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Ad Hoc Working Group of Legal and Technical Experts for the preparation of a Protocol on Chlorofluorocarbons to the Vienna Convention for the Protection of the Ozone Layer (Vienna Group)

Second Session
Vienna, 23-27 February 1987



REPORT OF THE AD HOC WORKING GROUP ON THE WORK OF ITS SECOND SESSION

PART I REPORT OF THE PLENARY SESSIONS

I. INTRODUCTION

1. The second session of the Ad Hoc Working Group on Legal and Technical Experts for the Preparation of a Protocol on Chlorofluorocarbons to the Vienna Convention for the Protection of the Ozone Layer (Vienna Group) was held at the Vienna International Centre, Vienna, Austria from 23 to 27 February 1987. The purpose of the session was to enable the Vienna Group to continue its work, begun at its first session in Geneva, Switzerland in December 1986 on the elaboration of a Protocol of Chlorofluorocarbons.

II. ORGANIZATIONAL MATTERS

A. Opening of the Meeting

2. The second session was opened on behalf of the Executive Director of UNEP by the Deputy Executive Director, Mr. W.H. Mansfield III.

Mr. Mansfield thanked the Government of Austria for its generous support towards the holding of the session. He referred to the work of the Vienna Group at its earlier session and urged the group to continue its efforts to set out the governmental actions that will prevent damage to the ozone layer. Mr. Mansfield referred to the differences of opinion among different delegations which emerged at Geneva and he urged participants to reach out to find a solution to these. Mr. Mansfield enumerated some of these issues; ^{c.g.} ~~on~~ the substances that should be regulated; ~~on~~ the levels of limitations to be chosen; ~~on~~ the cost-effectiveness of regulations and ~~on~~ how the burden of costs relative to the regulatory process would be shared among governments.

He stressed the need to quickly determine if controls should be based on either production or emissions and said that proponents of each of the strategies proposed should be prepared to demonstrate the advantages of their choice relative to the others so that it could be judged whether emissions or production control best met the criteria for effectiveness, efficiency and equity.

Mr. Mansfield reminded the Vienna Group of its obligation under the relevant UNEP Governing Council decision to develop a protocol that addresses both short and long term strategies for the equitable control of fully halogenated CFCs.

Mr. Mansfield concluded by expressing appreciation for the large measure of progress achieved by the Vienna Group at its first session which indicated that the elaboration of a protocol was only a matter of time. However, he reminded the Group, time was neither unlimited nor uncostly in human and financial terms. Mr. Mansfield said that the responsibility for maintaining the integrity of the planet's atmosphere through the protection of the ozone layer had been charged to the Group and it should not then be ungenerous in answering that challenge.

3. On behalf of the Government of Austria, the Director General of the Ministry of Health and Environment, Dr. Ernst Bobek, welcomed participants to Vienna and expressed a hope that the session would ensure a major step towards the development of a protocol on CFCs. He said that success in the initiative for the protection of the ozone layer could only be achieved through close international co-operation. Director General Bobek stressed that a policy of precaution and prevention was preferable to measures aimed at

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repairing damages caused by neglect. In referring to the different approaches to CFC regulations which had been suggested at the first session of the Vienna Group he asked that the experts should see them^{SELVES} as not the cause of unassailable dissent but, instead, as the basis for a substantial consent. Director General Bobek noted with satisfaction that the protocol under consideration had as its basis the Vienna Convention for the Protection of the Ozone Layer. He concluded by extending, on behalf of the Government and *the* people of Austria, good wishes for the success of the negotiations.

B. Attendance

4. The second session of the Vienna Group was attended by experts from Argentina, Australia, Austria, Belgium, Brazil, Canada, Columbia, Denmark, Egypt, Finland, France, Germany, Federal Republic of, Italy, Japan, Kenya, Malaysia, Mexico, Netherlands, New Zealand, Nigeria, Norway, Philippines, Poland, Spain, Sweden, Switzerland, Thailand, Union of Soviet Socialist Republics, United Kingdom, United States of America, and Yugoslavia. Representatives were also present from the World Meteorological Organization, European Economic Community, International Institute for Applied Systems Analysis, Organization for Economic Cooperation and Development, European Council of Chemical Manufacturers' Federations, European Environmental Bureau, Federation of European Aerosol Associations, International Chamber of Commerce, International Council of Scientific Unions, Institute for European Environment Policy, Natural Resources Defense Council and the World Resources Institute.

III. ADOPTION OF THE AGENDA AND ELECTION OF OFFICERS

5. The Working Group adopted the following agenda:

1. Opening of the session.
2. Adoption of the agenda and election of officers.
3. Review of the progress made at the first session.
4. Consideration of the fifth revised draft protocol on the control of chlorofluorocarbons.
5. Adoption of the report and plans for future work.
6. Other matters.
7. Closure of the session.

6. The Working Group re-elected by acclamation the Chairman of its first session in Geneva, Mr. Winfried Lang (Austria). In the absence of the two Vice Presidents and the Rapporteur, elected at the first session in Geneva, the session elected Mr. Essam Hawas (Egypt), Mr. Yuri Sedanov (USSR) and Mr. Paul Mungai (Kenya) respectively to the above offices.

IV. REVIEW OF PROGRESS MADE AT THE FIRST SESSION

7. Mr. Winfried Lang resumed the chairmanship of the Vienna Group and thanked participants for their expression of confidence in him. He said that the second session of the Vienna Group would have to be one of give and take with participants being willing to renegotiate on positions adopted in Geneva. He warned that refusal to be flexible would be to assume the burden of failure to protect the ozone layer and said that it was the duty of the experts present to help prevent deterioration of the environment for the sake of future generations. Mr. Lang noted the modest successes of the first session and outlined the common elements which had been agreed at that time. He then addressed the issues which still had to be resolved which included whether regulatory measures should be based on emissions or production of CFCs; trade matters, particularly with respect to non-participatory states in the convention, which might seek advantages over the parties to the convention and protocol; and the special situation of developing countries requiring an assurance that their development needs were not prejudiced by the regulatory measures to be agreed.

8. Mr. Lang then introduced the report of the first session of the Vienna Group contained in document UNEP/WG.151/L.4. In particular, he drew attention to the work of the Ad Hoc Working Group on Institutional and Financial Matters contained in Annex II to the report which had brought many of the matters concerned with finance and administration of the proposed protocol close to agreement, and also the work of the Ad Hoc Working Group on Scientific Matters contained in the body of the report.

9. The Chairman then turned to the organization of work of the session. He suggested that a brief plenary session be held in order to discuss developments since the holding of the first session of the Vienna Group in December 1986 in Geneva, which might contribute to the solution of

matters, to be followed by the establishment of working groups to address unresolved major issues. He proposed that four working groups be constituted.

- (a) An Ad Hoc Scientific Working Group which would address:
 - (i) How a periodic review and assessment of scientific and technical issues could be organized?
 - (ii) Which substances represented the greatest potential threat to the ozone layer?
 - (iii) Technological progress in the recovery and destruction of used CFCs.
- (b) An Ad Hoc Working Group to determine the special needs of developing countries in respect of regulatory measures.
- (c) An Ad Hoc Working Group on control measures to continue dialogue on Article II regulatory measures, of the protocol on chlorofluorocarbons.
- (d) An Ad Hoc Working Group on trade issues.

10. Participants endorsed the Chairman's proposals for the organization of work and praised him for his clear assessment of the issues before the Group.

