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ECONOMIC COMMISSION FOR EUROPE

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

Working Group on Effects

**REPORT ON THE EIGHTEENTH SESSION OF THE WORKING GROUP ON EFFECTS**

Introduction

1. The eighteenth session of the Working Group on Effects took place in Geneva from 25 to 27 August 1999.

2. It was attended by representatives of the following Parties to the Convention: Austria; Canada; Czech Republic; Denmark; Finland; France; Germany; Hungary; Italy; Netherlands; Norway; Poland; Spain; Sweden; Switzerland; Turkey; United Kingdom; and the European Community (EC). A representative of the World Health Organization's European Centre for Environment and Health (WHO/ECEH) was also present.

3. The session was chaired by Mr. K. Bull (United Kingdom).

I. ADOPTION OF THE AGENDA

4. The Working Group adopted the agenda for its eighteenth session (EB.AIR/WG.1/1999/1).

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

II. ADOPTION OF THE REPORT OF THE SEVENTEENTH SESSION

5. The Working Group adopted the report of its seventeenth session, as contained in document EB.AIR/WG.1/1998/2.

III. MATTERS ARISING FROM THE SIXTEENTH SESSION OF THE EXECUTIVE BODY FOR THE CONVENTION ON LONG-RANGE TRANSBOUNDARY AIR POLLUTION, FROM ITS SPECIAL SESSION ON 31 MAY 1999, AND FROM THE TWENTY-SEVENTH, TWENTY-EIGHTH, TWENTY-NINTH AND THIRTIETH SESSIONS OF THE WORKING GROUP ON STRATEGIES

6. The Deputy Director of the Environment and Human Settlements Division, Mr. L. Nordberg, drew attention to the decisions taken by the Executive Body at its sixteenth session and at its special session on 31 May 1999 (ECE/EB.AIR/59 and 64), in particular those concerning the main priorities and related core activities for carrying out its future work programme, and to the decisions taken by the Working Group on Strategies at its twenty-seventh, twenty-eighth, twenty-ninth and thirtieth sessions (EB.AIR/WG.5/56, 58, 60 and 62).

7. He pointed out the progress made in preparing the new multi-effect, multi-pollutant protocol to abate acidification, eutrophication and ground-level ozone (EB.AIR/WG.5/1999/11) and the adoption and publication of the 1998 Major Review of Strategies and Policies for Air Pollution Abatement. He also outlined the new draft mandate for the Working Group on Effects, prepared by the Bureau of the Executive Body as part of a proposal for a new structure for the work under the Convention.

8. He evaluated the present status of the Convention and its Protocols. The 1994 Sulphur Protocol had already been ratified by 28 Parties. All Protocols were now in force except the 1998 Protocols on POPs and Heavy Metals, which only Canada had ratified.

9. The Working Group on Effects took note of the decisions made by the Executive Body and of the deliberations of the Working Group on Strategies, and agreed to bear them in mind when discussing its future activities.

IV. INDEPENDENT REVIEW OF THE EFFECT-ORIENTED ACTIVITIES

10. The Chairman introduced a note, prepared by the Bureau of the Working Group on Effects in collaboration with the secretariat, summarizing the conclusions and recommendations of the external review of the effect-oriented activities (EB.AIR/WG.1/1999/3, chapter III). He stressed that these conclusions and recommendations should be considered together with the Executive Body's proposals for a new structure and priorities under the Convention and suggested that the Working Group should keep them in mind when discussing the future priorities and objectives of the effect-oriented activities under agenda item 7.

11. In the ensuing discussion, several delegations, while expressing their satisfaction with the results of the independent review, also noted the

difficulty of just one reviewer carrying out a comprehensive evaluation of the effect-oriented activities.

12. The Working Group:

(a) Welcomed the work done by the reviewer and the Extended Bureau and approved chapter III of the note on the future priorities and objectives of the effect-oriented activities (EB.AIR/WG.1/1999/3) and decided to submit it to the Executive Body for information;

(b) Noted that the reviewer had found the implementation of the effect-oriented activities to be successful and had recognized the high scientific quality of its achievements;

(c) Noted the excellent collaboration among programmes that had developed since the first external review;

(d) Took note of the acute need to better communicate important findings of effect-oriented activities to policy makers and to the general public;

(e) Took note of the possible difficulties for a single reviewer to review the broad issues of science and related policy;

(f) Invited all Task Forces to consider at their next meeting the practical implementation of the approved conclusions and recommendations in the activities of their individual programmes;

(g) Invited all Task Forces to submit to it at its nineteenth session proposals for necessary changes/amendments to the medium- and long-term objectives of their individual programmes.

V. RESULTS AND SHORT-TERM GOALS OF THE EFFECT-ORIENTED ACTIVITIES

13. The Chairman introduced the annual 1999 Joint report of the International Cooperative Programmes, the Mapping Programme and the Task Force on the Health Aspects of Air Pollution (EB.AIR/WG.1/1999/4). The report both summarized recent developments in the effect-oriented activities (monitoring, database development, assessment of effects, determination of critical loads and levels and their mapping, application of models and new research efforts) and reviewed the recent results and planned activities of individual programmes.

