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THE IMPLICATIONS OF BECOMING OR NOT BECOMING A PARTY TO
THE VIENNA CONVENTION FOR THE PROTECTION OF THE
OZONE LAYER AND THE MONTREAL PROTOCOL ON
SUBSTANCES THAT DEplete THE OZONE LAYER,
INCLUDING ITS AMENDMENTS

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I. INTRODUCTION

1. This paper has been prepared to assist those countries that have not yet become Parties to the Vienna Convention for the Protection of the ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer to assess the implications of becoming Parties.
2. The paper outlines the main provisions of the Vienna Convention and the Montreal Protocol (including its amendments and adjustments) and it describes the practical and moral implications of becoming or not becoming a Party to the two legal instruments. The main obligations and benefits of becoming a Party and the consequences of not becoming one are explained. Also included is a brief summary notes section on the main issues that a country may consider in becoming a Party, including notes on a survey that the country may wish to conduct in order to ascertain its position as a Party.

II. BRIEF BACKGROUND

3. As concerns over the depletion of the ozone layer mounted during the mid-1970s, the United Nations Environment Programme (UNEP) was asked to coordinate a world plan of action. The Coordinating Committee on the Ozone Layer (CCOL), consisting of representatives of Governments, organizations and chemical manufacturers, was established to assist in the task. Several studies and assessments were carried out after 1977 and formed the basis for the Convention for the Protection of the Ozone Layer, which was adopted in Vienna in 1985. After two more years of intensive negotiations, efforts to protect the ozone layer took an important step forward with the adoption of the Protocol on Substances that Deplete the Ozone Layer in Montreal in September 1987.
4. The Vienna Convention entered into force on 22 September 1988 and the Montreal Protocol on 1 January 1989. The first meeting of the Conference of the Parties to the Vienna Convention and the First Meeting of the Parties to the Montreal Protocol were held in Helsinki from 26 to 28 April 1989 and 2 to 5 May 1989, respectively. The Second Meeting of the Parties to the Montreal Protocol was held in London from 27 to 29 June 1990. At this Meeting, the Parties adopted adjustments and an amendment to the Montreal Protocol. The adjustments strengthened the control measures (Article 2) requiring the Parties to phase out the production and consumption of the five chlorofluorocarbons (CFCs) and the three halons listed in Annex A to the Protocol by the year 2000. The Fourth Meeting of the Parties in 1992 in Copenhagen further adjusted the phase-out schedule to phase out halons by the end of 1993 and CFCs by the end of 1995. The adjustments are binding on all the Parties.
5. The London Amendment to the Montreal Protocol includes the control of ten other fully halogenated CFCs, carbon tetrachloride and methyl chloroform. The London Amendment also includes a strengthened provision on the transfer of technology and a financial mechanism to facilitate the necessary transfer of technology to enable developing countries to comply with the Protocol. The Copenhagen Amendment includes hydrochlorofluorocarbons (HCFCs), hydrobromofluorocarbons (HBFCs) and methyl bromide in the list of controlled substances. HCFCs are to be gradually phased out by the year 2030 for non-Article 5 Parties and by 2040 for Article 5 Parties while HBFCs were phased out by 1996 by all Parties. The consumption of methyl bromide was frozen by 1995 for non-Article 5 Parties and is to be frozen for Article 5 Parties in 2002.
6. In 1995, the Montreal Protocol was adjusted to introduce control measures applicable to developing countries. According to this phase-out schedule, developing countries will phase out controlled substances ten years later following a schedule applicable to non-Article 5 Parties.
7. The Montreal Adjustments in 1997 provided the basis for determining compliance with the control measures relating to consumption of substances in Annex A to the Protocol for Article 5 Parties, which is to be calculated at the average of its annual calculated level of production for the period 1995 to 1997 inclusive. For substances in Annex B, it is the average of its annual calculated level of production for the

period 1998 to 2000 inclusive. The base level production of HCFCs would be the average calculated level of production and consumption in 2015, while for methyl bromide the base level consumption would be the average calculated level of production for the period 1995 to 1998 inclusive.

8. The 1997 Montreal Amendment provided, inter alia, for Parties to establish licensing systems for import and export of ozone-depleting substances. It also introduced a trade ban in import and export of methyl bromide to non-Parties to the Copenhagen Amendment to the Protocol from 10 November 2000.

9. The 1999 Beijing Adjustments to the Montreal Protocol changed the formula for production of substances in Annexes A, B and E above the baseline to meet the basic domestic needs of Article 5 Parties. The Beijing Amendment, on the other hand, introduced new controls on the production of HCFCs and listed a new controlled substance, bromochloromethane, to be phased out by 1 January 2002.

