its Working Group on Abatement Techniques, prepares and updates technical annexes to present and future protocols on the basis of regular assessments of the economic and environmental performance of relevant techniques, prepares inputs on techniques for preventing and reducing emissions including their efficiencies and costs for the development of future protocols, and takes measures to promote the exchange of information and dissemination of knowledge on techniques for preventing and reducing emissions among Parties.

The NO<sub>x</sub> and VOC Protocols and the Protocol on Further Reduction of Sulphur Emissions to the Convention stipulate that Parties shall, consistent with their national laws, regulations and practices, facilitate the exchange of technology to reduce emissions and create favourable conditions for this exchange.

##### **4.1 EXCHANGE OF TECHNOLOGY FOR AIR POLLUTION CONTROL**

Objective: The creation of favourable conditions for establishing contacts and cooperation among appropriate organizations and individuals in the private and public sectors that are capable of providing technology, design and

engineering services, equipment or finance. Strengthening and harmonizing the legal frameworks for air pollution abatement techniques in the region and particularly improving and aligning their emission, performance and technology standards could facilitate trade and technology cooperation between Parties in the ECE region and accelerate the accession and/or implementation of existing protocols to the Convention by countries in transition.

Method of work: Interested Parties will organize target-oriented workshops focusing in particular on technology-related problems within specific industrial sectors, including the implementation of different abatement techniques as recommended in technical annexes to protocols. Parties to the Convention, in particular countries in transition, will identify their needs for such workshops and submit information on their legal frameworks for air pollution abatement techniques to the secretariat.

Time schedule:

(a) Workshop on the implementation of VOC abatement techniques in the printing and dry-cleaning sectors, May 1998, Bologna, Italy;

(b) Report on the outcome of the workshop to the Working Group on Abatement Techniques at its sixth session in 1998.

#### **4.2 OPTIONS FOR REDUCING EMISSIONS OF AMMONIA**

Objective: In order to incorporate NH<sub>3</sub> in the development of the second step to the NO<sub>x</sub> Protocol, a report on control options and abatement techniques for reducing ammonia emissions and their costs will be prepared. It will also cover industry. Draft technical annexes on control techniques for emissions of reduced nitrogen compounds will be prepared, as required.

Method of work: On the basis of additional information to be provided by Parties as regards industrial sources, a group of governmentally designated experts, led by the United Kingdom, will prepare a final report and relevant draft technical annexes for the Working Group on Strategies and the sixth session of the Working Group on Abatement Techniques.

Time schedule:

(a) Expert meeting on ammonia abatement techniques, 14-15 January 1998, London, United Kingdom;

(b) Consideration of proposals for draft technical annexes at the sixth session of the Working Group in 1998.

#### **4.3 CONTROL OPTIONS AND TECHNOLOGIES FOR EMISSIONS FROM STATIONARY AND MOBILE SOURCES**

Objective: Preparation of input to the negotiation processes under the work-plan for the implementation of the Convention on options and techniques for preventing and reducing emissions, including their efficiencies and costs. The input will serve to update and prepare technical annexes to existing and future protocols and to develop annexes on emission limit values for air pollution abatement, taking an integrated approach.

Method of work: Seminars and workshops for reviewing present and future technology options and cost-efficient techniques for preventing and reducing emissions used in new and existing plants, including information on their investment and operating cost, aggregated at activity, process and/or sector level, will be organized. Task Forces and groups of governmentally designated experts will regularly assess the economic and environmental performance of relevant options and techniques and their actual application at sector and/or plant level. Draft proposals for updating and preparing technical annexes on control options and techniques and for annexes on emission limit values will be prepared. Available knowledge and experience of other organizations will be collected and used, particularly of the European Community in relation to mobile sources. Progress of work and proposals for draft annexes will be regularly reported to the Working Group on Strategies and the Working Group on Abatement Techniques for review and consideration and subsequent adoption by the Executive Body, as required.

Time schedule:

(a) Fourth meeting of the Task Force on the Assessment of Abatement Options/Techniques for Volatile Organic Compounds in The Hague (Netherlands), from 23 to 24 April 1998 and preparation of relevant technical annexes;

(b) Fourth meeting of the Task Force on the Assessment of Abatement Options/Techniques for Nitrogen Oxides in The Hague (Netherlands) from 27 to 28 April 1998 and preparation of relevant technical annexes;

(c) Meeting of experts to prepare a draft proposal for technical annexes on NO<sub>x</sub> and VOC control from selected mobile sources, in Geneva from 11 to 12 May 1998;

(d) Workshop on the elaboration and evaluation of techno-economic data based on production processes and related emission abatement options, 19-20 February 1998, Karlsruhe (Germany).