A. International Cooperative Programme (ICP) on assessment and monitoring of air pollution effects on forests

14. Mr. T. Haussmann (Germany), speaking on behalf of the lead country, introduced the progress report of the programme, including the results of the fifteenth Task Force meeting (EB.AIR/WG.1/1999/4, annex I). He outlined its future development and results that might be presented to the Working Group in

2000. He noted an increasing demand for the programme's data from outside the Convention, which confirmed that the scientific community valued the work. He also stressed the programme's effort to link level II and level I results and further elaborate integrated data evaluation.

15. Mr. J. Herkendell, speaking on behalf of the European Commission, stressed that forest damage caused by ozone and/or photo-oxidants was a problem of high priority and should be included in the common monitoring programme. He also noted that the workshop to be organized by the European Union in close collaboration with ICP Forests in 2000 would provide an opportunity for a comprehensive discussion of issues related to the further development of forest condition monitoring.

16. Mr. M. Lorenz (Germany), Head of the Programme Coordinating Centre, presented the summary reports on monitoring forest conditions in Europe (EB.AIR/WG.1/1999/5) and on the present state of knowledge of cause-effect relationships in forest condition (EB.AIR/WG.1/1999/9). He also provided additional information on the further integrated evaluation of the monitoring data and planned development of monitoring activities.

17. In the ensuing discussion a number of delegations expressed their satisfaction with the substantial progress achieved in implementing the programme and in assessing and presenting its results.

18. The Working Group on Effects:

(a) Welcomed the significant progress made by the programme in the evaluation, interpretation and presentation of its results;

(b) Took note of the progress report of ICP Forests (EB.AIR/WG.1/1999/4, annex I) and of the summary reports on monitoring forest conditions in Europe (EB.AIR/WG.1/1999/5) and on the present state of knowledge of cause-effect relationships in forest condition (EB.AIR/WG.1/1999/9);

(c) Noted with appreciation the efforts made in the production of the 1999 Executive Report, which addressed many of the comments made in the external review;

(d) Commended the programme for its efforts to make its data more widely available to other groups, its moves to collaborate with other programmes, its efforts to link level I and level II data, and its indication that it would prioritize various level II and level I activities;

(e) Noted the continuous relevance of the further development of level III monitoring activities (carried out in cooperation with ICP Integrated Monitoring) and invited the Task Force on ICP Forests to report on further progress to it at its nineteenth session in 2000;

(f) Noted the substantial contribution from the European Commission to the work of ICP Forests and its plan to review the programme's activities at a future workshop; it stressed the importance of addressing the needs of the Convention when undertaking the review;

(g) Invited the Task Force on ICP Forests to continue to investigate possibilities for rationalizing monitoring activities and to maintain integrated evaluation of monitoring data;

(h) Noted the possible importance of ozone effects on forests across Europe and recommended further action by ICP Forests in collaboration with other programmes, and possibly with groups outside the Convention.

B. ICP on assessment and monitoring of acidification of rivers and lakes

19. Ms. B. Kvaeven (Norway), Chairwoman of the Task Force on ICP Waters, reviewed the recent achievements of the programme, including the results of the fourteenth Task Force meeting (EB.AIR/WG.1/1999/4, annex II). With reference to the workshop on biological assessment and monitoring, organized jointly with ICP Integrated Monitoring (Zakopane, Poland, October 1998), she pointed out the need for efficient cooperation among the programmes and groups. She also stressed the importance of monitoring activities on a national level.

20. Ms. M. Johannessen Ulstein (Norway), Head of the Programme Centre, introduced the progress report on the assessment and monitoring of surface waters, including the results of the 1998 chemical intercalibration exercise and the main conclusions of the 1998 workshop on biological assessment and monitoring (EB.AIR/WG.1/1999/6). She also reviewed the ongoing activities, including the revision of the ICP Waters database, the preparation of the programme's twelve-year report and the drawing-up of the questionnaire on the monitoring of heavy metals, and outlined plans for further developing the programme. She particularly mentioned the recent important publications presenting programme results.

21. The Working Group expressed its appreciation for the high quality of the scientific work and underlined the need for continuing the long-term monitoring and the intercalibration exercises.

22. The Working Group:

(a) Took note of the progress report of ICP Waters (EB.AIR/WG.1/1999/4, annex II);

(b) Took note of the progress report on the assessment and monitoring of surface waters describing the results of the chemical intercalibration 1998 and the results of the joint ICP Integrated Monitoring/ICP Waters workshop on biological monitoring and assessment (EB.AIR/WG.1/1999/6), and noted the programme's efforts to present effective summaries of its results;

(c) Noted the information about the present status of the programme's database and its expected development;

(d) Noted the progress in preparing the programme's twelve-year report and invited the Task Force on ICP Waters to present the report to it at its nineteenth session in 2000;

(e) Took note of the efforts of the programme to collaborate with other ICPs and groups and to publish its results for presentation to scientists and the public, including the publication of its brochure.