10. To date, 191 States and the European Community are parties to the Vienna Convention and the Montreal Protocol. The London Amendment to the Montreal Protocol has been ratified by 185 Parties, while the Copenhagen Amendment to the Protocol has been ratified by 176 Parties. The ratification of the Montreal Amendment stands at 152 Parties, while the Beijing Amendment has been ratified by 124 Parties.

III. THE VIENNA CONVENTION FOR THE PROTECTION OF THE OZONE LAYER

11. The Vienna Convention for the Protection of the Ozone Layer contains 21 Articles and 2 annexes, providing for Parties to protect human health and the environment from the effects of depletion of the ozone layer and to participate in research, observation and information exchange.

A. Article 3: Research and systematic observations

12. Under this article, the Parties have to initiate or cooperate in research and scientific assessment on: (i) physical and chemical processes that may affect the ozone layer; (ii) effects on human health and other biological effects of modification of the ozone layer, particularly changes in ultra-violet solar radiation having biological effects (UV-B); (iii) climatic effects of modification of the ozone layer; (iv) substances, practices, processes and activities that may affect the ozone layer, and their cumulative effects; (v) alternative substances and technologies; and (vi) related socio-economic matters (as further elaborated in Annexes I and II of the Convention).

13. Every three years, the Ozone Research managers from all Parties to the Convention meet to review the latest scientific findings on the state of the ozone layer and its reports are circulated to all Parties. The major activities geared towards the protection of the ozone layer have been subsumed under the Montreal Protocol on Substances that Deplete the Ozone Layer.

IV. THE MONTREAL PROTOCOL ON SUBSTANCES THAT DEplete ZONE LAYER AND THE LONDON AMENDMENT

14. The Montreal Protocol on Substances that Deplete the Ozone Layer is a protocol under the Vienna Convention. The Protocol controls the production and consumption of the most commercially and environmentally significant ozone-depleting substances - the substances listed in the Annexes to the Protocol. One feature that makes the Montreal Protocol unique is Article 6, which requires the Protocol's control measures to be reviewed at least every four years (starting in 1990), based on the assessment of the latest available information on scientific, environmental, technical and economic aspects of the depletion of the ozone layer.

15. Based on the reports of the assessment panels appointed by the Parties and taking into consideration the needs and situation of developing countries, the Protocol has already been adjusted and/or amended five times.

16. The main provisions of the Protocol and the obligations of the Parties are explained below.

A. Articles 2A through 2E: Control measures

17. The Protocol controls substances with a high ozone-depleting potential listed in Annexes A, B, C and E. The Parties are required to phase out the consumption and production of all ozone-depleting substances according to the schedules summarized in Annexes I and II to document UNEP/OzL.Pro/WG.1/20/INF/2/Rev.1, which was distributed at the twentieth meeting of the Open-ended Working Group of the Parties to the Montreal Protocol in July 2000.

B. Article 3: Calculation of control levels

18. The control measures are based on calculated levels of production and consumption for each group of substances. Consumption is defined as production plus imports minus exports of controlled substances.

19. The calculated level of production of a controlled substance is the actual amount produced multiplied by the ozone-depleting potential (ODP) specified in Annex I of the Protocol for the substance. The total calculated production is the sum of the calculated production of each substance minus the amount destroyed and minus the amount used as feedstock. The calculated level of consumption for a controlled substance is determined in the same way as for the calculated level of production, i.e., the actual amount of consumption is multiplied by its ODP. The total calculated consumption is the sum of production plus imports and exports of controlled substances.

C. Article 4: Trade controls in ozone-depleting substances

20. The Protocol includes restrictions on trade with non-Parties to the treaty. These were included in order to encourage countries to join the treaty, and also to prevent the possibility of production of ODS migrating to non-parties in contravention of the controls. Parties were required to ban the import of Annex A controlled substances (CFCs and Halons) from non-Parties from 1990 (one year after the Protocol came into force); exports to non-Parties were banned from 1993. Imports of goods listed in Annex D to the Protocol were also banned from 1993. These are: (i) automobile and truck air-conditioning units (whether incorporated in vehicles or not); (ii) domestic and commercial refrigeration and air-conditioning/heat pump equipment, e.g., refrigerators, freezers, dehumidifiers, water coolers, ice machines, and air-conditioning and heat pump units; (iii) aerosol products, except medical aerosols; (iv) portable fire extinguishers; (v) insulation boards, panels and pipe covers; and (vi) pre-polymers. As new substances have been added to the control schedules, the trade provisions have been gradually extended to cover them as well. The trade restrictions are not applicable, however, to a non-Party that is in compliance with the control schedules.

21. Parties are also discouraged from exporting the technology for producing and using controlled substances (except for products, equipment, plants or technology that contribute to reducing the emission of controlled substances into the atmosphere) and to refrain from providing new subsidies, aid, credits and guarantees that would facilitate the production of controlled substances.

