
Committee on Trade and Environment

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**COMMUNICATION FROM THE SECRETARIAT FOR
THE VIENNA CONVENTION AND THE
MONTREAL PROTOCOL, UNEP**

The attached background paper¹ has been received from the Secretariat for the Vienna Convention and the Montreal Protocol, UNEP. It is being circulated to Members of the CTE in preparation for the Committee Meeting on Trade and Environment to be held on 29-30 June 1999.

Comité du commerce et de l'environnement

**COMMUNICATION DU SECRÉTARIAT DE LA CONVENTION DE VIENNE
POUR LA PROTECTION DE LA COUCHE D'OZONE
ET DU PROTOCOLE DE MONTRÉAL, PNUE**

Le Secrétariat de la Convention de Vienne et du Protocole de Montréal, PNUE, a fait parvenir au Secrétariat la note d'information ci-jointe¹, qui est distribuée aux membres du Comité du commerce et de l'environnement en vue de la réunion que le Comité tiendra les 29 et 30 juin 1999.

Comité de Comercio y Medio Ambiente

**COMUNICACIÓN DE LA SECRETARÍA DEL
CONVENIO DE VIENA Y EL PROTOCOLO
DE MONTRAEAL, PNUMA**

Se ha recibido de la secretaría del Convenio de Viena y el Protocolo de Montreal (PNUMA) el siguiente documento de información¹, que se distribuye a los miembros del Comité de Comercio y Medio Ambiente para preparar la reunión sobre comercio y medio ambiente que el Comité celebrará los días 29 y 30 de junio de 1999.

¹ English only/En anglais seulement/En inglés solamente.

**TRADE RELATED DEVELOPMENTS IN THE MONTREAL PROTOCOL ON
SUBSTANCES THAT DEplete THE OZONE LAYER**

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I. MONTREAL PROTOCOL

1. The Montreal Protocol on Substances that Deplete the Ozone Layer has been arrived at in 1987 as a Protocol under Article 8 of the Vienna Convention for the Protection of the Ozone Layer, 1985. The Protocol seeks to protect the ozone layer by phasing out global emissions of specified ozone depleting substances on the basis of developments in scientific knowledge, taking into account technical and economic considerations and bearing in mind the developmental needs of developing countries. The preamble of the Protocol specifically acknowledges the need for special provisions to meet the needs of developing countries, including provisions for additional financial resources and access to relevant technologies.

2. The Protocol of 1987 was acknowledged only to be the first step as only eight substances were included as controlled substances and the control measures prescribed only sought to freeze or reduce consumption of these substances over a time period. Article 6 of the Protocol provided for assessment of the control measures at least every four years on the basis of available scientific, environmental, technical and economic information. Article 2, paragraph 9 provided for adjusting the ozone depleting potentials and the control measures based on these assessments. The adjustments are binding on all Parties after a decision by a Meeting of the Parties with 2/3 majority vote of the Parties present and voting and representing a majority separately from the developing countries and from other countries and six months after the communication of such adjustments by the Depositary of the Protocol. Article 9 of the Vienna Convention provided for the procedure to amend the Protocol.

A. ADJUSTMENTS AND AMENDMENTS TO THE PROTOCOL

3. Based on the assessments made by panels of experts established by the Parties in 1989, 1991 and 1994, the Parties have adjusted the control measures of substances already included in the list through adjustments. The Parties also included more substances and prescribed control measures for them through amendments in 1990 (London Amendment) and 1992 (Copenhagen Amendment). There were also adjustments and an amendment adopted in 1997 (Montreal Amendment) which advanced the phase-out dates but no new substance was included. The Montreal Amendment has not yet entered into force. While the Montreal Protocol of 1987 controlled only eight substances, the London Amendment added twelve more and the Copenhagen Amendment added 75 more. Totally, 95 chemicals are controlled.

B. KEY PROVISIONS OF THE PROTOCOL

4. As adjusted and amended, the Protocol provides for, *inter alia*:

- A timetable of phased reduction and phase out of the 95 ozone-depleting substances (ODS) by Parties. (Control measures of Articles 2A-2H);
- a grace period of ten years (more in some cases) for Parties, classified as developing and consuming less than the specified per-capita quantities of ODS, to observe the time-table of phase out (Article 5 Parties). All the countries of the Group of 77 (in 1989), China, Albania, South Africa, Georgia and Moldova are classified as developing countries.
- a multilateral fund, contributed by non-Article 5 Parties, to meet the agreed incremental costs of Article 5 Parties for implementing the phase-out. The indicative list of agreed incremental costs is attached. (Article 10).