C. ICP on effects of air pollution on materials, including historic and cultural monuments

23. Mr. V. Kucera (Sweden), Chairman of the Task Force on ICP Materials, presented the progress report of the programme, including the results of the fifteenth Task Force meeting (EB.AIR/WG.1/1999/4, annex III), the report on the development of the new exposure programme and on the creation of an environmental database for the programme (EB.AIR/WG.1/1999/7). He drew attention to the recently published proceedings of the workshop on quantification of effects of air pollution on materials (May 1998, Berlin). He also reported on the progress in using the results of the exposure programme for modelling and mapping areas with increased corrosion risk and provided information on the workshop on mapping air pollution effects on materials, including stock at risk, which would be organized jointly with the Task Force on Mapping in June 2000 in Sweden.

24. Delegations welcomed the multi-pollutant approach to the implementation of the programme and stressed the importance of the further development of the related mapping activities and the economic assessment of damage.

25. The Working Group:

(a) Took note of the progress report of ICP Materials (EB.AIR/WG.1/1999/4, annex III);

(b) Took note of the progress report on the development of the new multi-pollutant exposure programme and on the creation of an environmental database for the programme (EB.AIR/WG.1/1999/7);

(c) Noted the progress in using the results of the exposure programme for modelling and mapping areas with increased corrosion risk and the preparations for the workshop on mapping air pollution effects on materials, including stock at risk (June 2000, Stockholm); the Working Group also noted the potential for the workshop to make an important contribution to the future economic assessment of damage, possibly also on the international scale;

(d) Welcomed the publication of the proceedings of the workshop on quantification of effects of air pollution on materials (May 1998, Berlin);

(e) Welcomed the decision of the Task Force to produce abstracts of existing reports and to produce a brochure of its main results.

D. ICP on effects of air pollution and other stresses on crops and non-wood plants

26. Ms. G. Mills (United Kingdom), Chairwoman of the Task Force on ICP Crops introduced the progress report of the programme including the results of the twelfth Task Force meeting (EB.AIR/WG.1/1999/4, annex IV) and the summary report on the progress in level II modelling and mapping of ozone for crops and natural vegetation (EB.AIR/WG.1/1999/8). She also presented the 1999 annual progress report of ICP Crops. Moreover, she provided information on plans for the programme's development.

27. With reference to the discussions at the twelfth meeting of the Task Force and the recent meeting of the Extended Bureau of the Working Group on Effects, she proposed to change the full name and the short name of the programme to: ICP on effects of air pollution on natural vegetation and crops - ICP Vegetation.

28. The Working Group was informed of a proposal from the Nordic Council of Ministers concerning the European Metals in Mosses Survey and suggesting that a subsidiary body of the Convention might take responsibility for the future operation and reporting of the Survey.

29. In the ensuing discussion, a number of delegations expressed appreciation for the important work already done by the programme. Several delegations stressed the need for close cooperation with ICP Forests and ICP Integrated Monitoring, as well as with the European Environment Agency, in addressing the effects of ozone and other air pollutants on natural vegetation.

30. The Working Group:

(a) Took note of the progress report of ICP Crops (EB.AIR/WG.1/1999/4, annex IV) and the 1999 annual progress report produced by the Programme Centre;

(b) Took note of the progress in level II ozone critical level modelling and mapping for crops and natural vegetation as described in the summary report (EB.AIR/WG.1/1999/8);

(c) Noted the progress in the identification of characteristics of natural and semi-natural plant communities associated with ozone sensitivity;

(d) Invited ICP Crops to continue its activities to make a realistic economic assessment of crop losses due to ozone pollution and to assess the impacts on natural vegetation, initially on individual species;

(e) Agreed to propose to the Executive Body to change the name of the programme to ICP on Effects of Air Pollution on Natural Vegetation and Crops (short name: ICP Vegetation);

(f) Commended the programme on its scientific publications, its contributions to workshops and the production of its brochure;

(g) Welcomed the commencement of work on the accumulation of metals in the clover clone experiment;

(h) Noted the proposal concerning the future coordination of the European Metals in Mosses Survey and agreed to react positively, provided sufficient funds were available;

(i) Noted with appreciation the description of the artificial neural networks provided in the programme's annual progress report;

(j) Requested the programme to assess the significance of transboundary transport of herbicides and to report to it at its nineteenth session.

E. ICP on integrated monitoring of air pollution effects on ecosystems

31. Mr. H. Staaf (Sweden), speaking on behalf of the lead country, reviewed the programme activities since the seventeenth session of the Working Group (EB.AIR/WG.1/1999/4, annex V). He mentioned in particular the publication of the revised programme manual, the development of its database, the organization of the joint workshop (with ICP Waters) on biological assessment and monitoring, the preparation of strategies for assessing heavy metal stores and fluxes and for assessing air pollution effects on vegetation, the participation in the European Union project on Networking of Long-term Integrated Monitoring in Terrestrial Systems (NoLIMITS), and recent reports and publications.

32. Mr. L. Lundin (Sweden), Chairman of the Task Force on Integrated Monitoring, reviewed the programme's ongoing and planned activities. He especially mentioned the development of the programme's monitoring network (50 sites in 22 countries), plans to implement the strategies for assessing heavy metal stores and fluxes and for modelling environmental effects on vegetation, and the development of models, including dynamic modelling.