22. A requirement that parties introduce a licensing system for imports and exports of all categories of ODS, including new, used, recycled and reclaimed substances, was introduced in the 1997 Montreal Amendment and entered into force in late 1999. The aim of the licensing system is to help tackle the growing illegal trade in ODS, which stems from some users' attempts to avoid the cost of replacing machinery requiring banned categories of chemicals.

D. Article 5: Special situation of developing countries

23. As defined under this Article, if a country belongs to the list of developing countries approved by the Parties for the purposes of this Protocol and has an annual calculated per capita consumption of controlled substances of below 0.3 kg for substances in Annex A and below 0.2 kg for substances in Annex B, the country can delay its compliance with the control measures by 10 years. However, such a country must stay below 0.3 kg and 0.2 kg per capita consumption respectively in order to remain eligible for the grace period. It must be noted that the ten-year delay in complying with the control measures is only for the purpose of satisfying basic domestic needs, i.e., expansion of production of controlled substances and products containing controlled substances for export purposes is not allowed.

24. This Article also requires the Parties to facilitate access to environmentally safe alternative substances and technology for Parties that are developing countries and, bilaterally or multilaterally, to facilitate the provision of subsidies, aid, credits, guarantees or insurance programmes for this purpose.

25. Under Article 5, any Party operating under paragraph 1 of the Article can submit a notification to the Secretariat if, after having taken all practicable steps, it is unable to comply with the control measures due to inadequate implementation of the provisions on the transfer of technologies and the Financial Mechanism. The Parties will consider any notification at their Meetings and decide on appropriate action to be taken. During the period between the submission of notification and the decision on appropriate action, the non-compliance procedure will not be invoked against the Party concerned. Furthermore, there is a provision that allows revision of the control measures applicable to the Parties operating under this Article, taking into account the effectiveness of the implementation of financial cooperation and transfer of technology.

E. Article 7: Reporting of data

26. This Article provides for reporting of statistical data on production, import and export of each substance controlled under the Protocol for the base year 1986 and annually, beginning in the year during which the Protocol enters into force for the country. For Article 5 Parties, while implementing the control measures set out in Article 2A, the base year is the average of 1995-1997 production or consumption of Annex A substances or the calculated level of consumption of 0.3 kilograms per capita, whichever is lower. For substances in Annex B, the base year is the average of 1998-2000 production or consumption or the calculated level of consumption of 0.2 kilograms per capita, whichever is lower. For the base year, the Parties can report best estimates where actual data are not available. The annual data on exports should be split into exports to Parties and to non-Parties. Exports of ozone-depleting substances to non-Parties is not allowed under Article 4.

27. Data are reported to the Secretariat. Data must be reported by each Party within three months of becoming a Party, and annual data not later than nine months after the year to which the data relate. The Protocol enters into force for a country on the ninetieth day following the date of deposit of its instrument of ratification, acceptance, approval or accession respecting the Protocol or its amendments.

F. Article 8: Non-compliance

28. In accordance with this Article, the Parties adopted the non-compliance procedure at their Fourth Meeting, in 1992; the procedure was then revised in 1998. The procedure provides for dealing with Parties that are found to be in non-compliance with the provisions of the Protocol, including requirements to report data.

29. The Implementation Committee established under the non-compliance procedure examines the circumstances of cases of possible non-compliance, and attempts to identify problems and recommend ways to assist the Parties concerned in order to bring about full compliance. The Committee aims to secure amicable solutions to issues of non-compliance as far as possible.

G. Article 9: Research, development, public awareness and exchange of information

30. This Article requires Parties to cooperate in research, development and information exchange on the reduction of emissions of controlled substances through recovery, recycling, improved containment and other means; on alternatives to controlled substances and manufactured products containing or made with controlled substances; and on the costs and benefits of control strategies. Parties must also promote public awareness on the consequences of the emission of ozone-depleting substances. Parties are required to report biennially on the activities conducted pursuant to this Article.

H. Article 10: Financial Mechanism

31. Article 10 establishes a Financial Mechanism to facilitate the transfer of ODS substitutes and related technology. The mechanism includes a Multilateral Fund as well as other means of multilateral, regional and bilateral cooperation. The Multilateral Fund covers the "agreed incremental costs" incurred by developing countries operating under paragraph 1 of Article 5 in complying with the control measures provided for in the Protocol. It also finances a clearing-house mechanism and the Secretariat for the Fund.

32. Parties operating under paragraph 1 of Article 5 are the beneficiaries of the Fund. All other Parties are required to contribute to the Fund in convertible currency, in kind and/or national currency on the basis of the United Nations scale of assessments. Up to 20 per cent of the required contribution by a Party may be in the form of bilateral or regional cooperation to be assessed according to guidelines established by the Executive Committee of the Multilateral Fund.

