

Distr.
GENERAL

UNEP/OzL.Conv/Bur/1/3
28 October 1991

ORIGINAL: ENGLISH

BUREAU OF THE CONFERENCE OF THE PARTIES
TO THE VIENNA CONVENTION FOR THE
PROTECTION OF THE OZONE LAYER

First meeting
Geneva, 18-19 March 1991

REPORT OF THE FIRST MEETING OF THE BUREAU OF THE
CONFERENCE OF THE PARTIES TO THE VIENNA CONVENTION

I. INTRODUCTION

1. The First Meeting of the Bureau of the Conference of the Parties to the Vienna Convention was held in Geneva on 18 March 1991.

II. ORGANIZATIONAL MATTERS

A. *Opening of the Meeting*

2. The Executive Director of UNEP, Dr. M.K. Tolba, opened the meeting and welcomed the participants. The Executive Director informed the Bureau that the President of the Bureau, Mr. Kaj Bärlund, Minister of Environment of Finland, was unable to attend the meeting due to the elections which took place in Finland on 17 March 1991, the day before the meeting. According to Rule 23, paragraph 1 of the Rules of Procedure of the Conference of the Parties to the Vienna Convention, one of the Vice-Presidents of the Bureau was requested, Professor Vladimir Zakharov, Deputy Chairmen of the State Committee for Hydrometeorology (USSR), to act as President of the meeting of the Bureau. Accordingly, Professor Zakharov took the Chair.

3. The Executive Director informed the Bureau that Minister Bärlund would be represented at this meeting by an observer from Finland, Mr. Antti Kulmala, Assistant Director-General, Ministry of Environment of Finland. Mr. Kulmala has been an active participant in negotiations on the Vienna Convention and the Montreal Protocol.

4. The Executive Director introduced the new Vice-President of the Bureau, Mr. Nobutoshi Akao, Ambassador for Global Environmental Affairs and International Co-operation from the Ministry of Foreign Affairs of Japan, who replaced the former Vice-President of the Bureau, Ambassador Wataru Miyakawa.

5. The Executive Director introduced the new Rapporteur of the Bureau, His Excellency Mr. Raphael Muli Kiilu, Ambassador, Head of International Organizations and Conferences of Kenya, who replaced in this function Ambassador Keziah Kinyanjui.

6. The Executive Director informed the meeting that Mrs. Imeria De Odreman from Venezuela, Vice-President of the Bureau, was unable to attend the meeting. The representative of the Permanent Mission of Venezuela to the United Nations, Mr. Carlos R. Pestana Macedo, attending the meeting as an observer, offered to introduce Mrs. De Odreman's comments on the points to be discussed at the meeting.

B. Attendance

7. Taking into account the changes described above, the following was the composition of the Bureau at the meeting:

Acting as President: Prof. Vladimir Zakharov (USSR)
Vice-Presidents: Ambassador Nobutoshi Akao (Japan)
Prof. Vladimir Zakharov (USSR)
Rapporteur: Ambassador Raphael Muli Kiilu (Kenya)

8. The full list of participants and observers at the meeting is attached to this report as Annex I.

C. Adoption of the Agenda

9. The following agenda was adopted by the meeting:

1. Opening of the meeting.
2. Adoption of the Agenda.
3. Note by the Executive Director:
 - (a) Implementation of the relevant subparagraphs of paragraph 4 of Article 6 of the Vienna Convention;
 - (b) Preparation of a draft agenda for the various activities under the relevant subparagraphs of paragraph 4 of Article 6 of the Convention, and estimation of the costs required for the implementation of the proposed activities;
 - (c) The provisional agenda and other documents for the Second meeting of the Conference of Parties to the Vienna Convention; and
 - (d) Status of implementation of the decisions of the First Meeting of the Conference to the Parties.
4. Adoption of the report.
5. Closure of the meeting.

III. SUBSTANTIVE MATTERS

10. The *Note by the Executive Director* (UNEP/OzL.Conv/Bur.1/1/2) was introduced by Dr. M.K. Tolba.

a. *Implementation of the relevant subparagraphs of paragraph 4 of Article 6 of the Vienna Convention*

11. In accordance with its terms of reference, the Bureau considered the implementation of the relevant subparagraphs of paragraph 4 of Article 6 of the Vienna Convention under item 3 (a) of the agenda. The Bureau reviewed the current scientific information on the ozone layer; on the possible modification of the ozone layer; and on the possible effects of any such modifications. The Bureau considered, in accordance with Articles 3 and 4 of the Vienna Convention, programmes for research, systematic observations, scientific and technical cooperation, the exchange of information, and the transfer of technology.