- mandate to parties to take “every practicable step” to transfer “the best available, environmentally safe substitutes and related technologies” “under fair and most favorable conditions”. (Article 10A).
- control of trade with non-Parties (Article 4);
- reporting of data and information (Articles 7 and 9);
- making a non-compliance procedure (Article 8).

II. MEASURES OF THE PROTOCOL FOR CONTROL OF TRADE WITH NON-PARTIES

5. The trade measures of the Protocol under Article 4 are directed against non-Parties. These measures are as follows:

- (a) Control of trade in ODS with non-Parties
 - (i) Annex A substances:
 - import from non-Parties banned from January 1990 (Article 4, paragraph 1);
 - export banned from January 1993 (Article 4, paragraph 2);
 - (ii) Annex B substances:
 - Import and export banned from August 1993 for non-parties to the London Amendment (Article 4, paragraphs 1 bis and 2 bis).
 - (iii) Annex C - Group II - HBFCs:
 - Import and export banned from June 1995 for non-Parties to the Copenhagen Amendment (Article 4, paragraphs 1 ter and 2 ter).
 - (iv) Annex C Group I (HCFCs), no restrictions as yet since it was felt by the Parties that such restrictions may affect the phase out of CFCs (of much higher Ozone Depletion Potential than CFCs) since HCFCs are used temporarily as substitutes for CFCs).
- (b) Control of Trade in ODS products with non-Parties
 - Import of products (listed in Annex D) containing Annex A substances banned from May 1992 (Article 4 paragraph 3 and Decision 15 of the Third Meeting of the Parties, 1991);
 - fifth Meeting of the Parties decided that it is not feasible to ban or restrict trade in products made with, but not containing, Annex A substances (Article 4, paragraph 4 and Decision 17 of the Fifth Meeting);
 - the Parties also decided that products containing Annex B and Annex C, Group II, substances or products made with, but not containing the Annex C, Group II substances will not be listed. (Article 4, paragraphs 3 bis, 3 ter and 4 ter and Decisions 12 of the Sixth Meeting and 18 of the Eighth Meeting).
- (c) Exports of ODS-technologies:

- Parties to discourage “to the fullest practicable extent,” export of technology for producing of ODS (excepting HCFCs);
- no new subsidies, aid etc., for export to non-Parties of equipment or technology to make ODS (excepting HCFCs);
- exception for equipment or technology to recycle ODS.

6. The Ninth Meeting of the Parties introduced, through the Montreal Amendment, *inter alia*, trade controls for methyl bromide (Annex E) with non Parties. These controls are:

- Within one year of the date of entry of the Montreal Amendment each Party shall ban the import of methyl bromide from any state not party to this Protocol.
- Commencing one year after the date of entry of the Montreal Protocol, each Party shall ban the export of methyl bromide to any state not party to the Protocol.
- Each Party undertakes to the fullest practicable extent to discourage the export to any non-Party of technology for producing or for utilizing methyl bromide.
- Each Party shall refrain from providing any assistance for the export to non-parties of any equipment or technology that would facilitate production of methyl bromide.

The Montreal Amendment has not yet entered into force.

A. MEASURES FOR CONTROL OF TRADE WITH PARTIES

7. The control measures of the Protocol which mandate phased reduction of the consumption of ODS can be implemented only by Parties curbing imports from other Parties. The parties adopted a wide variety of restrictions on trade through policies and regulations. These include:

- Agreements with industry to phase down imports;
- product labeling;
- licensing for ODS trade;
- duty reductions for ODS-substitutes and non-ODS technologies;
- excise taxes on ODS;
- quantitative restrictions, and bans on imports of ODS;
- total or partial bans on import of ODS products or technologies.

8. During the last few years, the developing country Parties wanted voluntary restraint by the exporting Parties from exporting new or used CFC-using equipment such as refrigerators. The developing countries agreed that such exports created a demand for CFCs in their countries making it difficult for them to cut down consumption of CFCs. The Tenth Meeting of the Parties in 1998 decided that a Party will inform the Secretariat of the ODS equipment it does not want imported into its country (along with the declaration that it does not itself make such equipment). The Secretariat will communicate this list to all the Parties. About ten Parties have so far informed the Secretariat on this issue. It is hoped that the exporting Parties will honour the wishes of the importing Parties.