33. The costs incurred by the Parties operating under paragraph 1 of Article 5 in converting from the production or use of controlled substances to substitutes and alternatives are covered by the Fund. An indicative list of such "incremental costs" has been adopted by the Parties. These eligible Parties can design projects and programmes that are in line with the indicative list and apply for financing from the Fund.

34. The Executive Committee, consisting of 14 members, 7 Parties operating under paragraph 1 of Article 5 and 7 Parties not so operating, has been established to develop and monitor the implementation of specific operational policies, guidelines and administrative arrangements. It allocates resources as appropriate and considers and approves projects. The Fund secretariat, located in Montreal, Canada, assists the Executive Committee in the discharge of its functions.

35. UNEP, the United Nations Development Programme, the United Nations Industrial Development Organization and the World Bank are the four implementing agencies of the Fund. One important function performed by the implementing agencies is to assist developing countries operating under paragraph 1 of Article 5 to prepare country programmes to phase out the consumption of controlled substances. Country programmes form the basis for the provision of financial and technical support for specific phase-out projects and activities.

36. The Multilateral Fund is making good progress in assisting developing countries to achieve a rapid phase-out of controlled substances. The Fund has already approved about \$1.1 billion since 1991 for projects and activities to assist developing countries operating under Article 5 of the Montreal Protocol to comply with the Protocol's control measures. These funds have been used for investment, demonstration, technical and training assistance and training projects in 120 countries. It has led to the phase-out of production and consumption of ozone-depleting substances in industrial sectors such as refrigeration, air-conditioning, foam, fire protection and solvents. Also, in the agricultural sector, the use of methyl bromide as a fumigant and CFCs for tobacco fluffing is being phased out through assistance from the Multilateral Fund.

I. Article 10 A: Transfer of technology

37. Article 10 requires that Parties take every practicable step to ensure transfer of the best available environmentally safe substitutes and related technologies to developing countries operating under paragraph 1 of Article 5 of the Protocol under fair and most favourable conditions.

38. Parties have adopted appropriate policies for export of recycled and used substances to Parties operating under paragraph 1 of Article 5 of the Protocol so as to avoid any adverse impact on the industries of the importing Parties. These policies have also cut down the demand for new substances.

V. THE ADJUSTMENTS AND AMENDMENTS TO THE MONTREAL PROTOCOL AGREED AT THE FOURTH, SEVENTH, NINTH AND ELEVENTH MEETINGS OF THE PARTIES

A. The adjustments and amendment to the Montreal Protocol agreed at the Fourth Meeting of the Parties in 1992

1. The adjustments

39. The production and consumption of substances by non-Article 5 Parties in Annex A, Group I (CFCs) and Annex B (other fully halogenated CFCs, carbon tetrachloride and methyl chloroform) were phased out by 1 January 1996 except for essential uses approved by the Parties. Halons were phased out by 1 January 1994 except for essential uses approved by the Parties.

2. The amendment

40. Hydrochlorofluorocarbons (HCFCs), hydrobromofluorocarbons (HBFCs) and methyl bromide were listed under the Montreal Protocol as controlled substances.

41. For hydrochlorofluorocarbons (HCFCs), the Parties agreed to control only the consumption of HCFCs with gradual reductions until 2030, when consumption would be completely phased out.

42. Control measures for methyl bromide would only apply to a production and consumption freeze by 1 January 1995 at the 1991 level.

43. The production and consumption of hydrobromofluorocarbons were completely phased out by 1 January 1996. It was also agreed that within five years, Parties would determine the feasibility of banning or restricting the import of products produced with, but not containing, hydrobromofluorocarbons.

44. The Parties also agreed to decide by 1 January 1996, through the procedure set out in paragraph 9 of Article 2, on reviewing the control schedules and phase-out dates applicable to Article 5 Parties with respect to HCFCs, HBFCs and methyl bromide.

B. The adjustments to the Montreal Protocol agreed at the Seventh Meeting of the Parties in 1995

1. Hydrochlorofluorocarbons (HCFCs)

45. The base year (1989) cap on HCFCs was reduced from three point one (3.1) to two point eight (2.8).

46. The 0.5 per cent consumption of HCFCs from 1 January 2020 would be restricted to the servicing of refrigeration and air-conditioning equipment existing at that date.

2. Methyl bromide

47. The Parties agreed to phase out both production and consumption of methyl bromide by 1 January 2010 for non-Article 5 Parties while exempting quarantine and pre-shipment applications of methyl bromide from these controls.
48. The ODP of methyl bromide was adjusted downward from 0.7 to 0.6.

