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Multilateral Fund for the Implementation of  
the Montreal Protocol

***POLICIES, PROCEDURES, GUIDELINES AND  
CRITERIA***

(As at November 2017)

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**VII. CONTROLLED SUBSTANCES****NEEDS FOR CONTROLLED SUBSTANCES**

The Fourth Meeting of the Parties took note with appreciation the report on "Meeting the needs of Article 5 Parties for controlled substances during the grace and phase-out periods", prepared by the Executive Committee.

The Parties requested the Executive Committee to update its report and submit it to the Seventh Meeting of the Parties to the Montreal Protocol in 1995, through the Secretariat, before 31 December 1994. They urged other Parties to take note of the Executive Committee's report and to take the necessary steps, consistent with the provisions of the Protocol, to promote an adequate supply of controlled substances in order to meet the needs of the Parties operating under paragraph 1 of Article 5 of the Protocol.

*(UNEP/OzL.Pro/4/15 Decision IV/29).*

*(Supporting document: UNEP/OzL.Pro/ExCom/8/25, and Add.1).*

The Fifteenth Meeting of the Executive Committee adopted the revised document on "Meeting the needs of Article 5 Parties for controlled substances during the grace and phase-out periods", and authorized the Secretariat to transmit it through the Ozone Secretariat to the Seventh Meeting of the Parties to the Montreal Protocol.

*(UNEP/OzL.Pro/ExCom/15/47, para. 163).*

The Fifth Meeting of the Parties requested Parties operating under paragraph 1 of Article 5 of the Protocol which require controlled substances from another Party to furnish, with effect from 1 January 1995, to the Government of the supplying Party a letter specifying the volume of the substances required and stating that the substances are required for the purposes of meeting their basic domestic needs; and also requested Parties supplying the controlled substances to provide annually to the Ozone Secretariat a summary of the requests received from Parties operating under paragraph 1 of Article 5 of the Protocol and to indicate therein whether such Parties receiving the substances have affirmed that the supply is to meet their basic domestic needs.

*(UNEP/OzL.Pro/5/12 Decision V/25).*

**Supply of controlled substances**

The Sixth Meeting of the Parties decided that a Party may opt to use either decision V/25 or the following decision in order to facilitate implementation of the Protocol's provision concerning the supply of controlled substances to meet the basic domestic needs of Parties operating under Article 5, paragraph 1, of the Montreal Protocol:

- (a) to request each Party operating under paragraph 1 of Article 5 of the Protocol, that requires controlled substances referred to in Articles 2A and 2E from another Party to furnish, with effect from 1 January 1995, to the Government of the supplying Party within 60 days of such imports a letter specifying the quantity of the substances imported and stating that the substances are to be used for the purposes of meeting its basic domestic needs. The Parties concerned will work out an internal mechanism so that enterprises in importing and exporting countries can trade directly in controlled substances.
- (b) to request each Party supplying the controlled substances to provide annually to the Secretariat a summary of the letters received from Parties operating under paragraph 1 of Article 5 of the Protocol and to indicate therein whether each such Party receiving the substances had affirmed that such imports are to meet its basic domestic needs. It is expected that such supplies will be consistent with the provisions of the Protocol.

*(UNEP/OzL.Pro/6/7 Decision VI/14A).*

The Seventh Meeting of the Parties decided that until the first control measure for each controlled substance in Annex A and B becomes effective for them (e.g., for chlorofluorocarbons, until 1 July 1999), Parties operating under Article 5 may supply such substance to meet the basic domestic needs of Parties operating under Article 5.

The Parties also decided that after the first control measure for each controlled substance in Annex A and B becomes effective for them (e.g., for chlorofluorocarbons, after 1 July 1999), Parties operating under Article 5 may supply such substance to meet the basic domestic needs of Parties operating under Article 5, within the production limits required by the Protocol.