12. The Bureau reviewed a report by the representative of WMO who conveyed the findings and recommendations made by the First Meeting of the WMO/UNEP Ozone Research Managers which took place in Geneva from 13-15 March 1991.

13. The Bureau noted that recent analysis of data and experimental studies supports the conclusion that the Antarctic spring ozone hole is due to chemical destruction of ozone by reactive chlorine and bromine from man-made CFCs and halons occurring in the unique south polar vortex conditions. The total ozone decline in the 30 -50 latitudinal belts of both hemispheres has been on the average of 3 per cent to 6 per cent during the last decade. This decline has been somewhat more severe in the Spring seasons, and at more extreme latitudes.

14. The Bureau noted that chlorine levels in the atmosphere will continue to rise until there is at least 90 per cent compliance with the revised control levels of the Montreal Protocol. Higher chlorine loadings, which are expected to reach a peak between 2000 and 2010, are likely to accelerate ozone destruction. (A detailed account of the recent findings of atmospheric ozone science as formulated by the First WMO/UNEP Meeting of Ozone Research Managers is reproduced in Annex II to this report).

15. The Bureau concurred with the view of the First WMO/UNEP Meeting of Ozone Research Managers (Geneva, 13-15 March 1991) that the overall goal of research activities is to understand the physics, chemistry, and transport processes of atmospheric ozone, with particular emphasis on accurate assessment of the possible perturbations caused by human activities as well as by natural phenomena. The Bureau noted that this will require a comprehensive programme of systematic observations, process studies, emission scenarios, and development of predictive modeling. Continuity in each of these activities, in particular ground-based and satellite observations is essential.

16. The Bureau noted several high priority scientific objectives formulated by the First WMO/UNEP Meeting of the Ozone Research Managers intended to guide future work on the ozone issue. These include:

- (i) To characterize the chemical and meteorological conditions leading to stratospheric ozone loss and tropospheric ozone increase;
- (ii) To improve the predictive capabilities of the current generation of models;
- (iii) To improve understanding of the lower stratosphere and its chemical and dynamic coupling with the upper troposphere, particularly with respect to the prediction of effects of supersonic transport and ozone-climate interactions;

- (iv) To improve understanding of the relationship between UV radiation and other atmospheric variables, such as ozone depletion and cloud cover, and the effects of UV-B and UV-A on living systems.

17. The Bureau supported the recommendations of the First WMO/UNEP Meeting of the Ozone Research Managers on:

- (i) Improving systematic measurements (e.g. expanding the Global Ozone Observing System and implementing 3-5 observatories for detection of Stratospheric Change);
- (ii) Developing future processes and campaign studies (e.g. polar ozone, halocarbon lifetime, trace gas fluxes, aerosols and heterogeneous chemistry);
- (iii) Improving model prediction capabilities;
- (iv) Investigating the impacts of ozone modification and general recommendations (including the need for multilateral assistance to increase collaborative research projects); and
- (v) Establishing additional GO₃OS monitoring stations, particularly in developing countries.

18. The Bureau recalled that the WMO/UNEP international ozone assessments (1988-1989), as well as the preparatory meeting and the first meetings of the Ozone Research Managers, each identified the tropical belt and the Southern hemisphere as data deficient regions and called for expansion of the WMO Global Ozone Observing System based on the integration of ground-based and satellite components into a fully operational system in these areas (as stipulated in Annex I (d) of the Convention).

19. Several members of the Bureau pointed out the need for a network for measuring ultraviolet radiation, and recognized that there is a special need for development of a mechanism to conduct these measurements in developing countries. The Bureau decided to suggest to the Second Meeting of the Conference of Parties that more observation and measurement of both ozone levels and levels of ultraviolet radiation should be undertaken.

- b. *Preparation of a draft agenda for the various activities under the relevant subparagraphs of paragraph 4 of Article 6 of the Convention, and estimation of the costs required for the implementation of the proposed activities*

20. The Bureau reviewed the forthcoming calendar of meetings to be held between the present meeting and the Second Meeting of the Conference of the Parties to the Vienna Convention, which will take place in Nairobi from 17-18 June 1991.

21. The Bureau decided to propose to the Second Meeting of the Conference of Parties to the Vienna Convention (17-19 June 1991) that the meetings of the Conference of the Parties should be held every three years rather than every two years. The Bureau suggested that this new meeting schedule might begin in 1993 when the amendment of Article 9 of the Vienna Convention may have already been adopted.