3. Special situation of developing countries

49. The Parties agreed that the application of control measures agreed in London in 1990 for ozone-depleting substances in Annexes A and B to Parties operating under paragraph 1 of Article 5 would be delayed for ten years. The phase-out date for both Annexes A and B is the year 2010 except for methyl chloroform, which will be phased out by 2015. For HCFCs, there will be a consumption freeze commencing on 1 January 2016 based on the calculated level of consumption in 2015, with the final phase-out by 2040.

C. The adjustments and amendment agreed at the Ninth Meeting of the Parties in 1997

1. The adjustments

50. The Parties agreed that for an Article 5 Party, the base level production of substances in Annex A would be the average of its calculated level of production for the period 1995 to 1997, inclusive, or a calculated level of production of 0.3 kilograms per capita, whichever is lower. For substances in Annex B, the average of its calculated level of production would be the period 1998 to 2000, inclusive, or a calculated level of production of 0.2 kilograms per capita, whichever is lower.
51. The base level production of hydrochlorofluorocarbons would be the calculated level of production and consumption in 2015.
52. With respect to methyl bromide, it was agreed that Parties not operating under Article 5 would phase out both production and consumption of methyl bromide, with interim reductions, by 1 January 2005, except for any approved critical uses, while Article 5 Parties would do so by 1 January 2015, by using the average base level consumption for the period 1995 to 1998 inclusive.

2. The amendment

53. New Article 4A of the Protocol provides that, after the phase-out date applicable to a Party for a controlled substance, such a Party, if unable to comply with its obligation under the Protocol, shall cease production of that substance for domestic consumption, other than for essential uses. It shall also ban the export of used, recycled and reclaimed quantities of that substance, other than for the purpose of destruction.
54. Article 4B is new and provides for each Party to establish and implement a system for licensing the import and export of new, used, recycled and reclaimed controlled substances in Annexes A, B, C and E by 1 January 2000 or within three months of the date of entry into force of this Article. Notwithstanding this provision, any Article 5 Party may delay the establishment and implementation of such a system for licensing the import and export of controlled substances in Annexes C and E until 1 January 2005 and 1 January 2002, respectively. Within three months of introducing such a system, each Party should report to the Secretariat.
55. Commencing on 10 November 2000, there will be a trade ban on the import and export of methyl bromide to non-Parties to the Copenhagen Amendment to the Montreal Protocol.

D. The adjustments and amendment agreed at the Eleventh Meeting of the Parties in 1999

1. The adjustments

56. The Parties agreed to change the formula for production of substances in Annexes A, B and E above production limits to meet the basic domestic needs of Article 5 Parties.

2. The amendment

57. The Parties introduced new controls on the production of hydrochlorofluorocarbons (HCFCs). Before this amendment, controls on HCFCs applied to only consumption of HCFCs.

58. A new substance, bromochloromethane, was listed as a controlled substance. Its production and consumption is to be completely phased out by 1 January 2002.

VI. THE ADVANTAGES OF BECOMING A PARTY AND DISADVANTAGES OF NOT BECOMING A PARTY

A. The advantages of becoming a Party

1. Transfer of the latest technology

59. Parties are in a better position to acquire the technologies for reducing and using substitutes as well as for reducing the use and emission of controlled substances in accordance with the provisions of Article 10A of the Protocol, which requires the transfer of technology, and the various programmes and projects that are undertaken within the framework of the Financial Mechanism (Article 10).

60. Alternative technologies for phasing out controlled substances are available. Activities are already being undertaken by the implementing agencies to disseminate information (through workshops, the publication and dissemination of newsletters, reports and manuals as well as through a computerized information system) and promote training courses, networking, demonstration projects, pre-investment and investment studies and implementation of country programmes that form the basis for specific projects to phase out the consumption of controlled substances.

61. Industrialized countries have stopped the use of CFCs much more easily than was originally anticipated. Not-in-kind substitutes have proved particularly important in the electronics sector, where 'no-clean' techniques have often ended the use of CFCs as solvents. The foam-blowing sector has replaced CFCs with water, carbon dioxide and hydrocarbons, as well as HCFCs. The refrigeration and air-conditioning sector has largely used HCFCs as alternatives, but new equipment is increasingly using non-ozone depleting hydrofluorocarbons (HFCs), (though these are powerful greenhouse gases, reinforcing the case for the ozone and climate change regimes to work closely together), ammonia (the chemical used in the very first refrigerators) or hydrocarbons. Stockpiling, or "banking", in which CFCs have been produced before phase-out for use afterwards, has helped to extend development and testing periods of the substitutes.

62. Consuming industries have also used banking to provide extra time to develop substitutes for halons for fire-fighting. Other fire-extinguishing agents such as carbon dioxide, water, foam and dry powder are now widely used. Alternative approaches, such as good fire prevention practices, use of fire-resistant materials and appropriate designs for buildings have significantly reduced the need for halon systems, and total phase-out in industrialized countries was achieved smoothly by the end of 1993.