11. The representative of Egypt in welcoming the Chairman's statement said there should be no delay in agreeing a protocol on CFCs through attempting to regulate other substances at the same time. He said that the protocol should be fair to both developed and developing countries with attention being paid to the particular needs of the latter. He said that his country's position was always consistent that both the Convention and the Protocol should follow a "Global Approach". This would mean that efforts should be made to identify global "red line" and other factors that lead to equity when applying control measures according to whether a country's production was far below the line or had already exceeded it. His country has also emphasized the need to consider all the factors involved, such as production, emission, import, export. He therefore saw the US "adjusted production" formula as being helpful in that direction and worth further study. He thought also that more attention should be given to the problem of disposals, long neglected, as the threat to the ozone was recognized only recently. The representative of the United Kingdom stressed the importance of scientific review and assessment as part of the protocol process which would ensure that potential ozone depleting substances not subject to regulation, could be considered for subsequent control. In this connection, information on the trade and production of such also needed to be obtained. The representative of Sweden noted of elements to be included in a protocol were at hand and he stre

to arrive at considerable results at this meeting. The point of departure must be an immediate freeze of the current level of production of CFCs world-wide. Every country should ensure at least to freeze its emissions of CFCs at the current levels. He noted the intention of his country to substantially cut its use of CFCs but suggested that developing countries should be allowed increased use of these chemicals. Even so, he said, such increases should also have limitations placed upon them.

12. The representative of the United States called for the development of a strong protocol and pointed out that in the intervening months since the Vienna Group last met a further quarter million tons of CFCs had been released to the atmosphere. The representative warned of reliance on methane as a mitigator of ozone depletion in view of the uncertainties connected with methane emissions and the shortness of its atmospheric residence time compared with that of the ozone-depleting CFCs. He referred to the adverse effects of ozone depletion and climate warming and conveyed the opinion of the public in his country which was one of dissatisfaction with the slowness of negotiations on a protocol, the limited number of ratifications of the Vienna Convention and the reluctance of some delegates to address the need for long term reductions. He noted that many in the U.S. felt that some other nations were more concerned with short-term economic gains instead of the well-being of future generations - as evidenced by the presence of industry representatives on their delegations. By contrast, he noted the willingness of the chemical industry in the United States to develop substitutes and support control measures. He cited the US proposal as a prudent plan for the future based not on panic but on rational concern. Using the analogy of bridge building, he said it was not necessary to prove with certainty that the bridge would collapse in order to build in safeguards. If we are to err, the representative concluded, let us err on the side of caution.

13. The representative of Japan said that in considering concrete regulatory measures it should be ensured that they are realistic, flexible and soundly based on scientific knowledge. He said it would be realistic to establish immediate measures such as regulations on CFCs 11 and 12 and to consider to control other substances to be determined on the basis of scientific review. The representative of Argentina noted his country's concern regarding the adverse effects of ozone layer depletion, particularly with respect to the

currently observed ozone depletion over Antarctica which extended almost to the southern borders of Argentina. He called for flexibility in the development of a protocol to ensure concensus. He noted that most of the chemical pollution affecting the ozone layer came from industrialized countries and said that developing countries could not be expected to control emissions to the same extent as developed countries. It is thought that the proposal establishing a global limit on emission discriminates against the developing countries which are in point of fact those that produce the least contamination, since more than 80 per cent of the contamination which produces or can produce a reduction in the ozone layer originates from the industrialized countries. It is not possible, therefore to seek to control the emission of the developing countries to the same degree as those of the industrialized countries which have achieved per capita levels several times higher than those of the developing countries. The system that is established should not exclude the developing countries, since to do so would promote the installation of production facilities in these countries. Special clauses must be drafted for the developing countries that take into account their particular situation and that, at a minimum, permit them to continue their production and emission at current levels, since these countries are not in a position to replace these substances, in addition to which they are experiencing a very difficult economic situation. Assistance must be provided to the developing countries for monitoring the ozone layer. The representative of Thailand said his country shared the common concern for the risks posed for the ozone layer. However, in addressing the problem there was a need to balance national development needs against other concerns and welcomed suggestions for special consideration to be given to developing countries. The representative of Australia referred to the high incidence of skin cancer in his country and the consequential interest there in having the ozone layer protected. He hoped that a protocol could be concluded as early as possible and that this would have the flexibility to be adapted as developing scientific knowledge indicated.

14. The delegate from the Commission of the European Communities expressed to the Working Group the latest position of the Community which was based on consideration of the particularly helpful informal note prepared by the Chairman at the Geneva session. The Community now supported the idea of an

early production freeze at current levels for producing countries and an import freeze for non-producing countries, together with a total ban on imports from countries not party to the Protocol. The Community also agreed that there should be a study into the feasibility and desirability of controlling adjusted production. It also recognised that, given the length of time needed for a first full review of the control measures, some reduction in production could be a desirable precautionary measure, provided that industry has a suitable time in which to adjust.

15. A representative of the European Environmental Bureau presented a statement on ozone depletion and climate changes on behalf of non-governmental organizations (NGOs). He observed that since the original introduction of this statement it has been joined by a total of more than 100 NGOs, located in more than 26 nations. The statement summarized NGO's views on the need for a rapid phase-out of emissions of CFCs and related substances and suggested a specific schedule (30% reduction within 18 months; 85% reduction within five years; near complete phase-out within 10 years) to protect public health and the environment and to create adequate incentives for development of safe substitutes, conservation techniques, etc.

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16. In accordance with plans for the organization of work (noted earlier in the report) four Ad Hoc Working Groups met to discuss particular issues related to the development of a protocol. The reports of the Working Groups submitted to the Plenary Session of the Vienna Group follow in Part 2. -

Report of the Ad Hoc Working Groups.

V. CONSIDERATION OF THE FIFTH REVISED DRAFT PROTOCOL
ON THE CONTROL OF CHLOROFLUOROCARBONS

17. The Chairman then suggested that the plenary continue in structured debate and he posed two sets of four questions which he asked the experts to answer.

The first set of questions were:

1. What potential ozone-depleting substances should be the subject of regulatory measures?

2. What mechanism should be instigated for the inclusion of substances additional to those specified for initial regulatory action?
3. What is meant by 'production' and 'emission' relative to strategies to limit CFC releases to the atmosphere. How are each calculated and monitored, and how feasible is the implementation of each method of regulation?
4. Upon what base production figure should regulatory measures be established?

A summary of the responses to each of the above questions follows.

Question 1.

What potential ozone depleting substances should be the subject of regulatory measures?

There was a mixed response to this question. All experts agreed that CFC 11 and 12 should be subject to regulation. Some considered that perhaps initial regulatory measures should be restricted to these chemicals adopting a simple regulatory approach which could be quickly implemented in view of the seriousness of the situation. However, one expert in suggesting this approach said that it would not make sense to control some chemicals while ignoring others which had similar effects on the ozone layer and thus eventually all such substances must be candidates for regulation. Other experts suggested that a broader range of substances should become part of the initial regulations with one noting that he could provide figures to prove that regulation of CFC 11 and 12 alone was insufficient for ozone layer protection even with an eventual 95 per cent phase out. Many permutations were suggested from a list which included CFCs 11, 12, 113, 114, 115 carbon tetrachloride, methyl chloroform, methylene chloride, Halons 1211 and 1301. Several experts said that it might be necessary to draw up two lists of potential pollutants - one containing substances to be regulated in the short term, the other containing substances which might be regulated at a later time. As knowledge increased and particular risks were confirmed then substances could be transferred from one list to the other. The expert from Canada offered a specific approach for the consideration of the Vienna Group which provided a

longer term solution to ozone layer protection through control measures. The formula proposed called for the drawing up of a schedule of chemical substances as follows:

Schedule A: Chemicals with a significant impact on the ozone layer which should be immediately regulated.