22. The Bureau suggested that the next meeting of the WMO/UNEP Ozone Research Managers (October 1991) should discuss more fully the issue of the socio-economic effects of the depletion of the ozone layer, especially in developing countries, in accordance with Decision 4 of the First Meeting of the Conference of the Parties to the Vienna Convention.

23. The Bureau requested the Secretariat to prepare an estimate of the costs of the projects proposed by the First WMO/UNEP Ozone Research Managers Meeting, and noted that this cost analysis is required as soon as possible.

24. The Bureau noted that under Decision II/8 of the Second Meeting of the Parties to the Montreal Protocol (London, June 1990), the Multilateral Fund shall finance clearing-house functions to, *inter alia*, facilitate technical cooperation to meet identified needs of developing countries including workshops, training sessions and other relevant activities. The Bureau suggested that the Second Meeting of the Conference of Parties to the Vienna Convention address the question of financing 12-15 Global Ozone Observing System (GO₃OS) stations in developing countries and the possibility of requesting the Parties to the Montreal Protocol and the Executive Committee of the Interim Multilateral Ozone Fund to consider providing the necessary funds from the Interim Multilateral Fund.

25. Considering Annex I of the Vienna Convention, the minimum observing programme at these stations should include measurements of the following: total and surface ozone; CFCs and their substitutes; NO_x; CO; UV-B; usual meteorological parameters; and, when possible, N₂O; methane and non-methane hydrocarbons; and ozone soundings. The cost for instrumentation, installation, and training of personnel for each such station with a minimum programme would be in the order of US\$330,000.

26. The Bureau noted that the implementation of the above-mentioned 12-15 GO₃OS stations supplemented by support for central calibration facilities, which might total about US\$5 million, could be considered for implementation during two consecutive years, e.g. 1992 and 1993, in order to relax the funding demands.

27. The Bureau requested the Ozone Secretariat, together with WMO, to prepare the estimate of the costs required for the proposed activities for implementation of the relevant subparagraphs of paragraph 4 of Article 6. The Bureau requested the Secretariat to present these costs to the Conference of the Parties to the Vienna Convention. The proposed cost estimates are attached to this report as Annex III.

28. The Bureau acknowledged that the budget for the Vienna Convention adopted in Helsinki in May 1989 has proven inadequate for the fulfillment of even basic requirements such as funding meetings or providing support for participants from developing countries.

29. The Bureau therefore requested the Executive Director to submit to the Second Meeting of the Conference of Parties to the Vienna Convention (17-19 June 1991) a revised budget for 1990 and 1991, and budget proposals for 1992-1993. In the next biennial budget proposal, funds for regional and/or global meetings for research and systematic observations, to be organized jointly with WMO, should be explicitly provided. In order to assure broad participation of developing countries in the meetings of the Parties to the Convention, a provision for travel and per diem for at least one person per developing Party to the Convention needs to be made (see Annex III).

c. *The provisional agenda and other documents for the Second Meeting of the Parties to the Vienna Convention*

30. The Bureau decided that a Draft Agenda for the Second Meeting of the Conference of Parties (17-19 June 1991) should be prepared, and should be presented to the Preparatory Meeting to the Second Meeting of the Conference of Parties to the Vienna Convention. The Bureau requested the Secretariat to prepare this Draft Agenda, and to circulate it to the Parties well in advance of the meeting. The agenda should indicate which issues are to be the subject of decisions by the Conference of the Parties.

31. The Bureau decided that draft decisions should be prepared and adopted at the next meeting of the Bureau, so that they can be presented to the Second Meeting of the Conference of Parties (17-19 June 1991). The Bureau requested the Secretariat to prepare these draft decisions in time for their presentation to the next meeting of the Bureau (17 June 1991).

32. The Bureau took note of the fact that scientific information regarding ozone layer depletion and its effects is largely covered in the reports of the International Assessment Panels which were established by the Parties to the Montreal Protocol in accordance with Article 6 of the Protocol. The four Assessment Panels reviewed current information on the scientific, environmental, technical and economic aspects of the depletion of the ozone layer and compiled their findings in reports that were completed in August 1989. These reports together with the Executive Summaries and the Synthesis Report have been circulated to all Governments. The Governments were requested to ensure appropriate reproduction and distribution of the reports to institutions, industries, and individuals requesting the information. In accordance with Decision II/13 of the Second Meeting of the Parties to the Montreal Protocol (London, 27-29 June 1990), the Assessment Panels are being reconvened to review the new information acquired since the completion of their first reports. Under this decision, the panels will compile such data into supplementary reports for consideration at the Fourth Meeting of the Parties to the Montreal Protocol in 1992.