9. The Montreal Amendment has introduced some controls on trade with Parties. Article 4A prescribes that where a Party is unable to phase out its production on the mandated date (i.e. it is in non-compliance) it shall ban the export of used, recycled and reclaimed substances over that for the purpose of destruction. This provision is intended to encourage countries to use their recycled substances within their country and phase out production. It is also intended to prevent illegal export of virgin substances in the guise of used substances. Article 4B of the Montreal Amendment mandates implementation of a system for licensing import and export of the ozone depleting substances, whether virgin or recycled. This provision is intended to control illegal trade and to enable countries to implement the control provisions of the Protocol.

III. NEW SUBSTANCES WITH OZONE DEPLETION POTENTIAL

10. The Protocol prescribes control measures for the 95 chemicals it lists in its annexes. Recently, a concern has been raised about new ozone depleting substances being put in the market as substitutes for CFCs. Two such chemicals, N-Propyl bromide and chlorobromomethane, with some ozone depleting potential are being marketed by a company as substitutes to HCFCs in the Solvents Sector. These substances have an ODP similar to that of CFCs which are permitted now as substitutes for CFCs but which need to be phased out by the year 2030. The Ninth and Tenth Meetings of the Parties considered this issue and are very concerned about the possibility of the marketing of new ODS not controlled by the Montreal Protocol. They have sought advice of their Assessment Panels and of the Legal Drafting Group on this issue. The Eleventh Meeting of the Parties in December 1999 will consider this issue further.

IV. WHO ARE THE “NON-PARTIES”?

11. Under the procedure established by the Vienna Convention, an Amendment is binding on a Party only if it ratifies that Amendment. Hence, the control and trade measures for substances included in a Protocol by an Amendment are applicable to a country only if that country has ratified that Amendment. At the moment 169 Parties have ratified the Vienna Convention, 168 the Montreal Protocol, 129 the London amendment and 89 the Copenhagen Amendment. The Montreal Amendment has not yet entered into force. 13 Parties have so far ratified it. It needs a total of 20 ratifications to enter into force. It has been provided in each Amendment that a country can ratify it only if all the previous amendments are ratified. In effect, the Montreal Protocol is actually three separate Protocols i.e. the Montreal Protocol, the Montreal Protocol with the London Amendment and the Montreal Protocol with the Copenhagen Amendment. Soon there will be a fourth agreement i.e. the Montreal Protocol with a Montreal Amendment.

12. Article 4 Paragraph 9 makes it clear that a Party that has not agreed to be bound by the control measures for a substance is considered a non-Party for that substance. Hence, 22 countries (which have not ratified the Montreal Protocol are non-Parties for all the 95 substances controlled by the Protocol, 51 countries for the 87 (Annex B, C, and E) substances and 101 countries for the 75 (Annex C and E) substances.

13. The list of Parties to the Protocol who are non-Parties to the Montreal Protocol, to the London Amendment and to the Copenhagen Amendment is annexed along with the populations.

A. WHY DO THE “NON-PARTIES” NOT RATIFY THE PROTOCOL/AMENDMENTS?

14. There are only 22 countries, which have not yet ratified the Montreal Protocol, and their total population is less than 5% of the world's population. It is surmised that the consumption of these countries of the ozone depleting substances will be insignificant and that their non-ratification is due to instability in their Governments. The non-Parties to the London Amendment are also small consumers of the controlled substances and their non-ratification may be due to long administrative procedures. The number of Parties who have not ratified the Copenhagen Amendment is, however,

much larger. It includes large countries such as China, Bangladesh, Philippines, India etc. The reason for non-ratification is not clear. No Party has ever objected to the substance of the Amendment. Many of these Parties also submit their data regularly for HCFCs and Methyl Bromide, which are controlled by Copenhagen Amendment. Some of these Parties have obtained the assistance of the Multilateral Fund for Methyl Bromide projects after assuring that they will ratify the Amendment soon.

15. It is noteworthy that meetings of all the Parties to the Protocol through consensus approved the Amendments to the Protocol. No Government ever objected to the substance of any Amendment. Indeed, many of the non-Parties periodically announce their intention to ratify it and explain the long procedure in their countries for such ratification as an explanation for the delay.

16. Article 4, paragraph 8 of the Protocol specifies that the trade restrictions do not apply to a non-Party if a Meeting of the Parties determines that the non-Party is in full compliance with the control measures and has provided data to that effect; Colombia, Malta, Jordan, Poland and Turkey were so determined to be in compliance in 1992-93 prior to their ratification of the Protocol/Amendment, so that they could import the ODS for their requirements.