Schedule B: Chemicals whose impact should be quantified with a view to regulation.

Schedule C: Chemicals subject to review to determine their potential to modify the ozone layer.

The expert suggested that should, for example, the manufacture and use of a chemical in Schedule C exceed 0.5 per cent of annual global emission limits (\approx 5 kilotons) it would be reclassified to Schedule B and likewise, if production and use of a Schedule B substance exceeds 2.0 per cent of global emission limits (\approx 20 kilotons) then it would move to Schedule A. The Group was informed that based on a calculation of production in kilotons multiplied by the ozone depletion weight the following substances contributed most to ozone depletion: CFC 12 33.6%, CFC 11 31.6%, CFC 113 10.1%, Halons 1211 and 1301 each 8.4%, methyl chloroform 6.7% and carbon tetrachloride which, although difficult to assess, probably exceeded 2% of ozone depletion, the limit suggested by Canada for substances to be included in Schedule A.

Question 2.

What measures should be instituted for the inclusion of substances additional to those specified for initial regulatory action?

A specific approach to the problem of identifying and including potential ozone depleting substances in a regulatory list was suggested by Canada and described in the previous section. Many experts found merit in the Canadian suggestion. Some, while not indicating what specific measures should be taken urged a flexibility of approach which would allow the inclusion of substances additional to those to be initially regulated under a protocol to the Vienna Convention. One expert said there was no bar to having several protocols but another said it was not desirable to renegotiate further protocols on other substances as it was time consuming and costly. Instead it would be prudent to anticipate ozone depletion effects of other chemicals now.

Question 3.

What is meant by 'production' and 'emission' relative to strategies to limit CFC releases to the atmosphere. How are each calculated and monitored, and how feasible is the implementation of each method of regulation?

One expert said it was essential to address both 'production' and 'emissions'; the former by an immediate freeze at current production and emission control based on what is used. He noted the willingness of his own country to instigate cuts in uses of chlorofluorocarbons.

Answer!
A representative of the Commission of European Communities said that it preferred regulations to be based on production control. Other methods such as 'Adjusted Production' advocated by some and based on a formula: Production + imports - exports - substances recycled and destroyed, was in the Communities' opinion too complicated to implement effectively. He said that it would be necessary to examine the feasibility of an 'emission system' under the protocol to determine whether it could be incorporated into the regulatory measures at a later time. He considered that the text of Article 9 of the Vienna Convention, suitably adapted, could provide justification for this approach.

One expert suggested adoption of the term 'consumption' based on 'production + imports - exports'. He noted similarities of his suggestion with those previously proposed and defined as 'emissions' or as 'adjusted production'. The expert asked for more information on mechanisms for the destruction or collection of CFCs which was one of the elements of the adjusted production formula. The same expert later said that there appeared to be no existing technology for the destruction of used CFCs and to include such a term in the adjusted production formula was misleading. However, another expert said that although such technology did not at present exist, solvent destruction systems were technologically possible. If credit was given for substances recovered and destroyed it would provide a stimulus for technological advance. He drew the attention to the fact that there was not in the past a recognized potential threat to the ozone layer. Once this is now widely recognized, efforts should start to find new substitutes and to enforce appropriate linkage-proof standards and measures for disposal.

A representative of a developing country appealed for flexibility in the application of any agreed formula as, for example, in the case of 'adjusted production'. For his country, all factors in the equation were zero apart from that relating to imports. Most other experts answering this question favoured an approach based on emissions or adjusted production as a basis for regulatory measures. None, other than the European Commission, referred to the feasibility of implementation of its preferred regulatory approach relative to other methods. Several experts stressed the need for the development of acceptable substitutes for CFC 11 and 12.

Question 4.

Upon what base production figure should regulatory measures be established?

There was near unanimity in the responses to this question which was that initial regulations should be based on the best estimation of current (1985 or 1986) production figures. One expert said a three year average might be chosen and another said that in view of there being little precision in current scientific calculations any convenient year could be chosen as the base year. Another, however, said it preferred the base figure set significantly below current levels and would support any solution of this type suggested but would, however, reserve its position on actual figures until the convening of a diplomatic conference to adopt a protocol.

The Chairman then posed a second set of questions to participants as follows:

5. How can it be ensured that a protocol on CFCs will be fair to developing countries?
6. How is the question of trade dealt with?
7. Should sanctions be applied to non-compliers with the protocol consistent with international law?
8. How will the protocol be financed and administered?

The following is a summary of the answers given to the Chairman.

Question 5.

How can it be ensured that a protocol on CFCs will be fair to developing countries?

One expert said it was important to encourage less-developed countries to involve themselves in ozone protection measures but also ensure that there remains a right for them to benefit from the use of the chemicals subject to regulation. It was necessary, said the expert, to quantify the potential ozone depletion caused by developing countries. However, another said that the contribution to ozone modification by developing countries was minimal and it was consequently not important to stress CFC use in developing countries and, in the development of a protocol, developing country needs could be met by excluding them from regulation. He said criteria could be established to determine the level where regulatory measures might be applied to developing countries. Another said that although developed countries should bear the initial costs of regulatory measures, eventually all nations had to assume the responsibility for ozone layer protection. Several experts said that it was important that a protocol ensures new technology and substitute chemicals are not denied to developing nations. Regional ozone monitoring networks should also be expanded said one. The same experts stressed the importance of developing countries being allowed additional use of the regulated chemicals consistent with their development plans and that adjustments to national emissions of developed countries should be made to maintain global emissions at an agreed level. One suggested that national emission limits should be based on country size and population and that ^{the} degree of industrialization should not be a factor. Another expert drew attention to the problems faced by small countries which might suffer increased costs or reduced availability of chemicals if producing nations restricted exports in favour of continued domestic consumption under regulatory measures. He noted that ^{necessarily the industry of} ~~small countries~~ industry had, ~~of necessity,~~ to follow larger countries in introducing new technology and that the time lag involved should be recognized in the application of regulations. He too, stressed the importance of ensuring the sharing of information on new technology and substitute chemicals. This view was supported by other experts.

Question 6.

How is the question of trade dealt with?

Proponents of emission controls suggested trade would not be an issue under their formula as a component for imports/exports was included and allowed a trade-off between domestic consumption and exports.

Question 7.

Should sanctions be applied to non-compliers with the protocol?

Most experts stressed the need to restrict imports from non-parties to the protocol and that it was important to discourage movement of capital and facilities outside the protocol areas.

Question 8.

How will the protocol be financed and administered?

On financing and administration of the protocol, certain experts drew attention to the work at the first session of the Group on Institutional and Financial Matters, and in particular to Article IX of the revised text (Annex II to the report UNEP/WG.151/L.4) which makes clear that, since the convention and protocol will not necessarily have the same parties, expenditure under the latter would be charged exclusively against contributions from the parties to the protocol.

She! With respect to the financing of the Protocol, a representative of Argentina wished to restate his view that this burden must be borne mainly by those countries that are major producers and consumers of chlorofluorocarbons, on the principle that "whoever contaminates must pay", which in turn is a corollary of the principle of the international responsibility of states. He also wished to enter his reservations regarding the text of Article IX of the fifth Revised Draft. On the question of which ozone-modifying substances should be included in the Protocol, Argentina's position favours including

only the totally halogenated CFC, leaving for future treatment other substances capable of producing modifications so as to gradually approach the protection of the ozone layer.

Other experts recalled the view expressed at the first session to the effect that responsibility for implementation of the protocol should rest on major CFC producers and users.

18. Several experts made general statements on the contents of a draft protocol on chlorofluorocarbons, particularly on that concerning control measures to be adopted.