33. The Bureau recognized that the work of the assessment panels pursuant to Article 6 of the Montreal Protocol, and the work of the Ozone Research Managers pursuant to Article 3 of the Vienna Convention should be somehow linked. The Bureau suggested that the Second Meeting of the Conference of the Parties to the Vienna Convention should consider coordinating the work of the two groups.

34. The Bureau discussed the amendment of the Rules of Procedure and in particular, the issue of the rotation of the offices of President and Rapporteur. The Bureau noted that the rotation of the offices of president is required by Rule 21 of the Rules of Procedure. It recommended to the Meeting of the Conference of the Parties that this could take place on the basis of the alphabetical rotation of regions. Thus, the President of the Second Meeting of the Conference of Parties could come from the African Group and the Rapporteur from the Group of Western Europe and Other States. The three Vice-Presidents would come from Asia, Eastern Europe, Latin America, and the Caribbean. The rotation would then continue in the following meetings.

35. The Bureau recommended to the Second Meeting of the Conference of Parties to the Vienna Convention (17-19 June 1991) that the Rules of Procedure be amended as follows:

(a) Rule 23 - delete paragraph 2;

(b) Rule 24 - delete the words "other than a president" and replace with the words "of the Bureau".

The Bureau took note of the fact that the First Meeting of the Bureau of the Second Meeting of the Parties to the Montreal Protocol, in Nairobi, 14 March 1991, recommended a similar amendment for consideration by the Third Meeting of the Parties to the Montreal Protocol.

36. The Bureau recommended to the Conference of the Parties to the Vienna Convention that it should consider the possibility of amending Article 9 of the Vienna Convention with a view to expediting the amendment procedure for protocols as requested in Decision II/16 of the Second Meeting of the Parties to the Montreal Protocol in London, 27-29 June 1990. It was further suggested that the *Ad Hoc* Working Group of Legal Experts on Non-Compliance should consider the Amendment of Article 9 of the Vienna Convention at its meeting scheduled for April 1991, and draw up specific recommendations for amending Article 9 of the Vienna Convention.

37. The Executive Director requested the Bureau to take note of Decision II/13 of the Second Meeting of the Parties to the Montreal Protocol (27-29 June 1990) concerning Assessment Panels. The Bureau reiterated its support for Decision II/13, and decided to take efforts to ensure that it is carried out.

- d. *Status of implementation of the Decisions of the First Meeting of the Conference of the Parties*

Decision 1:

To adopt, taking into account the explanations given during the meeting, the rules of procedures for the meetings of the Conference of the Parties to Vienna Convention for the Protection of the Ozone Layer in Annex I of this report (UNEP/OzL.Conv.1/5).

38. No further action was required of the Bureau on this decision.

Decision 2:

That each contracting party shall submit to the Secretariat of the Convention every two years after the entry into force of the Convention a summary of the measures adopted by the Party for the implementation of the Convention. In accordance with paragraph 5 of Annex II of the Convention, the biennial reporting shall include the socio-economic and commercial information on the substances referred to in Annex I. To this end the Secretariat shall prepare a format for reporting and shall ensure any required confidentiality of the information supplied to it.

39. The formats required by Decision 2 were prepared by the Secretariat and presented to the First Meeting of the *Ad Hoc* Group of Experts on the Reporting of Data (as required by Article 7 of the Montreal Protocol), Nairobi, 6-7 December 1990). The Bureau noted the view expressed by the Group that the formats were too extensive and detailed, and were therefore excessively time consuming and costly and that the issue should be discussed within the context of the Vienna Convention. The formats were circulated to the Parties of the Convention with a covering letter dated 11 December 1990 containing an introductory note inviting governments to present suggestions or comments for the improvement of the formats. No suggestions for improvements have been received.

40. The formats were then placed before the Ozone Research Managers who recommended that the Conference of the Parties put in place a process, such as the establishment of an expert task group, to recommend procedures for

estimating emission to the atmosphere of Annex I substances and also consider options which minimize requirements for submission of new data by Parties and are complimentary to efforts in connection with climate change. The Bureau agreed with the recommendations of the Ozone Research Managers.

Decision 3:

(a) That the Vienna Convention is the most appropriate instrument for harmonizing the policies and strategies on research; and

(b) That the Montreal Protocol is the appropriate instrument for achieving the harmonization of policies, strategies and measures for minimizing the release of substances causing or likely to cause modifications of the ozone layer.