63. Phase-out efforts in industrialized countries are now concentrating on HCFCs and methyl bromide. Parties to the Montreal Protocol are encouraged to ensure that HCFCs are used only as direct replacements for other ozone-depleting substances where other more environmentally suitable alternatives are not

available. HCFCs were critical in meeting the early CFC phase-out goals, but are generally considered much less important for new equipment available in the medium and long term.

64. The major use of methyl bromide is in agriculture, mainly for fumigation to control pests and weeds. Such treatment is often required by importers. (Methyl bromide used for quarantine and pre-shipment (QPS) purposes is currently exempted from the controls). The UNEP Methyl Bromide Technical Options Committee has already identified technically feasible alternatives for more than 95% of non-QPS uses, and many countries have already subjected the chemical to controls also because of concerns about toxicity.

2. Preserving/gaining access to world markets

65. When Parties obtain new technologies for producing or using substitutes, they are able to compete better as sellers/exporters in the world market for ODS substitutes and related products. The experience of some international companies has shown that alternative technologies are often cost-effective and lead to an improvement in the quality of end products. Industries located in the countries that are Parties to the Montreal Protocol will use new technologies to gain a competitive advantage in export markets.

3. Access to financial and technical assistance from the Multilateral Fund

66. Through the Multilateral Fund, Parties operating under paragraph 1 of Article 5 obtain the necessary financial and technical support to phase out the consumption of controlled substances. Projects and activities for phasing out controlled substances in various industrial sectors are being funded consistent with the indicative list of incremental costs (extra costs incurred due to the implementation of the Protocol).

4. Ability to import controlled substances to maintain existing equipment

67. Any Party operating under paragraph 1 of Article 5 is eligible to delay compliance with the control measures for ten years for the purpose of satisfying its basic domestic needs. Hence, if such a Party requires controlled substances, e.g., for maintaining the operation of existing equipment, it may import the necessary controlled substances from other Parties (but without exceeding the consumption limit of 0.3 kg per capita for the substances in Annex A of the Protocol and 0.2 kg per capita for Annex B substances) until such time as it is required to reduce its consumption.

68. If a Party operating under paragraph 1 of Article 5 is unable to obtain adequate supply of the controlled substances that it needs, that Party can submit a notification to the Secretariat and such notification will then be considered by the Parties for appropriate action.

5. Favourable provisions in the Protocol

69. As provided for under Article 5 of the Protocol, a Party operating under paragraph 1 of Article 5 can submit a notification if, having taken all practicable steps, it is unable to implement its obligations due to inadequate implementation of the provisions on technology transfer and the Financial Mechanism. Such notification will be considered by the Parties and, pending a decision, the Party will not be determined to be in non-compliance with the Protocol.

B. The disadvantages of not becoming a party

1. Obsolete technologies

70. It will not be easy for non-Parties to gain access to new technologies that replace the use of ozone-depleting substances. Financial and technical support for the transfer of technology are provided under the framework of the Financial Mechanism for the Parties. Hence, non-Parties are likely to have to operate for a longer period with technologies that are rapidly becoming obsolete. Continuing the use of obsolete technologies and building new facilities that use obsolete technologies would be an economic disadvantage, since it would result in the loss of export markets for non-Party industries.

2. No trade in controlled substances or products containing those substances with Parties

71. The Parties have already banned the export of controlled substances to non-parties, and these trade restrictions will apply to all controlled substances. Hence, the supply of controlled substances to any non-Party can be made only by other non-Parties. All producers of controlled substances are already Parties to the Protocol, and it will therefore be difficult for non-Parties to obtain controlled substances. Parties have also banned the import of products listed in Annex D to the Protocol from any non-Party.

3. Affecting the global environment

72. The ozone layer can only return to its 1970s status if all nations join the effort to eliminate the emission of ozone-depleting substances into the atmosphere. The depletion of the ozone layer results in an increase of harmful UV-B radiation at the earth's surface, which can cause catastrophic damage to human beings and the environment. Failure to ratify the ozone treaties and the continued emission of ozone-depleting substances into the atmosphere will undercut international efforts to protect the earth from the adverse effects of ozone-layer depletion. Damage caused by ozone-layer depletion will not be confined to those that continue using ozone-depleting substances, but will have a global impact.