19. Some experts cautioned that a short list of substances to be controlled might meet with acceptance by a larger number of delegations ~~than~~ a more comprehensive list of potential ozone depleting chemicals. The same expert together with several others noted that the entry into force of the protocol depended upon the entry into force of the Vienna Convention for the Protection of the Ozone Layer. The experts noted with regret that, to date, only eight states had ratified the Convention and unless the situation radically changed, it appeared unlikely that the protocol could come into force within a six or seven year period and ~~that~~ ^{thus} reductions of CFC production under the protocol would not occur for a decade. The states, themselves Parties to the Convention, urged others to ratify it as soon as possible. Another expert said that a short list of ozone depleting substances to be controlled would not answer the risk to the ozone layer and a long list of all the main ozone depleting substances should be controlled.

20. Another expert considered the document a useful background document that might form the basis of an agreement among states as it opened up a possibility for a convergence of views and this might enable rapid agreement at the next Vienna Group Session. However, he said it was first necessary to study the political and economic consequences of the proposed strategy before any commitment could be made.

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... The Chairman introduced a draft text for the section on control measures, which he had elaborated in the light of informal consultations held with a number of experts.

21. Several experts responded by congratulating the Chairman for his work and asked that the draft text be included in a sixth revised draft protocol on the control of chlorofluorocarbons and annexed to the report of the Second Session of the Working Group for further consideration before the convening of a third meeting of the Vienna Group to finalize the protocol on chlorofluorocarbons, it being understood that in annexing the draft protocol, it did not imply its endorsement by any of the delegations participating in the meeting of the Vienna Group. The Chairman confirmed that Article II would include language indicating that decisions as to possible reductions would be on the basis of the most recent scientific and technological information.

22. One expert expressed preference of option 4/A. He pointed out that option 4/A. gives an appropriate solution to avoid having several protocols each time a substance needed to be included. But on the other hand, there remains an important aspect of the problem related to other potential threats to the ozone such as "green house" effect. He hoped that the group will not fail to find ways and means for addressing this important question and that the Council of UNEP might have an important role to play in that connection.

23. Several experts cautioned that a short list of substances to be controlled might meet with acceptance by a larger number of delegations than a more comprehensive list of potential ozone depleting chemicals. Other experts noted, however, that meaningful protection of the ozone layer required control of those substances with the most serious potential to damage the ozone layer. Several others noted that the entry into force of the protocol depended upon the entry into force of the Vienna Convention for the Protection of the Ozon Layer. The experts noted with regret that, to date, only eight states had ratified the Convention and unless the situation radically changed, it appeared unlikely that the protocol could come into force within a six or seven year period and that reductions of CFC production under the protocol would not occur for a decade. The states, themselves Parties to the Convention, urged others to ratify it as soon as possible.

24. Another expert considered the document a useful background document that might form the basis of an agreement among states as it opened up a possibility for a convergence of views and this might enable rapid agreement

at the next Vienna Group Session. However, he said it was first necessary to study the political and economic consequences of the proposed strategy before any commitment could be made.

25. In accordance with plans for the organization of work (noted earlier in the report) four Ad Hoc Working Groups met to discuss particular issues related to the development of a protocol. The reports of the Working Groups submitted to and noted by the Plenary Session of the Vienna Group can be found in Part 2 of the report - Report of the Ad Hoc Working Groups.

VI. OTHER BUSINESS

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26. As the Vienna Group did not conclude its work during the Session by elaborating a protocol to the Vienna Convention on the control of chlorofluorocarbons, it requested UNEP to convene a third session in order that its work might be completed. After discussion, it was decided to request the Executive Director of UNEP to arrgane a third session of the Vienna Group from 27 April to 30 ^{April} May 1987.

27. The Secretariat noted the wishes of the Group but informed them that much of the finance reserved by UNEP to enable sessions of the Vienna Group to be convened and to support the participation of developing country experts in the sessions was now exhausted. The Secretariat appealed for additional support from interested states to meet the costs of a third session of the Vienna Group. It was also reported to the Group that it was planned to hold the Diplomatic Conference to adopt the draft protocol in Montreal in September at the kind invitation of the Government of Canada.

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28. The representative of Finland informed the Vienna Group that in their meeting in Helsinki on 25 February 1987, the Nordic Ministers of Environment recommended that each country prepares the necessary background material enabling them to see if a 25% reduction of CFC consumption can be realized before 1991. The aim is to prepare a joint Nordic reduction plan. This material shall be at hand ~~in~~ the next Minister Meeting in autumn 1987.

29. Experts also requested ~~that~~ ^{to} the Secretariat ask the Executive Director of UNEP to remind all States of the importance of ~~the~~ further ratification and/or accessions to the Vienna Convention for the Protection of the Ozone Layer for its early entry into force and to inform the States of the urgency of the matter in view of the significant risk to which the ozone layer was being subjected.

VII. CLOSURE OF THE SESSION

30. There being no other business, the Chairman thanked participants for participating in the Session and for their efforts in attempting to reach agreement on the form of a draft protocol on chlorofluorocarbons. He expressed a wish that a further session bring convergence of views leading to agreement on the form and content of a draft protocol that could be adopted by all states. He thanked the Secretariat for its work in assisting the Chair and on their and the participants' behalf thanked the Government of Austria for hosting the Session.

31. Responding to the Chairman many delegations warmly thanked him for his guidance during the session which had resulted in much progress being made particularly with regard to addressing the difficult issues on trade and to providing the protocol with a mechanism whereby scientific and technical assessments could be made and provided to the Parties so as to aid the efficient management of the protocol.

32. Speaking on behalf of the members of the European Economic Community, the representative of Belgium in thanking the Chairman and the Secretariat said the meeting had provided an important basis upon which further agreement might be developed and a valuable achievement ^{had been} realized. He said that Europe would be willing to undertake certain commitments on CFC management provided there was flexibility by other Parties and informed the Group that the important and urgent issue of ozone layer protection was on the agenda of the soon to meet European Council on Environmental Business.

33. The Chairman then wished participants a safe journey home and declared the session closed at 2.00 p.m. on Friday 27 February 1987.

PART 2: REPORT OF THE AD HOC WORKING GROUPS

I. SUMMARY OF THE DISCUSSION OF THE SCIENTIFIC WORKING GROUP ON:

A. SCIENTIFIC ASSESSMENTS

The recommendations contained within this summary are consistent with Annex I, Research and Systematic Observations, of the Vienna Convention for the Protection of the Ozone Layer. The following summary provides additional detail on the nature of the scientific assessment needed to service the protocol.

In order to provide the parties to a protocol an updated scientific assessment in the future, an "enhanced" commitment by all nations party to the Vienna Convention (or to the CFC protocol) will be required to (i) research, (ii) systematic observations and (iii) international scientific assessments. In particular, emphasis must be placed on international cooperation on the following topics:

1. Research:

- (I) Theoretical modelling
- (II)* Systematic observations
- (III) Atmospheric measurements to test models
- (IV) Laboratory studies of molecular and chemical properties
- (V) Studies of emissions of natural and anthropogenically produced chemicals
- Exchange(?)* (VI) Data/information exchanged
- (VII) Effects studies

2. Systematic Observations

The "vital" next step is to implement 1.II*, namely deployment of state-of-the-art well-calibrated instruemets at a network of ground-based stations designed to:

- (I) Detect any change in the chemical composition or physical structure of the atmosphere (troposphere and stratosphere).
- (II) Link "cause and effect" which will require utilization of multi-dimensional models.