41. The list of ratifications, acceptances, accessions to or approval of the Vienna Convention and the Montreal Protocol were contained in document UNEP/OzL.Conv/Bur.1/Inf.1. No further action was required of the Bureau on this decision.

Decision 4:

That the following activities shall be given priority in the research, observations and transfer of technology:

(a) The atmospheric impact of potential substitutes for controlled substances particularly with regard to their likely ozone depletion potential and their greenhouse warming potential;

(b) Monitoring of the rarer trace gases in the troposphere and research on their interactions;

(c) The Global Ozone Observing System should be expanded particularly in the tropics and in the Southern Hemisphere. Special attention must be paid to ozone monitoring in polar regions. Nations should make a long term commitment to such monitoring programmes including making sufficient resources available appropriate to the effective operation;

(d) Research on the human health and biological implications of ultraviolet radiation changes at the earth's surface. Particular attention must be given to the impact on food production in the developing world and to development of crop varieties resistant to higher levels of ultraviolet radiation;

(e) Research into the effects on the atmosphere of potential ozone layer depleting gases, other than the controlled substances, for example methyl chloroform;

(f) Studies on the social and economic effects of ozone depletion.

42. The Secretariat sent letters to Parties on 12 July 1989 requesting information on the plans the Parties had to implement the decision. Letters were also sent to OECD for any information with regard to 4 (e); to FAO for information with regard to 4 (d); and to WHO also for information with regard to 4 (d). The replies received were summarized in a document and presented to the Preparatory Meeting of the Ozone Research Managers' Meeting which was held in Geneva from 7-9 February 1990 (WMO/UNEP O₃ Conv.Res.Managers, Information Paper 2).

43. The Bureau strongly suggested that the question of financing 12-15 global ozone observing system (GO₃OS) stations should be favourably considered by the Second Meeting of the Conference of the Parties to the Vienna Convention. (See paras. 23-26, *supra*).

44. The Bureau took note of the fact that more research on the socio-economic effects of ozone depletion should be conducted. The Bureau decided to ask the Secretariat to request the next meeting of the International Assessment Panels to consider the matter.

Decision 5:

To cooperate to ensure the enhancement of the capability of developing countries to contribute to ozone science research. This may be facilitated through the organization of workshops and the identification of institutes in developed countries which can cooperate with appropriate scientific institutions in the developing countries. The identification of financial institutions who might assist the development of an improved scientific capability in developing countries should also be undertaken.

45. The Secretariat sent letters to the Parties on 24 August 1989 with regard to this decision. The replies to the letters were summarized in a document and presented to the Preparatory meeting of the Ozone Research Managers Meeting which was held in Geneva from 7-9 February 1990. (WMO/UNEP O₃ Conv.Res.Managers, Information Paper 2). The Bureau decided to request the Secretariat to send another letter to the Parties that have not provided information to submit the required information.

Decision 6:

(a) To establish the following coordination bodies as subsidiary bodies of the Conference of the Parties under Article 6 para. 4 (i) of the Vienna Convention:

- (i) The Bureau of the Conference of the Parties composed of the officers elected by the Conference;

The terms of reference of the Bureau shall be to facilitate the implementation, as appropriate, on behalf of the Parties, of the relevant subparagraphs of paragraph 4 of Article 6 of the Convention, particularly - review the scientific information on the ozone layer, on its possible modification, and on possible effects of any such modifications; - consider, in accordance with Articles 3 and 4, programmes for research, systematic observations, scientific and technical cooperation, the exchange of information and the transfer of technology and knowledge and prepare a draft agenda for such activities for consideration by the Parties at their following conference with estimates of the costs required for the implementation of the proposed activities; - consider other topics on the Agenda of the next Conference of the Parties, and review the documents prepared by the Secretariat for the Conference to facilitate the work of the conference.

The Bureau of the Conference of the Parties is to hold maximum two meetings between two sessions of the Conference of the Parties, one of them in conjunction with the Research Managers Meeting referred to in the next section. The cost of the meeting of the Bureau is to be covered within the budget of the Convention;

- (ii) A *Meeting* composed of: (a) government atmospheric Research Managers and (b) government Research Managers of research related to health and environmental effects of ozone modifications;

Such a meeting shall review ongoing national and international research and monitoring programmes to ensure proper coordination of

these programmes and identify gaps that need to be addressed.