*(UNEP/OzL.Pro.7/12 Decision VII/9 (paras. 1, 2)).*

**Transshipment of controlled substances**

The Ninth Meeting of the Parties decided to remind all Parties that the Parties decided in their decision IV/14, adopted at the Fourth Meeting of the Parties, to clarify as follows, for purposes of Article 7, the distinction to be made between cases of transshipment of controlled substances through a third country and cases of imports and subsequent re-exports:

- (a) for cases of transshipment of controlled substances through a third country, it was clarified that the country of origin of the controlled substances shall be regarded as the exporter and the country of final destination shall be regarded as the importer. In such cases, the responsibility for reporting data shall lie with the country of origin as the exporter and the country of final destination as the importer; and
- (b) for cases of import and re-export, it was clarified that import and re-export should be treated as two separate transactions; the country of origin would report shipment to the country of intermediate destination, which would subsequently report the import from the country of origin and export to the country of final destination, while the country of final destination would report the import.

*(UNEP/OzL.Pro.9/12, Decision IX/34).*

**Production for basic domestic needs**

The Fifteenth Meeting of the Parties decided to request the Technology and Economic Assessment Panel:

- (a) to assess the quantities of controlled substances in Annex A, group I and Annex B, group II to the Montreal Protocol that are likely to be required by Parties operating under Article 5 of the Protocol for the period 2004-2010;
- (b) to assess the permitted levels of production from companies in Parties operating under Article 5 to the Protocol, taking into account schedules agreed for reduction in production under the Multilateral Fund;
- (c) to assess the quantities of controlled substances in Annex A, group I and Annex B, group II to the Protocol which can be produced and exported by Parties not operating under Article 5 in order to meet the basic domestic needs of Parties operating under Article 5 during the period 2004-2010, taking into account regional production phase-out regulations and agreements;
- (d) to also take into account, when preparing the assessments, the actual and potential impact of training programmes for refrigeration technicians, retrofitting, recovery and recycling operations and other measures in reducing the demand for Annex A, group I and Annex B, group II substances;
- (e) to report on bulk price ranges of Annex A, group I and Annex B, group II substances in a representative sample of Article 5 Parties, including relative changes in bulk prices from 1 January 2001 to 31 December 2003, in comparison to bulk prices of alternatives;
- (f) to present its report to the Open-ended Working Group at its twenty fourth session or at the Sixteenth Meeting of the Parties.

*(UNEP/OzL.Pro.15/9, Decision XV/2).*

The Seventeenth Meeting of the Parties decided:

1. to urge all Parties not operating under paragraph 1 of Article 5 that produce chlorofluorocarbons to meet the basic domestic needs of Parties operating under paragraph 1 of Article 5 to ensure that such production is truly required by:
  - (a) requesting a written affirmation from the prospective importing Party that the chlorofluorocarbons are required and that such importation would not result in its non-compliance, prior to exporting any chlorofluorocarbons to meet the basic domestic needs of Parties operating under paragraph 1 of Article 5;
  - (b) including copies of these written affirmations when reporting chlorofluorocarbon production to meet the basic domestic needs of Parties operating under paragraph 1 of Article 5 to the Ozone Secretariat under Article 7 of the Protocol;
2. to request that the Secretariat report at the next Meeting of the Parties and at each regular Meeting of the Parties thereafter, the level of production of chlorofluorocarbons in Parties not operating under paragraph 1 of Article 5 to meet the basic domestic needs of Parties operating under paragraph 1 of Article 5 as compared to their allowed production as set out in Article 2A of the Protocol and when doing so to include copies of the affirmations, together with available data on transfer of production rights;
3. to urge all Parties not operating under paragraph 1 of Article 5 that have an entitlement to produce chlorofluorocarbons for the basic domestic needs of Parties operating under paragraph 1 of Article 5 to ensure an accelerated phase-out of their production, and to report back to the Parties at their Eighteenth Meeting on progress in eliminating production of chlorofluorocarbons for basic domestic needs;
4. to consider at the Eighteenth Meeting of the Parties an adjustment to accelerate the phase out schedule set

out in Article 2A of the Protocol for chlorofluorocarbon production to meet the basic domestic needs of Parties operating under paragraph 1 of Article 5.