This network would systematically observe the total column abundance of ozone, and the vertical distribution of temperature, ozone and a number of chemical species containing chlorine, nitrogen and hydrogen. This network of approximately 6-8 ground-based stations, which does not currently exist, is technically feasible, ^{but} would require a significant effort to implement. This network will complement current and planned satellite observing systems which will provide the required global perspective.

3. Scientific Assessments:

There was a consensus view that the current organizational structure involving UNEP and WMO has been, and would continue to be, satisfactory for developing timely, comprehensive and understandable scientific assessments. Therefore, the parties to the protocol (convention) could request UNEP and WMO seek means through which a scientific assessment described below might be performed 15 months prior to the time at which the information is needed. The assessment will be in two parts:

- (I) Major international scientific assessment of the physical and chemical processes controlling ozone consistent with the scope and detail of the recent UNEP/NASA/WMO/CEC/BMFT/NOAA/FAA report every 4 years with broadened participation from the USSR, Japan and developing countries. This will involve the participation of 150-200 scientists. In addition a comparable assessment of the effects of ozone modification on human health, and the environment, including climate change.
- (II) The reports discussed in 3.I should be summarized by the UNEP CCOL within 3 months. This would translate long and highly technical assessments into a more understandable short document for policymakers.

B. CFC DESTRUCTION AND COLLECTION

The Scientific Working Group discussed whether there were practical technologies for CFC destruction or collection. One expert said that it was better not to produce the chemicals rather than be concerned over how they should be destroyed. Information was given on the possible destruction of CFCs by incineration and by chemical destruction in rigid foam production.

Incineration of CFCs appears to be possible scientifically and has been achieved technologically on an experimental basis. It has not yet been applied on a wide spread operational basis. The energy efficiency and cost of such techniques is not yet known.

C. CHEMICAL COMPOUNDS CONTAINING CHLORINE WHICH MODIFY ATMOSPHERIC OZONES

The working group discussed which halogenated chemicals were most responsible for ozone depletion. Factors governing the relative efficiency of the compounds to deplete ozone are recognized to be:

- (1) Rate of release of compound into the atmosphere
- (2) Fraction of compound released at ground level that reaches the stratosphere
- (3) Efficiency of the compound to destroy ozone once in the stratosphere

The working group agreed that the following list of chemicals currently represents, in priority order, the greatest potential threat to ozone depletion:

- (1) CFC - 12
- (2) CFC - 11
- (3) CFC - 113
- (4) Halons 1211 and 1301
- (5) CH_3CCl_3
- (6) CCl_4
- (7) CFC - 22
- (8) CFC - 114
- (9) CFC - 115

However, predicting ozone changes in the future is very dependent upon the magnitude of future release rates into the atmosphere of each of these chemicals. Other chemicals may need to be considered in the future.

II. REPORT OF THE AD HOC WORKING GROUP ON TRADE ISSUES

The Sub-Group on Trade Issues considered the compatibility of measures for controlling trade between parties to the Protocol, and trade between parties and non-parties, with the rules of international trade, especially the GATT. The Sub-Group provisionally concluded that, provided it was clearly demonstrated that the measures were not arbitrary or unjustifiable, any discrimination in the treatment between parties and non-parties would be permissible under the exceptions provided by Article XX paragraph (b) of the GATT (concerning protection of human, animal or plant life or health) and possibly also paragraph (g) (concerning conservation of exhaustible natural resources). However, it was the opinion of several experts that discrimination would not arise at all, if the trade restrictions regarding non-parties did not apply to non-parties that were able to demonstrate full compliance with the control measures provided for in the protocol. Reference was also made to certain precedents, namely the Convention on International Trade in Endangered Species of Wild Flora and Fauna and the London Dumping Convention Resolution 29 (10) on Export of Wastes for Disposal at Sea. Possible implications of the Protocol's trade measures in the light of UNCTAD guidelines concerning transfer of technology were also discussed. The issue of exports to non-parties was raised and it was agreed that the issue deserved further deliberation. The Sub-Group concluded that it would be important for all delegations to further consider these trade issues prior to the next session.

The Sub-Group has provided the following text, which they consider a useful aid to further deliberation on the subject by all delegations before the next session of the Working Group:

Article on Control of Trade

1. Within [] years after entry into force of this Protocol, each Party shall ban the import of the controlled substances in bulk from any state not party to this protocol [], unless such state is in full compliance with Article [] and this Article and has submitted information to that effect as specified in Article []].

2. Within [] years after entry into force of this Protocol, each Party shall [restrict] [ban] imports of products containing substances controlled by this Protocol from any state not party to this Protocol [unless such state is in full compliance with Article [] and this Article, and has submitted information to that effect as specified in Article []]. At least one year prior to the time such measures take effect, the Parties shall elaborate in an annex a list of the products to be [restricted] [banned] and standards for applying such measures uniformly by all Parties.
3. The Parties shall jointly study the feasibility of restricting or banning imports of products produced with substances controlled by this Protocol from any state not party to this Protocol [unless such state is in full compliance with Article [] and this Article and has submitted information to that effect as specified in Article []].
4. Within [] years after entry into force of this Protocol, each Party shall [ban] [restrict] [discourage] the export of technologies [to non-parties] for the production and use of the controlled substances [, unless such state is in full compliance with Article [] and this Article and has submitted information to that effect as specified in Article []].
5. The Parties shall not provide [to non-parties] bilateral or multilateral subsidies, aid, credits, guarantees, or insurance programs for the export of products, equipment, plants, or technology for the production or use of the controlled substances [, unless such state is in full compliance with Article [] and this Article and has submitted information to that effect as specified in Article []].
- [6. The provisions of paragraphs 4 and 5 shall not apply to products, equipment, plants or technologies which contribute to the protection of the ozone layer.]

III. REPORT OF THE AD HOC WORKING GROUP ON THE SPECIAL
SITUATION OF DEVELOPING COUNTRIES

1. There was an agreement within the Group that it had to focus its attention on the following topics:

Topic 1: Room to be allowed for developing countries in respect of activities controlled by this Protocol

Topic 2: Assistance to be received by developing countries

Topic 3: Financial questions

2. There were useful discussions conducted on each of these topics where a common ground was reached concerning Topics 2 and 3. On Topic 1 it was agreed that further consideration was required at a future time. This report reflects the results reached by the Working Group on each Topic:

Topic 1: Room to be allowed for developing countries for activities controlled by this report

3. After lengthy discussion, the Working Group agreed that the summing up by its Chairman who reflected the results reached, should be included in this report annexed to the informal working papers it had before it. Following is the text of the Chairman's summing up:

First: Useful and constructive discussions took place under this topic. Different views were expressed. The Group had before it an informal working paper submitted by the Chairman as a basis for discussion (Annex A)*. The Group also formulated a sub-group which produced another paper, discussed and amended (Annex B)**.

* See Annex A to this report

** See Annex B to this report

Second: There was general awareness of the fact that this topic was being discussed at length, and in detail, for the first time since the work began in preparation for the Convention and the Protocol. It was also felt that discussion threw light on several ambiguous points. It revealed a need for additional time which would allow the members of the Group to go back to their capitals seeking advice and additional information. This would also allow the Group to follow the progress in the work of other related working groups such as the one concerned with control measures and the other concerned with trade implications.

Third: Discussions showed general understanding within the Group on some points which, it was agreed, should be reflected in the report. These points are:

1. The work of the Group has been carried out within the framework of the spirit and objectives of the Convention on the Protection of the Ozone Layer and taking account of the negotiations aimed at developing a protocol to the Convention.
2. The element of equity, in control measures, would encourage more countries to adhere to the protocol and would facilitate implementation.
3. There was general recognition that special consideration should be given to the situation of developing countries which did not contribute, due to the minimal level of their emissions, to the potential threat to the ozone layer.