V. NON-COMPLIANCE PROCEDURE OF THE PROTOCOL

17. The Protocol's non-Compliance Procedure has been elaborated by the Fourth Meeting of the Parties in 1992 in accordance with Article 8 of the Montreal Protocol. The Procedure establishes an implementation committee of ten members, elected by the Meetings of the Parties each year, two each from each of the five geographical regions. The committee considers submissions by one Party regarding another Party, by Secretariat or by a Party itself regarding its own implementation. After considering the submissions, the Implementation Committee would recommend appropriate action to the Meeting of the Parties. The measures, which could be taken in a case of non-compliance, include assistance, caution or suspension of specified rights and privileges under the Protocol. That the measures for non-compliance include assistance, on the assumption that a Party's non-compliance is not deliberate but only due to its inability, is a novel provision introduced by the Parties to the Montreal Protocol.

18. So far, only the case of the Russian Federation and other Republics of the former Soviet Union are before the Committee for non-compliance, on the basis of the Secretariat's report. These States are not classified as developing countries (excepting Georgia and Moldova) and hence are expected to phase out production and consumption of Annex A and Annex B substances by 1996. These States have represented to the Meetings of the Parties that they are unable to comply with the phase-out schedule due to the difficulties of their transition to a market economy and have promised to comply by the end of the year 2000, if they are given adequate technical and financial assistance. The Meetings of the Parties considered these representations and, on recommendation by the Implementation Committee have requested the Global Environment Facility to assist these Parties. The GEF has so far given about US\$110 million to these countries to assist their phase out. There have not been any cases of non-compliance with the trade provisions.

VI. WHY CONTROL TRADE WITH NON-PARTIES? WHAT IS THE IMPACT?

19. While including trade measures in the Montreal Protocol, the Parties have always kept in mind the provisions of GATT and consulted the GATT Secretariat, not surprisingly since there are many members who are Parties to both the Treaties. The trade measures with non-Parties were considered essential to prevent CFC providers and producers of equipment containing CFCs moving their capacity to a non-Party territory. Initially at least, the CFCs were cheaper than their alternatives: it was considered that non-Parties would reap economic benefits and at the same time negate the efforts of others to protect the ozone layer. The trade restrictions do not apply, in accordance with Article 4 paragraph 8, if a non-Party is in compliance with the Protocol.

20. It is almost the universal consensus that the ozone depletion is occurring due to use of CFCs and that ozone depletion would lead to adverse consequences for human health and environment in general. The objective of the Montreal Protocol is to eliminate the production and consumption of CFCs. Obviously, trade will increase the consumption negating the objectives of the Protocol. Permitting a Party to trade freely with a non-Party, which does not act in conformity with the control measures would go against the objectives of the Protocol. The trade restrictions with non-Parties acted as a penalty for staying outside the controls of the Montreal Protocol. There is no doubt that many countries who do not produce these substances acceded to the Protocol as, otherwise, they would have lost access to the CFCs needed by them. The preservation of the global resource of the ozone layer is possible only with universal participation since the emission of CFCs from anywhere causes damage to the ozone layer and the trade restrictions promoted the universal participation

A. WHY TRADE RESTRICTIONS BETWEEN PARTIES?

21. The only trade restriction between Parties, a part of the Montreal Amendment, is that a Party which continues to produce CFCs in non-compliance with the Protocol shall ban the export of recycled substances. The logic of this provision is that the country which exports recycled substances could instead use those recycled substances itself and reduce its production. The exemption given to recycled substances from control measures is intended to stop production soon and there is no reason why a country should produce virgin substances in defiance of the control measures if it can use recycled substances. Another factor, which led to this provision, is that some companies may have exported virgin substances in the guise of recycled substances. The provision is to help to curb such illegal trade. Illegal trade arises because there is still some demand for CFCs in the industrialized countries for maintenance of the existing equipment and the developing countries are given a grace period of ten years for their phase-out schedule. The Russian Federation also continues to produce in non-compliance with the Protocol, on the plea of unsettled conditions.

VII. ASSISTANCE TO DEVELOPING COUNTRIES – THE FINANCIAL MECHANISM

22. It is also true to say that almost all the developing countries willingly joined the Protocol in view of the grace period of ten years for implementing their control measures and in view of the financial mechanism and the Multilateral Fund established under Article 10 of the Montreal Protocol. They understood that by being outside they will lose assistance from this Fund and, at the same time, may be forced to change their technologies to CFC alternatives with their own money since the CFC technologies are becoming obsolete throughout the world. No country can maintain its CFC technology in isolation without loss of trade opportunities due to consumer resistance.