33. Mr. M. Forsius (Finland), Head of the Integrated Monitoring Programme Centre, provided additional information on the programme's recent activities. He pointed out the updating of the programme database, important scientific work and the publication of its results, intensified cooperation with other ICPs and active participation in international projects outside the Convention. He also stressed that wider application of dynamic modelling would require additional resources.

34. The Working Group on Effects:

(a) Took note of the progress report of ICP Integrated Monitoring (EB.AIR/WG.1/1999/4, annex V);

(b) Noted the eighth annual report 1999 of ICP Integrated Monitoring and welcomed the efforts made to summarize the main results of recent years;

(c) Welcomed the strategy for assessing heavy metal stores and fluxes and invited the Task Force to report to it on the progress in its implementation at its nineteenth session in 2000;

(d) Noted plans for modelling the environmental effects on vegetation and requested the Task Force to collaborate with other programmes and to report back to it in 2000;

(e) Stressed the importance of dynamic modelling and noted that funding was being sought and collaboration with other programmes planned;

(f) Noted the participation of the Programme Centre in the project on Networking of Long-term Integrated Monitoring in Terrestrial Systems (NoLIMITS) and requested to be kept informed of developments;

(g) Invited the Task Force to continue its activities to further develop proposals for an optimized joint network of ICPs monitoring sites.

F. Task Force on Mapping of Critical Levels and Loads

35. Mr. H.-D. Gregor (Germany), Chairman of the Task Force on Mapping, presented its progress report, including the results of its fifteenth meeting (EB.AIR/WG.1/1999/4, annex VI). He also informed the Meeting about a regional training workshop on critical load calculations for air pollutants, to be held in Pushchino, Russian Federation, from 27 September to 1 October 1999. He pointed out the intensified cooperation with other ICPs and stressed the importance of the continuous technical support provided to the Task Force by the Coordination Center for Effects.

36. On behalf of the lead country, he also presented information on preparations for the forthcoming workshop on effects-based approaches for heavy metals (Schwerin, Germany, October 1999).

37. Mr. M. Posch (Netherlands), the representative of the Coordination Center for Effects (CCE), reviewed the recent results of its mapping activities, including the outcome of the tenth CCE workshop on mapping critical loads and levels (Prague, Czech Republic, June 1999). He also introduced the CCE Status Report 1999, including information on the further analysis of critical loads data and the development of the critical loads/levels methodology. He also presented plans for future activities and stressed that their full implementation depended on adequate funding. He pointed out that CCE continued to provide support to other ICPs and to the

Task Force on Integrated Assessment Modelling, and that it had taken an active part in the workshop on critical level for ozone - level II (Gerzensee, Switzerland, April 1999).

38. The representative of Denmark, the host country of the Conference on Critical Loads Copenhagen (November 1999), provided detailed information on this event.

39. The representative of the Netherlands informed the Meeting that her Government was seriously considering substantially reducing the funding of the Coordination Center for Effects in 2000. The decision would be taken before the seventeenth session of the Executive Body. She noted that with reduced funding CCE would not be able to provide the present level of support to the Working Group on Effects, the Working Group on Strategies and their subsidiary bodies.

40. The Chairman of the Working Group presented a proposal from the Bureau to establish an ICP on mapping critical levels and loads, on the understanding that its Task Force would continue to be led by Germany and the Coordination Center for Effects (CCE) in Bilthoven (Netherlands) would continue to provide scientific and technical support to the new programme and its Task Force.

41. The representative of the Netherlands informed the Meeting of the recently published Manuals for Calculating Critical Loads for Heavy Metals in Aquatic and Terrestrial Ecosystems and Manuals for Performing Risk Assessments for Persistent Organic Pollutants in Aquatic and Terrestrial Ecosystems.

42. In the ensuing discussion a number of delegations commended the significant results of the Mapping Programme and stressed that the role of CCE was becoming increasingly important for the effective implementation of the Convention and its Protocols.

43. The Working Group on Effects:

(a) Took note of the progress report of the Task Force on Mapping and the Coordination Center for Effects (EB.AIR/WG.1/1999/4, annex VI) and noted the significant work that had been done to support the current protocol negotiations;

(b) Stressed the importance of the work carried out by CCE, not only within the Mapping Programme, but also in supporting relevant activities of other programmes; it therefore noted with disappointment the announcement by the representative of the Netherlands that funding for this very important work of CCE was likely to be cut, and requested the Bureau to explore ways of securing continued funding;

(c) Welcomed the publication of the CCE Status Report 1999, summarizing data and information relevant to current protocol negotiations, and approved its wide distribution;

(d) Agreed to propose to the Executive Body to establish an ICP on mapping critical levels and loads with its Task Force led by Germany and the Coordination Center for Effects (CCE) in Bilthoven, Netherlands, providing scientific and technical support to the programme and its Task Force;

(e) Welcomed the preparations for the workshop on critical limits for heavy metals (Schwerin, Germany, October 1999) and the Conference on critical loads (Copenhagen, Denmark, November 1999);