The Group also recalled Resolution 2 of the Conference of Plenipotentiaries on the Protection of the Ozone Layer, dated 22 March 1985, which referred to the relationship between the level of industrialization of a state and its responsibilities for the protection of the ozone layer.

4. The Group recognized that there is a need to identify the real potential needs of the developing countries for chemical substances that

would be controlled by the Protocol. In this connection, it was felt that governments, assisted by UNEP, may be able to respond to that need.

5. It was obvious to the Group that there were still several questions which needed further study and more precision such as:

- Global Emissions Limit
- Actual Global Level of Emissions
- National Emissions Limit
- Actual National Limit of Emissions

Fourth: The Group recommended that this Report, together with its Annexes should be made available for possible use by Delegations, and for ~~(the)~~ future reference for the "Vienna Group".

Topic 2: Assistance to be received by developing countries

4. (See Annex C)

Topic 3: Financial questions

5. (See Annex D)

ANNEX A TO THE REPORT OF THE WORKING GROUP ON
THE SPECIAL SITUATION OF DEVELOPING COUNTRIES

1. Room to be allowed for developing countries for activities controlled by this protocol

In order to establish room for extended activities for developing countries in matters related to this protocol, there is a need to identify the following:

- revised*
- | | |
|---------------|---|
| <u>First</u> | A <u>GLOBAL</u> Limit for Activities Affecting the Ozone Layer (a red line) |
| <u>Second</u> | An Actual Global Level of Activities |

Third National Limits/Levels regarding the "first" and "second" points above.

2. When this has been done:

(a) A country should be asked to freeze and then reduce its activities if it has, in fact, exceeded its national "red" line.

(b) A country could be allowed an increased quota if it was below its national "red" line.

3. A review system will assure that through the reductions and the quotas allowed, the activities of countries will not exceed the critical line in the first instance and that they will be phased out at a later stage according to an agreed schedule.

4. It is also understood that exempted countries should do their best to avoid using CFCs whenever this proves feasible.

ANNEX B TO THE REPORT OF THE WORKING GROUP ON
THE SPECIAL SITUATION OF DEVELOPING COUNTRIES

1. Room to be allowed for developing countries for activities controlled by this protocol

(Working paper prepared by the sub-group and amended by the working group on developing countries)

I. Basic principles and objectives

1. Developing countries' needs should be recognized and accommodated in the scheme of the Protocol to ensure full participation in international efforts to reduce the risk to the ozone layer.

2. Such needs are essential and vital to the economic growth and goals of national developments which are associated with the production and use of CFCs and other ozone modification substances.

3. Identification of these needs should be based upon the concept of the essential use of the substances and their relationship to the important interests of the country.

4. ^{To give} ~~In order for~~ developing countries ^{the opportunity} ~~to~~ respond fully to the responsibility under the Protocol, provisions must be made for developing countries' access to the availability of substitute chemical substances during transition to new technologies.

II. Considerations

In order to put the above-mentioned principles into practice in the form of special provisions, it is imperative that the following must be done:

1. Identification of developing countries' need.

The following factors should be identified:

- (a) The level of the industrial development associated with the production and use of CFCs and other substances;
- (b) Expectation of the planned development within the time-frame to be set by the protocol for regulatory purposes;
- (c) Effects on their foreign trade in connection with the production and use of CFCs and substances intended to be covered by the Protocol.

2. Adoption of control measures

In adopting any control measures, provisions must be made to accommodate all those factors that have been identified as the needs of the developing countries, bearing in mind the principle objective of the protocol aimed at the protection of the ozone layer.

III. Options

At the moment, identification of the developing countries' needs is yet to be done. What can be done to find whether there is any room left for

developing countries to satisfy their needs is only to examine the several proposals tabled for adoption as control measures under the protocol, as well as other options. The proposals already tabled include among other things:

1. The establishment of maximum permissible volumes of annual consumption of CFCs shall not be extended to developing countries.
2. The developing countries will be permitted to have growth in use up to the current average per capita/use in the world.
3. Any developing country which does not produce the regulated substances is entitled to produce an amount which does not exceed its aggregate 1986 consumption level.
4. During a first phase of reduction any party whose emissions do not exceed the average per capita consumption in the world should be exempted from reduction requirements.

These options for the developing countries are to be analyzed. So long as their needs are not identified, it is very difficult indeed to ascertain if each option has taken full account of their needs under the circumstances.

ANNEX C TO THE REPORT OF THE WORKING GROUP ON
THE SPECIAL SITUATION OF DEVELOPING COUNTRIES

2. Assistance to be received by developing countries

- A.(i) Add a new Article V 1. bis to UNEP/WG.151/2, 26 September 1986, Fifth Revised Draft Protocol on Chlorofluorocarbons* as follows:
1. bis
The Parties, individually, jointly or through competent international bodies, shall cooperate in promoting public awareness of the environmental effects of the emissions of CFCs and other ozone modifying substances.
- (ii) Change the title of Article V to "Research, Development, Exchange of Information and Public Awareness".
- B. Add a new Article VII 2. bis to Article VII: "Meetings of the Parties" in Annex II to UNEP/WG/151/L.4. Draft (sic) Report of the Ad Hoc Working Group on the Work of the First Session, 15 January 1987.

* As a sixth revised draft protocol has been prepared and issued as a working paper by the Chairman of the Vienna Group - see Annex I to the Report of the Ad Hoc Working Group on the Work of its Second Session (UNEP/WG.167/2) of 27 February 1987, the above recommendations have been incorporated into the text of the sixth revised draft protocol and not the fifth as recommended.

4. bis

At their first meeting, the Parties shall begin deliberations on the ways and means of fulfilling the obligations set out in Articles V and VI above, including the preparation of work plans in this regards. Such work plans shall pay special attention to the needs and circumstances of the developing countries. Non-parties to the protocol should be encouraged to participate in activities outlined in such work plans.

Sup. (a)

Add a new sub-paragraph (e) bis and (f) bis to Article VIII:
"Secretariat" of Annex II to UNEP/WG.151/L.4, 15 January 1987.

VIII (e) bis

Where possible, encourage non-parties to attend the meetings of the Parties, as observers, and to act in accordance with the provisions of the protocol;

(f) bis

Where possible, provide the information referred to in sub-paragraphs (b), (c) and (d) above to such non-party observers.

ANNEX D TO THE REPORT OF THE WORKING GROUP ON THE
SPECIAL SITUATION OF DEVELOPING COUNTRIES

FINANCIAL QUESTIONS

1. The Working Group recalled Resolution No.2 of the Plenipotentiaries Conference on the Vienna Convention on Protection of the Ozone Layer which drew attention to the need for special considerations to be given to the particular situation of the developing countries and also the relationship between a state's level of industrialization and its responsibilities for the protection of the ozone layer.

2. It was noted that, in Geneva the Working Group on Institutional and Financial Matters made provision in Article IX for the Financial Rules of the Protocol (including rules for assessing contributions from the parties) to be adopted by the parties themselves.

3. The Working Group, in agreeing with this approach, did not consider it necessary to provide in detail for Financial Rules in the Protocol itself. The matter could appropriately be left to the parties at their first Meeting.

4. The Working Group considered that when the Financial Rules were drawn up it would be most important not to place undue financial burdens on the developing countries whose contribution to ^{the} depletion of the ozone layer is minimal.

5. It concluded that the report of the present Expert Session should include a clear statement emphasizing the importance of the special situation of the developing countries as mentioned in paragraph 4, above.