A. THE MULTILATERAL FUND

23. The Multilateral Fund of the Protocol has functioned very effectively since 1991. The Fund has disbursed nearly US\$900 million to 110 developing countries for the purpose of institutional strengthening, training, project preparation, and implementation of investment projects. The Fund has the obligation to meet all the agreed incremental costs of developing countries for implementing the control measures. An indicative list of agreed incremental costs approved by the Fourth Meeting of the Parties is enclosed. As can be seen, the list is fairly comprehensive, compensating the industries adequately for changing to ozone-friendly technologies. The Fund meets the incremental costs of technology transfer, training, the equipment needed and the installation costs for all industries producing or using ODS. The Fund has so far sanctioned more than two thousand projects to phase out nearly 60% of the developing country consumption.

24. The Fund is administered by the Executive Committee of 14 members - 7 members from developing countries and 7 from others. Allocations to the Fund are approved by Meetings of the Parties once in 3 years based on a study of the requirements of the Fund. The contributions are wholly from Parties who are not developing countries in proportion to their UN scale of contributions.

The allocations so far have been as follows:

Period	Amount (US Dollar Millions)
1991 - 1993	240
1994 - 1996	455
1997 - 1999	465

The allocation for the period 2000 - 2002 will be finalized by the Eleventh Meeting of the Parties to be held in Beijing, China on 29 November - 3 December 1999.

25. The list of pledges to the Fund includes the Russian Federation and countries of the former USSR that have not paid their contributions. All the other countries i.e. industrialized countries are paying their contributions promptly. 90% of the contributions due are being collected.

26. The fund operates through four implementing agencies, UNEP, UNDP, UNIDO and the World Bank. UNEP concentrates on preparation of country programmes, institutional strengthening by establishing ozone focal points in each developing country, training, networking of the ozone focal points and information exchange on expertise and technologies available. The other three agencies prepare investment projects and help the countries to implement them.

27. The functioning of the Multilateral Fund has resulted in establishment of the ozone focal points in every country and in raising awareness among all the sections of countries such as industries who need to change their technologies. It is no exaggeration to say that this effort to eliminate 95 chemicals through out the world is an unprecedented exercise, which is being successfully carried out.

28. More than 80% of the Parties regularly report their data on production and consumption of these substances and the only countries who do not report data are the ones whose country programmes are yet to be prepared. The data from 1986 - 1997 shows that the developed countries have reduced their consumption from one million tonnes in 1986 to about twenty thousand tonnes in 1997. The CFC consumption of developing countries has increased about 11% over these eleven years. It has to be noted that the Protocol provides for increase of production and consumption of developing countries to meet their basic domestic needs without any limit up to 1999. In the developing countries the annual growth rate of population has been 2-3% and the economic growth rate of many of these countries have been about 6-7% annually. The products, which use CFCs like refrigerators, air conditioners etc, have two digit growth rates in most countries. In spite of this, the growth rate of CFC consumption in the developing countries as a whole has been negligible over the past eleven years thanks to the work of the Multilateral Fund and transfer of alternative technologies.

VIII. TECHNOLOGY TRANSFER

29. That nearly 2500 projects are under implementation in developing countries' industries to shift to non-ODS technologies shows that technology transfer has been mostly successful. However, there have been complaints from the Republic of Korea, India and China that the few companies who hold the HFC 134A (an alternative to CFC) technologies stipulate unfavourable conditions such as joint enterprises and market restrictions for the transfer of technologies. Some companies cite lax intellectual property protection in the recipient countries as a reason for reluctance to transfer. The Protocol asks Parties to take "every practicable step" to transfer technologies but does not compel such transfer. The Executive Committee is considering the issue of how to promote technology transfer in general. In the abstract, the problem appears intractable but in practice, commercial considerations win out.

IX. COMPATIBILITY BETWEEN GATT AND THE TRADE PROVISIONS OF THE PROTOCOL

30. The relationship between the provisions of GATT and trade provisions of the Montreal Protocol has been discussed in many publications. The following has raised the possibility of inconsistency:

- The trade measures in Article 4 of the Protocol ban imports from non-Parties to the Protocol who may be GATT Parties: Similar restrictions are not imposed on Parties, thus violating GATT Article I – “The most-favoured-nation principle”;
- the restrictions on imports of products from non-parties violates GATT Article III, “The national treatment principle”.
- Article XI of GATT on “General elimination of quantitative restrictions” is also said to be violated by the provisions of the Montreal Protocol.