The Meeting shall be held every 2 years (6 months prior to the meeting of the Parties) jointly with the meeting of the Bureau.

The Meeting should produce a report including recommendations for future research and expanded cooperation between researchers in developed and developing countries for presentation to the following meeting of the Parties to the Convention.

It is assumed that the Research Managers from developed countries will cover their own expenses and that the Secretariat budget will cover only participation of no more than ten Research Managers from developing countries.

(b) The Secretariat of the Convention in cooperation with UNEP and WMO shall prepare for the joint meeting of the Bureau and the group of the Research Managers. The joint meeting shall take place in conjunction with the meeting of the WMO Executive Council Panel on Environmental Pollution, Monitoring and Research.

46. WMO in cooperation with UNEP organized the Preparatory Meeting of the Ozone Research Managers, which was held in Geneva from 7-9 February 1990. (WMO/UNEP/OzL.CONV.Res.Managers, Report). The First Meeting of Ozone Research Managers was held in Geneva from 13-15 March 1991 in conjunction with the meeting of the Bureau.

Decision 7:

Adopt, in accordance with Article 11, para. 3 (a) of the Vienna Convention, the Arbitration Procedure in Annex II to this report.

47. No further action was required of the Bureau on this Decision.

Decision 8:

To designate UNEP as the Secretariat of the Convention.

48. The Secretariat of the Vienna Convention and its Montreal Protocol has been established in UNEP and will continue to serve the Parties to the two legal instruments. No further action was required of the Bureau on this Decision.

Decision 9:

Financial arrangements:

(a) To establish a United Nations Trust Fund in accordance with the Financial Regulations and Rules of the United Nations and in accordance with the General Procedures governing operations of the Fund of the United Nations Environment Programme;

(b) The Convention Trust Fund shall be administered by the Executive Director of UNEP and shall finance expenditures approved by the Parties and shall receive the contributions of Parties to the Convention;

(c) To that end, the Conference requests the Executive Director to secure the necessary consents of the Secretary-General of the United Nations and the Governing Council of UNEP;

(d) To adopt the terms of reference for the Trust Fund in Annex III of this report;

(e) The contributions of the Parties shall be in the form of voluntary contributions according to the formula in Annex V of this report;

(f) The Conference calls on all Parties to pay their contributions to the Trust Fund in advance of the period to which they relate;

(g) To approve a total budget of US\$790,000 for the biennium 1990-1991, the details of the approved budget are presented in Annex IV.

49. In accordance with this decision, the Trust Fund for the Vienna Convention was established in UNEP. No further action was required of the Bureau on this Decision.

Decision 10:

The States non-Parties and the non-contributing Parties to the Trust Fund are encouraged to make voluntary contributions to the Trust Fund.

50. To date, no contributions to the Trust Fund for the Vienna Convention have been received from the States that are non-Parties or from the non-contributing Parties to the Convention. No further action was required of the Bureau on this Decision.

IV. DECISIONS

51. The decisions taken by the Bureau may be summarized as follows:

1. The Bureau decided to suggest to the Second Meeting of the Conference of Parties that more observation and measurement of both ozone levels and levels of ultraviolet radiation should be undertaken.

2. The Bureau suggested that the Second Meeting of the Conference of Parties to the Vienna Convention address the question of financing 12-15 Global Ozone Observing System (GO₃OS) stations in developing countries and the possibility of requesting the Parties to the Montreal Protocol and the Executive Committee of the Interim Multilateral Ozone Fund to consider providing the necessary funds from the Interim Multilateral Fund.

3. The Bureau requested the Ozone Secretariat together with WMO to prepare the estimate of the costs required for the proposed activities necessary to implement the relevant subparagraphs of paragraph 4 of Article 6 of the Vienna Convention, in accordance with the proposal of the First WMO/UNEP Ozone Research Managers Meeting. That cost estimate was prepared during the meeting and is attached to this report as Annex III.

4. The Bureau agreed that the Secretariat should recommend to the next meeting of the WMO/UNEP Ozone Research Managers that this group should increase their efforts to consider the socio-economic aspects of the depletion of the ozone layer, in accordance with Decision 4 of the First Meeting of the Conference of the Parties to the Vienna Convention.

5. The Bureau suggested that the Second Meeting of the Conference of Parties to the Vienna Convention could consider the linkage between the work of the assessment panels established in accordance with Article 6 of the Montreal Protocol, and the work of the Ozone Research Managers established in accordance with Article 6, paragraph 4 (i) of the Vienna

Convention to consider coordinating the work of both bodies.