IV. REPORT OF THE WORKING GROUP ON CONTROL MEASURES

The Working Group on Control Measures held extensive discussions on the merits of the various control measures proposed. On the basis of the discussions of the Working Group and through informal discussions between the Chairman, and a number of delegates, Mr. Lang reported the following information to the Vienna Group:

- He noted some degree of flexibility of approach by the proponents of different control strategies;
- The Chairman said that he understood that any solution achieved in respect of control measures had to be closely linked to trade regulations, for example the idea that trade with non-parties would have to be limited or possibly prohibited;
- The Chairman said he also understood that special provisions for developing countries had to be included so that it became possible for those countries to implement the regulations specified in the protocol and to establish, eventually, their own production. This requires that the reduction phase starts as early as possible, to avoid any overall increase of global emissions. He said that it was also understood that whatever emission concessions are to be given to developing countries, they would have to be compensated for by lower consumption by the industrialized states.

The Chairman then introduced a draft text for the section on control measures in the proposed Protocol on the control of chlorofluorocarbons combining the common elements of the strategies on "production plus imports" and "adjusted production", previously submitted to the Vienna Group giving several alternatives for strategies for consideration by the experts of the Vienna Group. The Chairman said that informal consultations had indicated some degree of flexibility among delegations' positions. This related to the establishment of a single freeze system, which might be based mainly on the adjusted production formula but would also include exports of some manufactured products containing CFCs. It also related to the undertaking of a first, almost automatic, step towards reduction, it being understood that this reduction would depend on various variables:

1. substances covered
2. number of years
3. percentage of reduction
4. types of manufactured products included.

Several experts responded by congratulating the Chairman for his work and asked that the draft text be included in a sixth revised draft protocol on the control of chlorofluorocarbons and annexed to the report of the Second Session of the Working Group for further consideration before the convening of a third meeting of the Vienna Group to finalize the protocol on chlorofluorocarbons, it being understood that in annexing the draft protocol, it did not imply its endorsement by any of the delegations participating in the meeting of the Vienna Group.

ANNEX I

SIXTH REVISED DRAFT PROTOCOL ON CHLOROFLUOROCARBONS*

PREAMBLE

THE PARTIES TO THIS PROTOCOL,

Being Parties to the Vienna Convention for the Protection of the Ozone Layer, opened for signature at Vienna on 22nd March 1985,

Mindful of their obligation under the Vienna Convention to take appropriate measures to protect human health and the environment against adverse effects resulting or likely to result from human activities which modify or are likely to modify the ozone layer,

Recognizing the possibility that world-wide emissions of fully halogenated chlorofluorocarbons and other chlorine containing substances can significantly deplete and otherwise modify the ozone layer, resulting or likely to result in adverse effects on human health and the environment,

Recognizing also the potential climatic effects of chlorofluorocarbons emissions,

Determined to protect the ozone layer by taking precautionary measures to control total global emissions of chlorofluorocarbons,

Mindful of the precautionary measures for controlling emissions of chlorofluorocarbons that have already been taken at the national and regional levels,

* - issued under the responsibility of the Chairman

Aware that measures taken to protect the ozone layer from modifications due to the use of chlorofluorocarbons should be based on relevant scientific and technical considerations,

Mindful that special provision needs to be made in regard to the production and use of chlorofluorocarbons for the benefit of developing countries,

Considering the importance of promoting international co-operation in the research and development of science and technology on the control and reduction of chlorofluorocarbons emissions, bearing in mind, in particular, the needs of developing countries,

HAVE AGREED AS FOLLOWS:

ARTICLE I: DEFINITIONS

For the purposes of this Protocol,

1. "Convention" means the Vienna Convention for the Protection of the Ozone Layer;
2. "Parties" means, unless the text otherwise indicates, Parties to this Protocol;
3. "secretariat" means the secretariat of the Convention;
- (4. "Chlorofluorocarbon" or "CFC" means any fully halogenated chlorofluoroalkane.)

Aware that measures taken to protect the ozone layer from modifications due to the use of chlorofluorocarbons should be based on relevant scientific and technical considerations,

Mindful that special provision needs to be made in regard to the production and use of chlorofluorocarbons for the benefit of developing countries,

Considering the importance of promoting international co-operation in the research and development of science and technology on the control and reduction of chlorofluorocarbons emissions, bearing in mind, in particular, the needs of developing countries,

HAVE AGREED AS FOLLOWS:

ARTICLE I: DEFINITIONS

For the purposes of this Protocol,

1. "Convention" means the Vienna Convention for the Protection of the Ozone Layer;
2. "Parties" means, unless the text otherwise indicates, Parties to this Protocol;
3. "secretariat" means the secretariat of the Convention;
- (4. "Chlorofluorocarbon" or "CFC" means any fully halogenated chlorofluoroalkane.)

ARTICLE II: CONTROL MEASURES*

1. Each party, under jurisdiction of which substances referred to in Annex A are produced shall ensure that within [1 - 3] years after the entry into force of this Protocol the [annual production and imports] [adjusted annual production] of these substances does (do) not exceed its (their) 1986 level.

2. Each party, under the jurisdiction of which substances referred to in Annex A are not produced at the time of the entry into force of this Protocol, shall ensure that within [1 - 3] years hereinafter [its annual production and imports] [its adjusted annual production] do not exceed the level of imports in 1986.

3. Each party shall ensure, that within [..] years after the entry into force of this Protocol levels attained in accordance with paragraphs 1 and 2 will be reduced by [10 - 50] percent [unless the parties by a two-thirds majority otherwise decide] [if the parties confirm this obligation by a two-thirds majority].

Option A

4. Parties shall decide not later than [..] years after the entry into force of this Protocol by a two-thirds majority on

- new substances to be included in Annex A
- further reductions of 1986 levels.

These decisions shall be reviewed in intervals of [..] years.

Option B

4. Each party shall ensure that within [..] years after the entry into force of this Protocol levels attained in accordance with paragraph 3 will be reduced by [] unless parties by a two-thirds majority otherwise decide if parties confirm this obligation by a two-thirds majority .

*- Numbers used are only illustrative.

- This Article has to be reconsidered in the light of any provisions related to trade.

ARTICLE III: REVIEW OF CONTROL MEASURES

The Parties shall regularly at their meetings reassess the control measures provided for in article II, on the basis of the scientific, environmental and economic information available, and shall take all appropriate action.

ARTICLE IV: REPORTING OF INFORMATION

1. Within one year after the entry into force of this Protocol each Party shall inform the Secretariat about the implementation of this Protocol.
2. The Parties, either individually or jointly, shall submit annually to the secretariat;
 - (a) Information on national laws, regulations, policy directives and other measures adopted to implement this Protocol;
 - (b) Any other information to indicate their implementation of this Protocol.

ARTICLE V: RESEARCH, DEVELOPMENT, EXCHANGE OF INFORMATION

1. The Parties shall co-operate in promoting, directly and through competent international bodies, bearing in mind the needs of developing countries, research, development and exchange of information on:
 - (a) Best practicable technologies;
 - (b) Possible alternatives to CFCs and CFC products;
 - (c) Costs and benefits of relevant control strategies.
2. Each Party shall submit to the Secretariat a summary of activities conducted pursuant to the present article on a biennial basis.

ARTICLE VI: TECHNICAL ASSISTANCE

1. The Parties shall co-operate, taking into account in particular the needs of developing countries, in promoting, in the context of the provisions of article 4 of the Vienna Convention, technical assistance to facilitate participation in and implementation of this Protocol.
2. Any Party or Signatory to this Protocol in need of technical assistance in implementing it may submit a request to the Secretariat.