31. The answer by many experts to the charge of inconsistency is based on exceptions provided by Article XX of GATT. Article XX (b) provides for measures “necessary to protect human, animal or plant life or health” and Article XX (g) provides for exceptions for measures “relating to conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption”. Many experts consider that the exceptions of Article XX of GATT are applicable to the trade provisions of the Montreal Protocol for the following reasons:

- The ozone layer is an exhaustible natural resource and its depletion adversely affects human, animal and plant life and health.
- the Protocol has been based on international scientific assessment of what is necessary to protect the ozone layer. These assessments are backed by an international consensus.
- free trade in ozone depleting substances increases production and consumption of ozone depleting substances and affects the ozone layer.
- Article 4 exempts non-Parties from trade restrictions if they comply with the control measures.
- the trade measures are but a part of an integrated set of policy instruments used within the Protocol.
- there is no arbitrary and unjustifiable discrimination between countries where same conditions prevail.
- the terms of the Protocol are fully transparent.

X. ARE THE TRADE MEASURES NECESSARY?

32. A question occasionally asked is whether economic instruments could have replaced the trade measures. The answer is in the negative for the following reasons:

- Many countries are inexperienced in efficient use of economic instruments;

- many countries have controlled economies in varying degrees and economic instruments of other countries have little effect on them;
- it would have taken a long time for any economic instrument to bring in non-Party producers and consumers. The unrestricted consumption of ODS of such non-Parties would have made the ozone-depletion worse. The trade measures helped bring in almost all the countries.
- the word 'necessary' will have to be interpreted liberally in environmental situations where the health of the entire planet is at stake.

XI. SOLUTIONS FOR INCOMPATIBILITY?

33. Many solutions have been suggested to make GATT "environment-friendly":

- Amending GATT to include sustainability principles;
- amend GATT to extend the exemptions of Article XX to include trade provisions of the environmental agreements;
- use the waiver clause (Article XXV).

ANNEX I

INDICATIVE LIST OF CATEGORIES OF INCREMENTAL COSTS

(Extracted from Annex VIII of the Report of the 4th Meeting of the Parties)

1. The evaluation of requests for financing incremental costs of a given project shall take into account the following general principles:

- (a) The most cost-effective and efficient option should be chosen, taking into account the national industrial strategy of the recipient party. It should be considered carefully to what extent the infrastructure at present used for production of the controlled substances could be put to alternative uses, thus resulting in decreased capital abandonment, and how to avoid deindustrialization and loss of export revenues;
- (b) consideration of project proposals for funding should involve the careful scrutiny of cost items listed in an effort to ensure that there is no double counting;
- (c) savings or benefits that will be gained at both the strategic and project levels during the transition process should be taken into account on a case-by-case basis, according to criteria decided by the Parties and as elaborated in the guidelines of the Executive Committee;
- (d) the funding of incremental costs is intended as an incentive for early adoption of ozone protecting technologies. In this respect the Executive Committee shall agree which time scales for payment of incremental costs are appropriate in each sector.

2. Incremental costs that once agreed are to be met by the financial mechanism include those listed below. If incremental costs other than those mentioned below are identified and quantified, a decision as to whether they are to be met by the financial mechanism shall be taken by the Executive Committee consistent with any criteria decided by the Parties and elaborated in the guidelines of the Executive Committee. The incremental recurring costs apply only for a transition period to be defined. The following list is indicated:

- (a) Supply of substitutes
 - (i) Cost of conversion of existing production facilities:
 - cost of patents and designs and incremental cost of royalties;
 - capital cost of conversion;
 - cost of retraining of personnel, as well as the cost of research to adapt technology to local circumstances;
 - (ii) Costs arising from premature retirement or enforced idleness, taking into account any guidance of the Executive Committee on appropriate cut-off dates:
 - of productive capacity previously used to produce substances controlled by and/or amended or adjusted Protocol provisions; and

- where such capacity is not replaced by converted or new capacity to produce alternatives;
 - (iii) Cost of establishing new production facilities for substitutes of capacity equivalent to capacity lost when plants are converted or scrapped, including:
 - cost of patents and designs and incremental cost of royalties;
 - capital cost;
 - cost of training, as well as the cost of research to adapt technology to circumstances;
 - (iv) Net operational cost, including the cost of raw materials;
 - (v) Cost of import of substitutes;
- (b) Use in manufacturing as an intermediate good
- (i) Cost of conversion of existing equipment and product manufacturing facilities;
 - (ii) cost of patents and designs and incremental cost of royalties;
 - (iii) capital cost;
 - (iv) cost of retraining;
 - (v) cost of research and development;
 - (vi) operational cost, including the cost of raw materials except where otherwise provided for;
- (c) End-use
- (i) Cost of premature modification or replacement of user equipment;
 - (ii) cost of collection, management, recycling, and, if cost effective, destruction of ozone-depleting substances;
 - (iii) cost of providing technical assistance to reduce consumption and unintended emission of ozone-depleting substances.