6. The Bureau requested the Executive Director to submit to the Second Meeting of the Conference of Parties to the Vienna Convention a revised budget for 1990, 1991, and a revised budget proposal for 1992-1993. In the next biennial budget proposal, funds for regional and/or global meetings for research and systematic observations should be explicitly provided. Funds for the participation of developing countries at these meetings should also be included. The Bureau requested that the proposed budget for 1992-1993 should be more detailed than the budget which was previously submitted.

7. The Bureau requested the Secretariat to prepare a Draft Agenda for the Second Meeting of the Conference of Parties to the Vienna Convention as soon as possible, so that it can be presented to the Bureau members, and circulated to the Parties well in advance of the meeting. The agenda should indicate what issues are to be the subject of decisions by the Conference of the Parties.

8. The Bureau requested the Secretariat to prepare draft decisions for presentation to the next meeting of the Bureau of the Conference of the Parties to the Vienna Convention.

9. The Bureau recommended that the Conference of the Parties consider the possibility of amending Article 9 of the Convention with a view to expediting the amendment procedure for protocols as requested in Decision II/16 of the Parties to the Montreal Protocol at their Second Meeting (London, 27-29 June 1990).

10. The Bureau further suggested that the *Ad Hoc* Working Group of Legal Experts on Non-Compliance consider the amendment to Article 9 of the Vienna Convention at its meeting scheduled for April 1991 and draw up specific recommendations for amending Article 9 of the Vienna Convention.

11. The Bureau decided to propose to the Second Meeting of the Conference of Parties to the Vienna Convention that the meetings of the Conference of Parties should be held every three years rather than every two years. The Bureau suggested that this new three year meeting schedule could begin in 1993 when the amendment of Article 9 may have already been adopted.

12. The Bureau agreed that there is a need for amendment of the Rules of Procedure of the Vienna Convention concerning the election of President of the Meeting of the Parties, and in this connection, the Bureau recommended that the Meeting of the Conference of Parties to the Vienna Convention amend the Rules of Procedure as follows:

(a) Rule 23 - delete paragraph 2;

(b) Rule 24 - delete the words "other than a president" and replace with the words "of the Bureau".

13. The Bureau noted that the rotation of the offices of president is required by Rule 21 of the Rules of Procedure. It recommended to the Meeting of the Conference of the Parties that this could take place on the basis of the alphabetical rotation of regions. Thus, the President of the Second Meeting of the Conference of Parties could come from the African Group and the Rapporteur from the Group of Western Europe and Other States. The three Vice-Presidents would come from Asia, Eastern Europe, Latin America and the Caribbean. The rotation would then continue in the following meetings.

14. The Bureau decided, pursuant to Decision 5 of the First Meeting of

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the Conference of the Parties to the Vienna Convention to request the Secretariat to send another letter to the Parties that have not provided information to submit the required information.

Annex I

BUREAU OF THE CONFERENCE OF PARTIES TO
THE VIENNA CONVENTION FOR THE
PROTECTION OF THE OZONE LAYER

First meeting
Geneva, 18-19 March 1991

LIST OF PARTICIPANTS

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Annex II

CURRENT ASPECTS OF ATMOSPHERIC OZONE SCIENCE

The meeting heard reports by WMO and national representatives of recent scientific activities and research results relating to the issue of ozone depletion. Papers published in the last year have concentrated on the analyses of ground-based and satellite data, interpretation of results from recent campaigns to study polar ozone and a continuation of the development and application of models, acquisition of laboratory data and improvements of the quality of ozone data (calibrations, intercomparisons, etc.). The Current status of the scientific understanding of the ozone issue can be summarized as follows:

(a) Analysis of data in the past year has provided further support for the conclusion that the Antarctic-spring ozone hole is due to chemical destruction of ozone by reactive chlorine and bromine from man-made CFCs and halons;

(b) In 1990, the Antarctic springtime depletion of the ozone layer was as severe as in 1987 and 1989. A noticeable feature in 1990 was the extraordinary persistence of the Southern polar vortex and the region of depleted ozone within; the ozone hole did not disappear until late December, after the summer solstice;

(c) The late break up of the south polar vortex raises the question of a possible link between ozone depletion and changes in the atmospheric dynamics of the southern hemisphere due to changes in the radiative properties of the stratosphere; but no definitive statement can be made at this time. Similarly no definite statement can be made concerning the implication for marine surface biota in the southern ocean of the enhanced UV-B fluxes resulting from the ozone depletion;