Annex VI

**PROVISIONAL LIST OF MEETINGS FOR 1998**

19-23 January 1998 Geneva	Working Group on Strategies (Twenty-fourth session)
11-13 February 1998 Geneva	Working Group on Strategies (Twenty-fifth session)
16-20 March 1998 Geneva	Working Group on Strategies (Twenty-sixth session)
19-20 March 1998 Geneva	Executive Body for the Convention (Special session)
8-12 June 1998 Geneva	Working Group on Strategies (Twenty-seventh session)
22-23 June 1998 Aarhus (Denmark)	Executive Body for the Convention (Special session)
2-3 July 1998 Geneva	Working Group on Abatement Techniques (Sixth session)
26-28 August 1998 Geneva	Working Group on Effects (Seventeenth session)
31 August - 4 September 1998 Geneva	Working Group on Strategies (Twenty-eighth session)
7-9 September 1998 Geneva	EMEP Steering Body (Twenty-second session)
7-11 December 1998 Geneva	Executive Body for the Convention (Sixteenth session)
	* * *
Early in 1998	Expert meeting on EMEP quality system
13 January 1998 Wageningen (Netherlands)	Workshop on using artificial neural networks to model environmental data
14-16 January 1998 Wageningen (Netherlands)	Programme Task Force, ICP on Effects of Air Pollution and Other Stresses on Crops and Non-wood Plants (Eleventh meeting)
14-15 January 1998 London (United Kingdom)	Expert meeting on ammonia abatement techniques

19-20 February 1998 Karlsruhe (Germany)	Workshop on the elaboration and evaluation of techno-economic data based on production processes and related emission abatement options
February 1998	Expert meeting on the evaluation of 1997 contributions in kind to the EMEP Programme
23-27 March 1998 (Netherlands)	Conference on nitrogen
March/April 1998	Programme Task Force, ICP on Integrated Monitoring of Air Pollution Effects on Ecosystems (Sixth meeting)
23-24 April 1998 The Hague (Netherlands)	Task Force on Assessment of Abatement Options/Techniques for VOCs (Fourth meeting)
27-28 April 1998 The Hague (Netherlands)	Task Force on Assessment of Abatement Options/Techniques for nitrogen oxides (Fourth meeting)
11-12 May 1998 Geneva	Expert meeting to prepare a draft proposal for technical annexes on NOx and VOC control from selected mobile sources
11-14 May 1998 Kristiansand (Norway)	Ninth CCE Mapping Workshop
15 May 1998 Kristiansand (Norway)	Task Force on Mapping of Critical Loads and Levels (Fourteenth meeting)
18-22 May 1998 Wismar (Germany)	Task Force on Emission Inventories (Seventh meeting)
25-27 May 1998 Helsinki (Finland)	Task Force on Integrated Assessment Modelling (Twenty-first meeting)
25-27 May 1998 Berlin (Germany)	Workshop on the quantification of the effects of air pollutants on materials
27-29 May 1998 Berlin (Germany)	Programme Task Force, ICP on Effects of Air Pollution on Materials, Including Historic and Cultural Monuments (Fourteenth meeting)
28-29 May 1998 Helsinki (Finland)	Task Force on Economic Aspects of Abatement Strategies (Thirteenth meeting)
May 1998 Bologna (Italy)	Workshop on the implementation of VOC abatement techniques in the printing and dry-cleaning sectors

Early in June 1998 (Spain)	Programme Task Force, ICP on Assessment and Monitoring of Air Pollution Effects on Forests (Fourteenth meeting)
12-13 October 1998 Zakopane (Poland)	Workshop on biological assessment and monitoring
14-16 October 1998 Zakopane (Poland)	Programme Task Force, ICP on Assessment and Monitoring of Acidification of Rivers and Lakes (Fourteenth meeting)
2-4 November 1998 London (United Kingdom)	Task Force on Integrated Assessment Modelling (Twenty-second meeting)
5-6 November 1998 London (United Kingdom)	Task Force on Economic Aspects of Abatement Strategies (Fourteenth meeting)
Autumn 1998 (Finland)	EMEP/WMO Workshop on data analysis and interpretation
Late in 1998 (or early in 1999)	Expert meeting on modelling of POPs and heavy metals (with the support of WMO)

Annex VII

**DECISION 1997/4 ON THE FACILITATION OF PARTICIPATION OF COUNTRIES  
WITH ECONOMIES IN TRANSITION**

1. Broad participation by Parties in the activities under the Executive Body is essential to ensure progress in the work under the Convention. To facilitate the participation of certain countries with economies in transition which would otherwise not be in a position to take part, Parties are invited to contribute temporarily to the Trust Fund for this purpose.
2. The secretariat is authorized to fund, subject to available resources, the participation of one governmentally designated representative from each of the following countries: Armenia, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Latvia, Lithuania, Republic of Moldova, Romania, Russian Federation, Slovakia and Ukraine, to meetings of the Executive Body's four subsidiary bodies, giving highest priority to negotiating groups and other relevant meetings directly linked to preparatory or ongoing negotiations. Upon their accession to the Convention and their expressed intention to take part in the work of the Executive Body, the following countries may also qualify for funding: Albania, Azerbaijan, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, the former Yugoslav Republic of Macedonia, Turkmenistan and Uzbekistan. First-time participation of new Parties at a session of the Executive Body could be eligible for funding.
3. Participation in other meetings may qualify for funding at the discretion of the Bureau of the Executive Body.
4. To make efficient use of the limited funds available for travel, Parties are encouraged, to the extent possible, to finance their own participation in the activities under the Convention.
5. The countries mentioned in paragraph 2 above that have applied for membership of the European Union and/or the Organisation for Economic Co-operation and Development (OECD) are, in principle, expected to finance their own participation, and should only exceptionally make use of this extraordinary offer.
6. The secretariat is authorized to decide, in consultation with the Chairman of the Executive Body, on the extent of funding (travel and/or daily subsistence allowance, or lump sum), on the basis of available funds and forecasts for requests and contributions for each year.

-----