ANNEX II

Table I

Countries that have NOT Ratified the London Amendment		
Country Name		Population
1. Benin		5742
2. Bosnia and Herzegovina		3700
3. Brunei Darussalam		314
4. Burundi		7145
5. Central African Republic		3478
6. Chad		6731
7. Dominican Republic		8098
8. El Salvador		6027
9. Ethiopia		58414
10. Fed. States of Micronesia		136
11. Gabon		1397
12. Georgia		5479
13. Guatemala		11241
14. Guyana		854
15. Honduras		5981
16. Kazakhstan		17437
17. Kiribati		84
18. Korea, Dem. People's Rep. of		24772
19. Lao People's Dem. Rep.		5309
20. Lesotho		2219
21. Libyan Arab Jamahiriya		5980
22. Madagascar		16221
23. Mauritania		2453
24. Moldova		4476
25. Nicaragua		4876
26. Nigeria		121773
27. Saint Lucia		148
28. Samoa		180
29. Solomon Islands		417
30. Sudan		30427
31. Suriname		437
32. Swaziland		929
33. Syrian Arab Republic		16220
34. Tonga		100
35. Trinidad and Tobago		1350
36. Tuvalu		10
37. United Arab Emirates		2028
38. Yemen		16065
39. Yugoslavia		10781
Total		409429

Table II

Countries that have NOT Ratified the Copenhagen Amendment		
Country Name	Population	
1. Algeria	29205	
2. Bahrain	608	
3. Bangladesh	125898	
4. Belarus	10107	
5. Bulgaria	8686	
6. China	1266838	
7. Comoros	701	
8. Congo	2815	
9. Cote d'Ivoire	15722	
10. Cyprus	757	
11. Dominica	71	
12. Fiji	808	
13. Gambia	1190	
14. Ghana	18504	
15. Grenada	93	
16. Guinea	7109	
17. India	998056	
18. Lebanon	3194	
19. Maldives	280	
20. Mali	11832	
21. Malta	373	
22. Monaco	33	
23. Myanmar	49516	
24. Namibia	1664	
25. Nepal	23645	
26. Niger	10119	
27. Papua New Guinea	4602	
28. Paraguay	5360	
29. Peru	25153	
30. Philippines	71775	
31. Romania	22683	
32. Russian Federation	146107	
33. Senegal	9001	
34. Singapore	2922	
35. South Africa	44275	
36. Tajikistan	6618	
37. Tanzania, United Republic of	32277	
38. Turkmenistan	4369	
39. Uganda	23281	
40. Ukraine	51140	
41. Zambia	10231	
Total	3047618	

Table III

Countries that have Not Ratified the Montreal Protocol		
	Country Name	Population
1.	Afghanistan	22720
2.	Albania	3509
3.	Andorra	48
4.	Angola	11865
5.	Armenia	3690
6.	Bhutan	1709
7.	Cambodia	10808
8.	Cape Verde	414
9.	Djibouti	602
10.	Eritrea	3850
11.	Guinea-Bissau	1119
12.	Haiti	7482
13.	Holy See	
14.	Iraq	21674
15.	Kyrgyzstan	4982
16.	Oman	2434
17.	Palau	
18.	Rwanda	8595
19.	San Marino	26
20.	Sao Tome & Principe	141
21.	Sierra Leone	4839
22.	Somalia	10099
TOTAL		120606