(f) Agreed on further action to develop a work-plan to address the priorities of the Convention, drawing upon the work of National Focal Centres (NFCs) and offers of help in kind, and invited the Task Force to report to it in 2000;

(g) Agreed on further action to develop the regional application of simple dynamic models, including consideration of a probabilistic approach, and requested the Task Force to report back to it in 2000;

(h) Noted that the critical load definitions had been discussed by the Task Force and that it had agreed that current, approved definitions should stand for ongoing protocol negotiations;

(i) Noted that the Task Force had recommended that deadlines for data submission should be adhered to and that sample maps should not be annexed to the multi-effect, multi-pollutant protocol, but made available through a brochure;

(j) Welcomed the decision of the Task Force to make the Mapping Manual available on the Internet, and to produce a brochure for the mapping activities;

(k) Noted the importance of the further development of level II critical levels for ozone and recommended that the proceedings of the workshop on the topic (Gerzensee, Switzerland, April 1999) should be distributed to all NFCs.

#### G. Task Force on the Health Aspects of Air Pollution

44. Mr. M. Krzyzanowski, representative of the European Centre for Environment and Health of the World Health Organization (WHO/ECEH) and Chairman of the Task Force on the Health Aspects of Air Pollution, reported on the development of the Task Force activities, including the results of its second meeting (EB.AIR/WG.1/1999/4, annex VII). He noted the present status of the report on the health risk from particulate matter from long-range transboundary air pollution. He noted with appreciation the active participation of experts from nine countries and the substantive contribution provided by EMEP. He also presented draft proposals for further developing the Task Force's activities, including possibly on persistent organic pollutants and heavy metals.

45. Special mention was made of the Ministerial Conference on Environment and Health (London, United Kingdom, June 1999) and of the adopted documents of relevance to the Convention.

46. In the ensuing discussion, a number of delegations expressed their satisfaction with the impressive results achieved by the Task Force. While they supported the proposal to undertake a study on the possible health effects of heavy metals as a short-term priority, they stressed that work to address the health effects of persistent organic pollutants (POPs) should also be started.

47. The representative of the Netherlands provided information on a project to prepare for the possible inclusion of additional POPs into the relevant annexes of the Protocol on POPs.

48. The Working Group on Effects:

(a) Took note of the report of the activities of the Task Force (EB.AIR/WG.1/1999/4, annex VII) and recognized the important contributions made by EMEP and national experts to the work;

(b) Agreed with the proposals for further developing the Task Force's activities, including the timetable for the finalization of the report on health risks from particulate matter, and future action on persistent organic pollutants and heavy metals;

(c) Expressed its appreciation to the European Centre for Environment and Health of WHO for its substantial contribution to the activities of the Task Force;

(d) Reiterated its invitation to all interested countries to nominate the experts and actively participate in the work of the Task Force;

(e) Took note of the EMEP/WMO workshop on fine particles (Interlaken, Switzerland, November 1999);

(f) Took note of the information presented on the Ministerial Conference on Environment and Health (London, United Kingdom, June 1999) and of the contents of the adopted documents, identifying the importance of environmental health issues in research;

(g) Recommended that reporting on the significance of the health effects of heavy metals should be a short-term priority;

(h) Took note of the possible implications of the Protocol on POPs for the effect-oriented activities once it entered into force, noted the Netherlands initiative to launch a project concerning possible new substances to be controlled, and requested the Bureau in collaboration with WHO/ECEH to make plans for future work on the effects of POPs and report back to it at its nineteenth session.

H. Common aspects of the International Cooperative Programmes

49. The Working Group on Effects:

(a) Noted with satisfaction the important results of the International Cooperative Programmes, the Mapping Programme and the Task Force on the Health Aspects of Air Pollution in implementing the Convention and, in particular, their contribution to the preparation of the new multi-effect, multi-pollutant protocol to abate acidification, eutrophication and ground-level ozone;

(b) Reiterated the importance of the work carried out by the national focal centres and of the support provided by the lead countries and coordinating centres;

(c) Again drew attention to the relevant provisions of the Convention, in particular article 7 (d), requiring Parties to conduct cooperative research on the effects of sulphur compounds and other major air pollutants on human health and the environment, and article 8 (f), inviting Parties to exchange available information on physico-chemical and biological data relating to the effects of long-range transboundary air pollution and the extent of the damage;

(d) Again stressed the need for adequate financing of the effect-oriented activities on the national level (national programmes and NFCs) and on the international level (Task Forces and ICPs);

(e) Reiterated the continued need to regularly update the objectives and methods of work of individual programmes, in view of the results of the independent review of the effect-oriented activities and the recent priorities of the Executive Body;

(f) Noted the importance of intercalibrations and quality assurance/control and recommended to all programme centres to continue to make efforts to collaborate and share their expertise and experience;

(g) Noted the important developments in dynamic models in several programmes and requested that necessary action should be taken to collaborate in the future;

(h) Noted the reporting of widespread effects of ozone on vegetation and requested that all relevant programmes should collaborate to identify the extent of effects and exceedances of critical levels;

(i) Noted the need for better communication and reporting and urged the programmes to continue to make an effort to this end;

(j) Noted the progress in the preparation of the website of the Working Group on Effects with links to the individual programme centres and the national focal centres;

(k) Invited all programmes to provide the secretariat with their recent brochures and publications so that these could be exhibited during the forthcoming ministerial meeting and the seventeenth session of the Executive Body, to illustrate the results of the effect-oriented activities.