ARTICLE VII: MEETINGS OF THE PARTIES

1. The Parties shall hold meetings at regular intervals. The secretariat shall convene the first meeting of the Parties not later than one year after entry into force of this Protocol and in conjunction with a meeting of the Conference of the Parties to the Convention, if a meeting of the latter is scheduled within that period.

2. Subsequent ordinary meetings of the Parties shall be held, unless the Parties otherwise decide, in conjunction with meetings of the Conference of the Parties to the Convention. Extraordinary meetings of the Parties shall be held at such other times as may be deemed necessary at a meeting of the Parties, or at the written request of any of them, provided that, within six months of such a request being communicated to them by the Secretariat, it is supported by at least one third of the Parties.

3. The Parties shall by consensus adopt rules of procedure for their meetings.

4. The functions of the meetings of the Parties shall be:

- (a) To review the implementation of this Protocol;
- [(b) To establish, where necessary, guidelines or procedures for reporting of information as provided for in articles IV and V;]
- (c) To review requests for technical assistance provided for in article VI;
- (d) To review requests received from the Secretariat pursuant to article VIII;
- [(e) To reassess, pursuant to article III, the control measures provided for in article II;]
- (f) To consider and adopt proposals for amendment of this Protocol (in conformity with articles 9 and 10 of the Convention;)
- (g) To consider and adopt the budget for implementation of this Protocol;
- (h) To consider and undertake any additional action that may be required for the achievement of the purposes of this Protocol.

5. The United Nations, its specialized agencies and the International Atomic Energy Agency, as well as any State not party to this Protocol, may be represented at meetings of the Parties by observers. Any body or agency, whether national or international, governmental or non-governmental, qualified in fields relating to the protection of the ozone layer which has informed the secretariat of its wish to be represented at a meeting of the Parties as an observer may be admitted unless at least one-third of the Parties present object. The admission and participation of observers shall be subject to the rules of procedure adopted by the Parties.

ARTICLE VIII: SECRETARIAT

The secretariat shall:

- (a) Arrange for and service meetings of the Parties provided for in article VII;
- (b) Distribute to the Parties information on each Party's year of maximum use of CFCs by sectors and the total amount of its use in that year, as reported by the Parties in accordance with article IV;
- (c) Prepare and distribute to the Parties regularly a report based on information received pursuant to articles IV and V;
- (d) Notify the Parties of any request for technical assistance received pursuant to article VI so as to facilitate the provision of such assistance to the extent possible;
- (e) Perform such other functions for the achievement of the purposes of the Protocol as may be assigned to it by the Parties.

ARTICLE IX: FINANCIAL PROVISIONS

1. The funds required for the operation of this Protocol, including those for the functioning of the secretariat related to this Protocol, shall be charged exclusively against contributions from the Parties.
2. The Parties shall by consensus adopt financial rules for the operation of this Protocol, including rules for assessing contributions from the Parties.

ARTICLE X: RELATIONSHIP OF THIS PROTOCOL TO THE CONVENTION

The provisions of the Convention relating to its protocols shall apply to this Protocol.

ARTICLE XI: SIGNATURE

This Protocol shall be open for signature at from
..... to

ARTICLE XII: ENTRY INTO FORCE

1. The Protocol shall enter into force on the same date as the Convention enters into force, provided that at least nine instruments of ratification, acceptance, approval or accession to the Protocol have been deposited. In the event that nine such instruments have not been deposited by the date of entry into force of the Convention, this Protocol shall enter into force on the thirtieth day following the date of deposit of the ninth instrument of ratification, acceptance, approval or accession to the Protocol.
2. For the purposes of paragraph 1, any instrument deposited by a regional economic integration organization as referred to in Article 12 of the Convention shall not be counted as additional to those deposited by member States of such organizations.
3. After the entry into force of this Protocol, any state or regional economic integration organization as referred to in Article 12 of the Convention shall become a Party to it on the thirtieth day following the date of deposit of its instrument of ratification, acceptance, approval or accession.

ARTICLE XII bis: RESERVATIONS

(No reservations may be made to this Protocol)

ARTICLE XIII: AUTHENTIC TEXTS

The original of this Protocol, of which the Arabic, Chinese, English, French, Russian and Spanish texts are equally authentic, shall be deposited with the Secretary-General of the United Nations.

IN WITNESS WHEREOF THE UNDERSIGNED, BEING DULY AUTHORIZED TO THAT EFFECT HAVE SIGNED THIS PROTOCOL,

DONE AT THIS DAY OF

X X X

ARTICLE ON CONTROL OF TRADE

1. Within [] years after entry into force of this Protocol, each Party shall ban the import of the controlled substances in bulk from any state not party to this protocol [], unless such state is in full compliance with Article [] and this Article and has submitted information to that effect as specified in Article []].
2. Within [] years after entry into force of this Protocol, each Party shall [restrict] [ban] imports of products containing substances controlled by this Protocol from any state not party to this Protocol [], unless such state is in full compliance with Article [] and this Article, and has submitted information to that effect as specified in Article []]. At least one year prior to the time such measures take effect, the Parties shall elaborate in an annex a list of the products to be [restricted] [banned] and standards for applying such measures uniformly by all Parties.
3. The Parties shall jointly study the feasibility of restricting or banning imports of products produced with substances controlled by this Protocol from any state not party to this Protocol [], unless such state is in full compliance with Article [] and this Article and has submitted information to that effect as specified in Article []].
4. Within [] years after entry into force of this Protocol, each Party shall [ban] [restrict] [discourage] the export of technologies [to non-parties] for the production and use of the controlled substances [], unless such state is in full compliance with Article [] and this Article and has submitted information to that effect as specified in Article []].
5. The Parties shall not provide [to non-parties] bilateral or multilateral subsidies, aid, credits, guarantees, or insurance programs for the export of products, equipment, plants, or technology for the production or use of the controlled substances [] unless such state is in full compliance with Article [] and this Article and has submitted information to that effect as specified in Article []].

- [6. The provisions of paragraphs 4 and 5 shall not apply to products, equipment, plants or technologies which contribute to the protection of the ozone layer.]

X X X

ASSISTANCE TO BE RECEIVED BY DEVELOPING COUNTRIES

- A.(i) Add a new Article V 1. bis to UNEP/WG.151/2, 26 September 1986, Fifth Revised Draft Protocol on Chlorofluorocarbons* as follows:

1. bis

The Parties, individually, jointly or through competent international bodies, shall cooperate in promoting public awareness of the environmental effects of the emissions of CFCs and other ozone modifying substances.

- (ii) Change the title of Article V to "Research, Development, Exchange of Information and Public Awareness".

- B. Add a new Article VII 2. bis to Article VII: "Meetings of the Parties" in Annex II to UNEP/WG/151/L.4. Draft (sic) Report of the Ad Hoc Working Group on the Work of the First Session, 15 January 1987.

4. bis

At their first meeting, the Parties shall begin deliberations on the ways and means of fulfilling the obligations set out in Articles V and VI above, including the preparation of work plans in this regards. Such work plans shall pay special attention to the needs and circumstances of the developing countries. Non-parties to the protocol should be encouraged to participate in activities outlined in such work plans.

- C. Add a new sub-paragraph (e) bis and (f) bis to Article VIII:
"Secretariat" of Annex II to UNEP/WG.151/L.4, 15 January 1987.

VIII (e) bis

Where possible, encourage non-parties to attend the meetings of the Parties, as observers, and to act in accordance with the provisions of the protocol;

(f) bis

Where possible, provide the information referred to in sub-paragraphs (b), (c) and (d) above to such non-party observers.