Table IV

Countries that have Ratified the Montreal Protocol		
Country Name		Population
1. Algeria		29205
2. Antigua & Barbuda		67
3. Argentina		35405
4. Australia		18550
5. Austria		8053
6. Azerbaijan		7726
7. Bahamas		284
8. Bahrain		608
9. Bangladesh		125898
10. Barbados		264
11. Belarus		10107
12. Belgium		10174
13. Belize		227
14. Benin		5742
15. Bolivia		7774
16. Bosnia and Herzegovina		3700
17. Botswana		1577
18. Brazil		167046
19. Brunei Darussalam		314
20. Bulgaria		8686
21. Burkina Faso		10866
22. Burundi		7145
23. Cameroon		13998
24. Canada		30101
25. Central African Republic		3478
26. Chad		6731
27. Chile		14691
28. China		1266838
29. Colombia		36200
30. Comoros		701
31. Congo		2815
32. Congo, Dem. Republic of		46691
33. Costa Rica		3575
34. Cote d'Ivoire		15722
35. Croatia		4470
36. Cuba		11191
37. Cyprus		757
38. Czech Republic		10311
39. Denmark		5194
40. Dominica		71
41. Dominican Republic		8098
42. Ecuador		11937
43. Egypt		65445
44. El Salvador		6027
45. Estonia		1412
46. Ethiopia		58414
47. Fed. States of Micronesia		136
48. Fiji		808
49. Finland		5149
50. France		58433
51. Gabon		1397
52. Gambia		1190
53. Georgia		5479

Table IV (cont'd)

Countries that have Ratified the Montreal Protocol		
	Country Name	Population
54.	Germany	81845
55.	Ghana	18504
56.	Greece	10512
57.	Grenada	93
58.	Guatemala	11241
59.	Guinea	7109
60.	Guyana	854
61.	Honduras	5981
62.	Hungary	10037
63.	Iceland	274
64.	India	998056
65.	Indonesia	203631
66.	Iran, Islamic Republic of	70136
67.	Ireland	3577
68.	Israel	5854
69.	Italy	57268
70.	Jamaica	2502
71.	Japan	125958
72.	Jordan	6033
73.	Kazakhstan	17437
74.	Kenya	30812
75.	Kiribati	84
76.	Korea, Dem. People's Republic of	24772
77.	Korea, Republic of	46297
78.	Kuwait	2130
79.	Lao People's Democratic Republic	5309
80.	Latvia	2501
81.	Lebanon	3194
82.	Lesotho	2219
83.	Liberia	3347
84.	Libyan Arab Jamahiriya	5980
85.	Liechtenstein	32
86.	Lithuania	3693
87.	Luxembourg	418
88.	Madagascar	16221
89.	Malawi	11765
90.	Malaysia	21450
91.	Maldives	280
92.	Mali	11832
93.	Malta	373
94.	Marshall Islands	59
95.	Mauritania	2453
96.	Mauritius	1154
97.	Mexico	98995
98.	Moldova	4476
99.	Monaco	33
100.	Mongolia	2558
101.	Morocco	28615
102.	Mozambique	17744
103.	Myanmar	49516
104.	Namibia	1664
105.	Nepal	23645
106.	Netherlands	15784
107.	New Zealand	3690

Table IV (con't)

Countries that have Ratified the Montreal Protocol	
Country Name	Population
108. Nicaragua	4876
109. Niger	10119
110. Nigeria	121773
111. Norway	4393
112. Pakistan	152984
113. Panama	2767
114. Papua New Guinea	4602
115. Paraguay	5360
116. Peru	25153
117. Philippines	71775
118. Poland	38605
119. Portugal	9812
120. Qatar	583
121. Romania	22683
122. Russian Federation	146107
123. Saint Kitts & Nevis	41
124. Saint Lucia	148
125. Saint Vincent and the Grenadines	115
126. Samoa	180
127. Saudi Arabia	19787
128. Senegal	9001
129. Seychelles	76
130. Singapore	2922
131. Slovakia	5420
132. Slovenia	1948
133. Solomon Islands	417
134. South Africa	44275
135. Spain	39779
136. Sri Lanka	19277
137. Sudan	30427
138. Suriname	437
139. Swaziland	929
140. Sweden	8901
141. Switzerland	7391
142. Syrian Arab Republic	16220
143. Tajikistan	6618
144. Tanzania, United Republic of	32277
145. Thailand	60681
146. The Former Yugoslav Republic of Macedonia	2216
147. Togo	4537
148. Tonga	100
149. Trinidad and Tobago	1350
150. Tunisia	9378
151. Turkey	65460
152. Turkmenistan	4369
153. Tuvalu	10
154. Uganda	23281
155. Ukraine	51140
156. United Arab Emirates	2028
157. United Kingdom	58743
158. USA	270537
159. Uruguay	3239
160. Uzbekistan	24354
161. Vanuatu	182

Table IV (con't)

Countries that have Ratified the Montreal Protocol	
Country Name	Population
162. Venezuela	23242
163. Viet Nam	79400
164. Yemen	16065
165. Yugoslavia	10781
166. Zambia	10231
167. Zimbabwe	12012
Total	5,838,389