VI. REVIEW OF SCIENTIFIC AND TECHNICAL KNOWLEDGE

A. Trends in the impacts of long-range transboundary air pollution

50. The Chairman presented the summary of the substantive report on trends in the impacts of long-range transboundary air pollution (EB.AIR/WG.1/1999/10) and the final draft of the substantive report on the topic, and pointed out some inconsistencies between them. He also outlined plans for finalizing the technical report.

51. The Working Group amended document EB.AIR/WG.1/1999/10 as follows:

(a) In paragraph 5, the third sentence should start: "Acidity critical load ...";

(b) In paragraph 5, the last sentence should be replaced by the following text: "However, nitrogen emissions remain high, causing widespread and continuing eutrophication of natural ecosystems as well as acidification. As a consequence, improvements in exceedances of nutrient nitrogen critical loads are small. Forest condition shows continued signs of deterioration in some parts of Europe; the results are confounded by stress factors other than air pollution, which is still seen as a predisposing or triggering factor for forest damage.";

(c) In paragraph 7, the last sentence should read: "Effects of ozone on crops are widespread and follow the yearly changes in pollutant concentrations, but there are no overall trends over the time period reported here.";

(d) In paragraph 12, the fourth and fifth sentence should be deleted;

(e) In paragraph 22, the last sentence should read: "As a result, ozone exceedances for crops and other vegetation on the ECE scale have shown no trends over the time period reported here."

52. The Working Group:

(a) Approved the summary of the substantive report (EB.AIR/WG.1/1999/10) as amended above;

(b) Approved in principle the substantive report, while taking note of the proposed amendments, and agreed that the Extended Bureau would finalize the report in time for publication before the end of 1999;

(c) Noted that the report did not include any results of ongoing studies on the trends in human health effects, as the Task Force on the Health Aspects of Air Pollution was not in a position to participate in its preparation;

(d) Expressed its appreciation for the work done by the programme centres, the Bureau and the Institute of Terrestrial Ecology (United Kingdom) in preparing the substantive report.

B. Assessment of the health risk of particulate matter

53. Mr. M. Krzyzanowski (WHO/ECEH) introduced the executive summary of the report on the preliminary assessment of the health risk of particulate matter from long-range transboundary air pollution (EB.AIR/WG.1/1999/11). He also presented a draft of the technical report on the topic and summarized its most important findings.

54. A number of delegations stressed the importance of health effects of particulate matter, including those of long-range transport, and expressed their satisfaction with the report.

55. The Working Group amended the document (EB.AIR/WG.1/1999/11) as follows: in paragraph 11, the last sentence should read: "Estimates of expected changes in primary particulate matter from long-range transboundary air pollution are under development but not available yet."

56. The Working Group:

(a) Approved the executive summary of the report (EB.AIR/WG.1/1999/11) as amended and noted the significant health risk associated with long-range transport of fine particulates and the important reductions in secondary particulates associated with possible future abatement of long-range transboundary pollution; these abatement measures might also decrease primary particulate concentrations;

(b) Approved, in principle, the draft of the technical report and invited the European Centre for Environment and Health of WHO to coordinate its finalization;

(c) Expressed its appreciation for the work done by the national experts, EMEP and the European Centre for Environment and Health of WHO in preparing the report and its executive summary;

(d) While noting the importance of developing means to address the effects of particulates, requested the Task Force on the Health Effects of Air Pollution in collaboration with the Task Force on Mapping to consider the possible use of a critical level approach and to report to it at its nineteenth session in 2000.

C. Summary report on the workshop on critical levels for ozone level II

57. Mr. B. Achermann (Switzerland), introduced a summary report on the workshop on critical levels for ozone - level II (Gerzensee, Switzerland, April 1999), prepared by its organizing committee (EB.AIR/WG.1/1999/12). He reviewed the results of the discussions concerning the reassessment of level I critical levels and possible options for level II approaches for forests, agricultural crops and semi-natural vegetation, as well as the conclusions on modelling and mapping. He also outlined plans for publishing the workshop's results and for their possible future use for updating relevant parts of the Mapping Manual.

58. In the ensuing discussion, the Working Group appreciated the important results of the workshop. It also amended document EB.AIR/WG.1/1999/12 as follows:

(a) Paragraph 6 (b) should read: "The modification of the AOT40 values calculated to express exceedances of the level I critical levels for ozone;"

(b) In paragraph 7, the end of the first sentence should read: "..., such as the modification of the AOT40 values calculated to express exceedances of the level I critical levels for ozone."