C. The financial implications

73. The Parties to the Vienna Convention and the Montreal Protocol, at their first meetings in Helsinki, established two separate trust funds for their respective activities: one for the Montreal Protocol and another for the Vienna Convention. The cost of running the Secretariat is covered by the two trust funds. Contributions towards the trust funds are voluntary and made by the Parties on the basis of the United Nations scale of assessments. Parties that under the United Nations scale of assessments have a level of contribution of less than 0.1 per cent are not required to contribute to the trust funds. Among those not yet Parties to the Montreal Protocol, only Iraq and the Holy See might be required to contribute to the trust funds. The other potential parties would not be required to pay. However, the contributions required of Cook Islands, Nauru, Niue and the Holy See pursuant to the United Nations scale of assessments are not known at this stage.

VII. THE MORAL OBLIGATION

74. In recent years, scientific research has greatly advanced understanding of stratospheric processes, including the depletion of the ozone layer. Scientific evidence shows, beyond reasonable doubt, that man-made chlorinated and brominated substances are the major cause of the destruction of the ozone layer, which shields the earth from harmful UV-B radiation from the sun. The destruction of the ozone layer therefore results in increased amounts of UV-B radiation.

75. Adverse effects to human beings of increased UV-B at the earth's surface include increased incidence of skin cancer, eye cataracts leading to blindness and damage of the immune system resulting in the increased occurrence of infectious diseases and the decreased effectiveness of existing immunization programmes. Increased UV-B may also have adverse effects on several species of plants, resulting in decreased crop yields and damaged forests. Small aquatic organisms that form the basis of aquatic food chains are also negatively affected, leading to a decline in fish-stocks. Damage caused to materials, especially plastics and rubbers used outdoors, as well as wood, paint, paper and textiles, would be very expensive. Another effect is the increase in photochemical pollution in the troposphere that occurs especially around cities where the ingredients for pollution are present.

76. These adverse effects can reach all countries in the world. The most severely affected may be the developing countries, especially those already suffering from infectious diseases coupled with inadequate

medical facilities, countries that rely heavily on fish as an important source of food and exports and countries with poor crop yields.

77. Through understanding and cooperation, the world community reached an agreement on a mechanism to provide new and additional resources for the protection of the ozone layer to those countries that need them most. Now that there is a Multilateral Fund with the financial resources and the capacity to provide technical assistance, developing countries should be able to comply with the Montreal Protocol without having to compromise their economic development.

VIII. SUMMARY NOTES ON IMPORTANT POINTS TO CONSIDER IN BECOMING A PARTY

A. Determining whether or not a country is eligible to operate under paragraph 1 of Article 5

78. For a country to operate under paragraph 1 of Article 5, it must belong to the list of developing countries that was adopted by the First Meeting of the Parties to the Montreal Protocol. That list includes Afghanistan, Bhutan, Cape Verde, Equatorial Guinea, Rwanda, Sao Tome and Principe, Sierra Leone, Somalia, Cambodia and Iraq.

79. Any country that does not belong to this list but concludes that it should be treated as a developing country may make special application to the Meeting of the Parties to the Montreal Protocol for a decision. Such country must have a total calculated level of consumption (for the controlled substances in Annex A) of below 0.3 kg per capita at the time of entry into force of the Protocol for it or at any time thereafter and until 1 January 1999. If the 0.3 kg per capita is exceeded, the country will lose its Article 5 status. Under the London Amendment, the total calculated level of consumption of controlled substances in Annex B must be below 0.2 kg per capita for the country to retain Article 5 status.

B. The main advantages of operating under paragraph 1 of Article 5

80. The benefits accruing to a country as an Article 5 party include:

(a) The right to delay compliance with the control measures set out in Articles 2A-2B for ten years without increasing production of the controlled substances or related products for export purposes, i.e., this grace period is allowed so that basic domestic needs can be satisfied;

(b) Eligibility for financial and technical support through the Multilateral Fund to phase out the consumption of controlled substances;

(c) Strong prospects of expeditiously obtaining the best available environmentally safe substitutes and alternative technologies.

C. A survey of the consumption of the controlled substances in the country

81. It is not a requirement to conduct a survey before ratification. However, a survey of the controlled substances in the country would be useful for the following purposes:

(a) To determine whether the country is eligible to operate under paragraph 1 of Article 5 (if, however, the country appears in the list of developing countries, it will be treated as operating under paragraph 1 of Article 5 unless controlled substance consumption data require otherwise);

(b) To facilitate the reporting of statistical data in accordance with Article 7 when the country becomes a Party;

(c) To facilitate the preparation of a country programme, which is the basis for obtaining assistance from the Multilateral Fund for specific projects and activities for phasing out the consumption of controlled substances;

(d) To facilitate the monitoring of compliance with the control measures and trade provisions.