(d) Transport of ozone-depleted air from Antarctica to other parts of the southern hemisphere has been observed for short periods in the late spring and summer;

(e) Measurements in the Arctic have shown that the stratospheric composition is highly perturbed in the late winter. The unexpectedly large amounts of reactive chlorine reflect a potential for large ozone depletion. There are indications of local ozone depletion during short-time periods which may be related to chlorine;

(f) Provisional results from a new analysis of the last 12 years of satellite data indicates total ozone between 65°N and 65°S has been decreasing at an average rate of about 3 per cent per decade, after correction for known natural influences on ozone;

(g) Analysis of both ground-based and satellite data for the northern hemisphere indicates ozone decline during the winter season at all latitudes north of 20°N, with depletions up to 8 per cent in the most northern latitudes over the past 12 years. At the mid latitudinal belt (30-50°N), significant reduction (4 to 5 per cent) of the long term average total ozone has occurred during the same period and, perhaps more significantly, there is a stronger reduction in spring when the growing season is in progress. In the southern hemisphere during the past 12 years there has been about 3 to 6 per cent decline at 30° to 50°S latitudinal belt and much stronger depletion polarward;

(h) The analysis of the ozone record clearly shows that the decreases which have occurred over the last 10 years are significantly larger than any trends in the previous decades;

(i) All the reported downward trends in ozone, which have been confirmed by several independent analyses of the data, are substantially greater than the predicted decrease from classical, gas-phase, state-of-the-art atmospheric models. For example in the northern hemisphere the model-predicted depletions are lower by a factor of 2 to 5 than those observed, depending on altitude, latitude and season;

(j) There are major limitations in current models due to inability to represent satisfactorily the heterogeneous chemistry that is believed to be involved in rapid ozone depletion by chlorine. This probably accounts, at least in part, for the discrepancy between modelled and observed ozone changes;

(k) The total amount of chlorine compounds in the atmosphere, the "chlorine loading" has continued to rise and will continue to do so until there is at least 90 per cent compliance with the phase out of CFCs, and other halogenated molecules stipulated by the revised Montreal Protocol;

(l) After phase out of CFC production, in accordance with the Montreal Protocol, chlorine loading will continue to rise due to release of "banked" material (in storage and contained applications), leading to a peak between 2000 and 2010. Thereafter chlorine loading will decay at a rate depending on the amount and nature of substitute compounds that are used. There is a similar problem with bromine compounds;

(m) In order to return to a chlorine loading of 2 ppb ("pre-Antarctic ozone hold" levels) by 2050 all production of short-lived chlorine containing halocarbons will need to be phased out by 2030 at the latest. It follows that substitution of CFCs by HCFCs will have to be moderate and temporary, if this goal is indeed to be achieved by the year 2050;

(n) Companies from several nations are again considering the development of supersonic civil air transport. An up-dated assessment of the impact of the exhaust emissions (mainly NO_x) from a fleet of such aircraft, as well as from rockets and multiple use space vehicles, confirms earlier prognoses that significant depletion of stratospheric ozone may occur. The degree of depletion predicted by the models is critically dependent on the altitude of pollutant injection.

Annex III

For 1992-1993 additional fund requirements

CONSULTANTS

(a) Ozone and UVB station implementation)		
(b) Preparations for meetings of Parties) 15 x 3 m/m 45 m/m		450 000
and Bureau)		

MEETINGS

on GO ₃ OS* station locations	40 000
on data flow	40 000
on information dissemination	40 000
2 on data assessments	80 000

ADMINISTRATIVE SUPPORT

24 m/m G.4 secretary in Geneva	100 000
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CONFERENCE SERVICING COST

Third Meeting of the Parties provisions for 40 participants from developing countries	200 000
2 experts meetings in preparation for the Third Meeting of the Parties	60 000
Support to 30 participants from developing countries to the Research Managers Meeting	150 000

EQUIPMENT

15 GO ₃ OS stations in developing countries by x 330	4 450 000**
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COMMUNICATIONS

Within GO ₃ OS network and WMO/UNEP	60 000
Public relations publications on GO ₃ OS etc.	60 000

* Globe Ozone Observing System (GO₃OS).

** The Parties may wish to recommend to the Contracting Parties of the Montreal Protocol that these be financed from the Interim Multilateral Fund under its terms of reference (Technical Assistance to Developing Countries).

Note: The figures given above regarding GO₃OS stations are preliminary estimates given by the Secretariat. As the executing agency, WMO would clarify the question of the costs of new GO₃OS stations.