59. The Working Group:

(a) Took note of the summary report on the workshop on critical levels for ozone - level II (EB.AIR/WG.1/1999/12) as amended, which addressed the reassessment of level I critical levels and the options for level II approaches;

(b) Noted that two approaches were thought suitable for the level II assessment: a modified AOT40 for development in the shorter term, and a flux-based approach for the longer term. It also took note of the detailed consideration that was given to the application of these two approaches and the difficulties associated with obtaining the necessary data for mapping;

(c) Noted the proposal to revise the Mapping Manual, but agreed that this should be considered only after more scientific work was completed and published;

(d) Invited relevant programmes, in particular the Mapping Programme, ICP Vegetation, ICP Forests, ICP Materials and ICP Integrated Monitoring, to cooperate actively in implementing the conclusions of the workshop and in further developing the level II approach for ozone.

VII. FUTURE PRIORITIES AND OBJECTIVES OF THE EFFECT-ORIENTED ACTIVITIES

60. The Chairman introduced relevant chapters of the note on future priorities and objectives of the effect-oriented activities, prepared by the

Bureau in collaboration with the secretariat (EB.AIR/WG.1/1999/3, chapters I, II, IV and V).

61. He drew the attention of the Working Group to the recent decisions of the Executive Body and its Bureau concerning the future organization of work of the Executive Body and its priorities for medium- and long-term work under the Convention. He also referred to the decisions of the Working Group at its present session concerning the conclusions of the independent review of the effect-oriented activities (agenda item 4).

62. In the ensuing discussion the Working Group considered future priority tasks, objectives and organization of work of the Working Group on Effects, its Task Forces and programmes, which would ensure the most effective use of available resources for meeting the needs of the Executive Body in implementing the Convention. While welcoming the note and commending its stimulating content, some delegations expressed the view that any extension of existing activities should be critically assessed by each of the programmes. Others noted the great importance of continuing long-term activities such as monitoring.

63. The Working Group amended document EB.AIR/WG.1/1999/3 as follows:

(a) In paragraph 17, the end of the second sentence should read: "the Working Group will maintain its efforts to collect and assess the following information, which is important for promoting the effective implementation of the Convention:";

(b) In paragraph 18 at the end add: "(1) Quality assurance.";

(c) In paragraph 19 (b), after "and materials" add: "and cultural heritage";

(d) In paragraph 19, after subparagraph (c) add a new subparagraph: "(d) Identification of gaps in knowledge and stimulation of new research to address shortfalls;"

(e) In paragraph 24, the second part of the sentence should read: "will continue to provide necessary inputs based on available information on the effects of ...";

(f) In paragraph 25 (c) add at the end: ", including cultural heritage";

(g) In paragraph 36, the end of the first sentence should be amended to read: "the continued assessment based on all available information on population exposure to, and health effects of:";

(h) In paragraph 41 after "Climate Change" add: ", Convention on Biodiversity".

64. The Working Group on Effects:

(a) Approved the note on the future priorities and objectives of the effect-oriented activities (EB.AIR/WG.1/1999/3), as amended, and decided to submit it to the Executive Body;

(b) Invited all Task Forces to consider carefully the practical implementation of the proposed changes in the objectives and priorities of individual programmes at their next meeting, while preparing plans for future activities;

(c) Reiterated the importance of close collaboration among programmes and recommended that the options identified in paragraphs 26 and 27 of the above-mentioned document should be explored by the programmes;

(d) Stressed the importance of effectively collaborating with other bodies inside and outside the Convention;

(e) Noted the importance of quality assurance as one of the activities to be continuously addressed by all programmes.

VIII. FINANCING OF EFFECT-ORIENTED ACTIVITIES

65. The secretariat introduced a note on financing of the effect-oriented activities, prepared by the Bureau of the Working Group in collaboration with the secretariat (EB.AIR/WG.1/1999/13). It drew attention to the updated table 2, showing the 1999 voluntary cash contributions towards financing the essential international coordination of the effect-oriented activities, and the updated table 3, showing the use of voluntary contributions in 1998 and 1999.

66. The secretariat noted the substantial financial support continuously provided by all lead countries of the programmes and by countries hosting the programme centres, as well as the important contribution made by hosting task force meetings and workshops.

67. In the ensuing discussion, a number of delegations stressed the urgent need to secure sufficient long-term funding for the effect-oriented activities and noted that any unjustified reductions in the scope of the work would have a detrimental effect not only on the effective implementation of the Convention, but also on a number of environmental programmes and activities outside the Convention.

68. The Working Group:

(a) Approved the note on the financing of the effect-oriented activities (EB.AIR/WG.1/1999/13) and decided to submit it to the Executive Body;

(b) Noted with appreciation the essential support provided by lead countries, countries hosting coordinating centres, and countries funding the active participation of their national experts and National Focal Centres;

(c) Noted that the voluntary contributions in the last year had amounted to only about 17% of the estimated essential coordination costs of the programmes; this fell well short of what was needed to support work defined by the Executive Body as one of the three core activities under the Convention;

(d) Requested the secretariat to provide some information on the use of the contributions to the Trust Fund at the nineteenth session of the Working Group on Effects;

(e) Agreed that the essential coordination costs of different elements of the effect-oriented activities in 2000 should be kept at the same level as in 1999, i.e. US\$ 1,488,000 (see document EB.AIR/WG.1/1997/14, table 2);

(f) Reiterated its invitation to all Parties that had not yet done so to consider providing voluntary contributions to the Trust Fund for financing the effect-oriented activities without undue delay.