82. A survey should include the following components:

(a) Identification of the industries producing controlled substances and the quantities produced;

(b) Quantification of ozone-depleting substances imported/exported as bulk chemicals including mixtures. A survey both of customs records and of importing/exporting industries would be useful;

(c) Identification of use patterns of controlled substances in the country and quantities of the controlled substances used in each sector;

(d) Identification and quantities of the products containing controlled substances that are being imported/exported by the country, as well as the countries from/to which the products are imported/exported;

(e) Collection of information on industrial practices and processes, including recycling methods used (and quantities recycled), as well as industry strategies.

83. The following are useful notes to be considered for the survey:

(a) When a country becomes a Party, a country programme is prepared with the assistance of one of the implementing agencies and financial support from the Multilateral Fund. The country programme requires a survey upon which the action plan for reducing and phasing out controlled substances is based. Hence, a survey by the country would facilitate preparation of the country programme.

(b) For the purpose of reporting data as required by Article 7, only bulk chemicals and mixtures are included, and not the controlled substances contained in manufactured products such as in refrigerators, air conditioners and foams. The consumption data for the base years 1995 to 1997, inclusive, for Annex A substances and 1998 to 2000, inclusive, for Annex B substances must be reported within three months of the country having become a Party.

(c) The uses of controlled substances are:

(i) As refrigerants (CFC-11,-12,-113,-115, azeotropic mixtures 502,500) for domestic refrigerators, industrial refrigerators, water coolers, bottle and walk-in coolers, ice machines and cold-storage units;

(ii) In air-conditioners (CFC-11,-12,-113), e.g. room air-conditioners, packaged air-conditioners, central air-conditioners, reciprocating and centrifugal, and mobile air-conditioners in cars, trucks, buses, ships, and trains;

(iii) As foam-blowing agents (CFC-11,-12,-113,-114), e.g., flexible polyurethane, rigid polyurethane, polyoleofimic foam, phenolic foam, and polystyrene;

(iv) As aerosol propellants (CFC-11,-12,-13,-14,-114), e.g., bottle aerosols, can aerosols, and inhalers;

- (v) As process solvents, e.g., pesticides, pharmaceuticals, and in industrial paint manufacturing;
- (vi) As solvents for cleaning (CFC-11,-113, carbon tetrachloride, methyl chloroform), e.g., for degreasing electronic components, metal cleaning, cleaning computer hard disks, and dry cleaning;
- (vii) In fire extinguishers (halon-1301,-1211,-2402), e.g., portable fire extinguishers and flooding units.

D. Financial contributions towards the Trust Fund for the Vienna Convention, the Trust Fund for the Montreal Protocol and the Multilateral Fund

84. If a country's level of contribution on the United Nations scale of assessments is less than 0.1 per cent, it is not required to contribute to the Trust Funds for the Vienna Convention and the Montreal Protocol.
85. If a country's level of contribution is above 0.1 per cent, the country will be required to contribute to the two trust funds on a scale based on the United Nations scale of assessments and adjusted in accordance with the number of Parties that will be required to contribute, with a 25 per cent ceiling per single Party.
86. If a country is operating under paragraph 1 of Article 5, it is not required to contribute to the Multilateral Fund.
87. If a country is not operating under paragraph 1 of Article 5, it is required to contribute to the Multilateral Fund in accordance with the adjusted scale of contribution, based on the United Nations scale.
88. Among non-Parties to the Vienna Convention and the Montreal Protocol, only Iraq and the Holy See might, upon becoming Parties, be required to contribute to the Trust Funds for the Vienna Convention, the Montreal Protocol and the Multilateral Fund.

E. Consideration of the main obligations as a Party

89. A Party must comply with the control measures to phase out the production and consumption of controlled substances in accordance with Article 2. If a Party is operating under paragraph 1 of Article 5, a ten year delay is allowed for complying with the control measures.
90. A Party must report statistical data on the production, import and export of each controlled substance annually and for the base years 1986 (Annex A); 1989 (Annex B and Annex C, Group 1); 1991 (Annex E). Base years for Article 5 Parties are the average of 1995-1997 (Annex A); 1998 – 2000 (Annex B); 2015 (Annex C, Group I) and 1995-1998 (Annex E). Best estimates may be reported for the base years if actual data are not available.
91. A Party must ban the import from and export to non-Parties of the controlled substances listed in Annexes A and B.
92. A Party must ban the import from non-Parties of products listed in Annex D.
93. A Party must report on the activities undertaken pursuant to Article 9 of the Protocol.

F. Ratification, accession, approval or acceptance

94. To become a Party to the Vienna Convention and the Montreal Protocol, an official instrument of ratification, accession, approval or acceptance (depending on the domestic legal system) should be submitted, normally from the head of state or the minister for foreign affairs, to the Depositary of the two legal instruments, i.e., the Secretary-General of the United Nations in New York. Also, every amendment to the Montreal Protocol must be ratified individually, while each set of adjustments to the Protocol automatically enters into force six months after the date of official notification of the adjustments by the depositary.