69. Voluntary contributions in US dollars should be sent to:

Account Number: 001-1-508629  
Bank Name: Chase Manhattan Bank, New York  
Account Title: UNOG General Fund  
General Ledger: UN-0503456 (for UNOG/Finance reference only)  
Address: International Agencies Branch  
270 Park Avenue, 43<sup>rd</sup> Floor  
New York, N.Y. 10017, USA  
ABA: 021000021 (US Banking Code)  
Reference: Trust Fund for the Implementation of the Convention,  
Sub-account for Voluntary Contributions towards  
Funding of Effect-oriented Activities under the  
Convention, Allotment account No.: LUC-25-270

70. Voluntary contributions in other currencies (except US dollars) should be sent to:

Account Number: 240-CO-590,160.0  
Bank Name: UBS S.A.  
Account Title: UNOG General Fund  
Bank Address: 2, rue de la Confédération  
Case postale 2770  
1211 Geneva 2  
Switzerland  
Bank Swift Code: UBSWCHZH12A

Reference: Trust Fund for the Implementation of the Convention,  
Sub-account for Voluntary Contributions towards  
Funding of Effect-oriented Activities under the  
Convention, Allotment account No.: LUC-25-270

71. These contributions should clearly indicate the year for which they are made and the specific programme/coordinating centre, if applicable.

72. Alternatively, contributions may also be made by cheque made payable to "UN Economic Commission for Europe", clearly earmarked as indicated above and addressed to:

Administrative and Conference Service Unit (Office 333)  
Office of the Executive Secretary  
Economic Commission for Europe  
Palais des Nations  
1211 Geneva 10

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

#### IX. ELECTION OF OFFICERS

74. Mr. K. Bull (United Kingdom) was re-elected Chairman. Mr. B. Achermann (Switzerland), Mr. V. Bashkin (Russian Federation), Mr. G. Fenech (Canada), Mr. R. Guardans (Spain), and Mr. T. Johannessen (Norway) were re-elected Vice-Chairmen.

#### X. OTHER BUSINESS

75. The secretariat presented a provisional list of meetings for 1999/2000 (annex) and invited all Parties and programmes to communicate to the secretariat without undue delay any amendments or new information.

76. The Chairman informed the Working Group that its nineteenth session was tentatively scheduled to be held from 23 to 25 August 2000, starting on Wednesday, 23 August 2000 at 10 a.m.

Annex

**PROVISIONAL LIST OF MEETINGS FOR 1999/2000**

(reflecting the proposed restructuring of the work under the Executive Body)

26 August - 3 September 1999 Geneva	Working Group on Strategies (thirty-first session)
6-8 September 1999 Geneva	EMEP Steering Body (twenty-third session)
29 November -3 December 1999 Gothenburg (Sweden)	Executive Body for the Convention (seventeenth session)
24-28 January 2000 Geneva	Working Group on Strategies and Review (thirty-second session)
5-9 June 2000 Geneva	Working Group on Strategies and Review (thirty-third session)
23-25 August 2000 Geneva	Working Group on Effects (nineteenth session)
28 August - 1 September 2000 Geneva	Working Group on Strategies and Review (thirty-fourth session)
4-6 September 2000 Geneva	EMEP Steering Body (twenty-fourth session)
4-7 December 2000 Geneva	Executive Body for the Convention (eighteenth session)
* * *	
6-8 October 1999 Verbania Pallanza (Italy)	Programme Task Force, ICP on Assessment and Monitoring of Acidification of Rivers and Lakes (fifteenth meeting)
12-15 October 1999 Schwerin (Germany)	Workshop on effects-based approaches for heavy metals
16-19 November 1999 Geneva	WMO/EMEP Workshop on modelling of atmospheric transport and deposition of POPs and mercury
21-25 November 1999 Copenhagen (Denmark)	Conference on critical loads

22-25 November 1999 Interlaken (Switzerland)	EMEP/WMO Workshop on fine particles; emissions, modelling and measurements
Winter 1999/2000	Task Force on the Health Aspects of Air Pollution (third meeting)
18-21 January 2000 Semmering (Austria)	Programme Task Force, ICP on Effects of Air Pollution on Natural Vegetation and Crops (thirteenth meeting)
April 2000 (United Kingdom) (tentatively)	Task Force on Mapping of Critical Loads and Levels (sixteenth meeting)
11-13 May 2000 Paris (France)	Programme Task Force, ICP on Effects of Air Pollution on Materials, Including Historic and Cultural Monuments (sixteenth meeting)
Spring 2000 (Lithuania) (tentatively)	Programme Task Force, ICP on Integrated Monitoring of Air Pollution Effects on Ecosystems (eighth meeting)
20-24 May 2000 (Belgium)	Programme Task Force, ICP on Assessment and Monitoring of Air Pollution Effects on Forests (sixteenth meeting)
14-16 June 2000 (Sweden) (tentatively)	Workshop on mapping air pollution effects on materials, including stock at risk
Autumn 2000	Programme Task Force, ICP on Assessment and Monitoring of Acidification of Rivers and Lakes (sixteenth meeting)