*(UNEP/OzL.Pro.17/11, Decision XVII/12).*

**Exports of ODSs and products containing ODSs**

The Eighth Meeting of the Parties decided:

1. to note that the links among exports of ozone-depleting substances and products containing such substances under the Montreal Protocol, illegal trade, and compliance with the Montreal Protocol were discussed at the Seventh Meeting of the Parties to the Montreal Protocol; and also to note that some aspects of this issue were briefly discussed again at the Eighth Meeting of the Parties to the Montreal Protocol in the context of document UNEP/OzL.Pro.8/CRP.1;
2. to note that the debate at the Seventh Meeting of the Parties to the Montreal Protocol and a brief discussion at the Eighth Meeting of the Parties to the Montreal Protocol have demonstrated the importance, complexity and sensitivity of this issue; and also to note that, in addition, the debate and brief discussion revealed important aspects that require further deliberation including, inter alia, the need for controlling exports of ODS from Parties not operating under Article 5 found to be in non-compliance with their obligations under the Protocol to Parties operating under Article 5;
3. to recognize that this issue ultimately has a direct impact on progress towards the elimination of ozone-depleting substances and the protection of the ozone layer;
4. to decide to include this issue on the agenda of the Fifteenth Meeting of the Open-ended Working Group of the Parties to the Montreal Protocol;
5. to encourage interested Parties to submit their views to the Secretariat by March 1997, for compilation and forwarding to Parties prior to the Fifteenth Meeting of the Open-ended Working Group of the Parties to the Montreal Protocol.

*(UNEP/OzL.Pro.8/12, Decision VIII/26).*

The Nineteenth Meeting of the Parties decided to request the Implementation Committee under the Non-compliance Procedure of the Montreal Protocol to review, on the basis of the report prepared by the Secretariat in accordance with paragraph 2 of decision XVII/12, the implementation by the Parties of paragraph 1 of decision XVII/12, and to report its conclusions, including any appropriate recommendations, to the Meeting of the Parties.

*(UNEP/OzL.Pro.19/7, Decision XIX/).*

**Exports of controlled substances from non-Article 5 Parties to meet the basic domestic needs of Article 5 Parties**

The Tenth Meeting of the Parties decided to request the Technology and Economic Assessment Panel:

- (a) to make an assessment of the quantities of controlled substances in Annex A and Annex B to the Protocol likely to be required and produced by Parties operating under Article 5 of the Protocol for the period 1999-2010;
- (b) to make an assessment of the quantities of controlled substances in Annex A and Annex B to the Protocol which need to be produced and exported by Parties not operating under Article 5 in order to meet the basic domestic needs of Parties operating under Article 5 during the period 1999-2010;
- (c) to present its report to the Open-ended Working Group in time for the issue to be considered by the Eleventh Meeting of the Parties.

*(UNEP/OzL.Pro.10/9, Decision X/15).*

**Export of products and equipment whose functioning relies on Annex A and Annex B substances**

The Ninth Meeting of the Parties decided:

1. to recommend that each Party adopt legislative and administrative measures, including labeling of products and equipment, to regulate the export and import, as appropriate, of products, equipment, components and technology whose continuing functioning relies on supply of substances listed in Annexes A and B of the Montreal Protocol, in order to avert any adverse impact associated with the export of such products and equipment using technologies that are or will soon be obsolete because of their reliance on Annex A or Annex B substances and which would be inconsistent with the spirit of the Protocol, including decision 1/12 C of the First Meeting of the Parties to the Protocol, held in Helsinki in 1989;
2. to recommend to non-Article 5 Parties to adopt appropriate measures to control, in co-operation with the

importing Article 5 Parties, the export of used products and equipment, other than personal effects, whose continuing functioning relies on supply of substances listed in Annexes A and B of the Montreal Protocol;

3. to recommend to Parties to report to the Tenth Meeting of the Parties on actions taken to implement the present decision.

*(UNEP/OzL.Pro.9/12, Decision IX/9).*

### **Countries that do not manufacture for domestic use and do not wish to import products and equipment**

The Tenth Meeting of the Parties decided:

1. to recall that decision IX/9 recommends:
  - (a) that each Party adopt legislative and administrative measures, including labeling of products and equipment, to regulate the export and import, as appropriate, of products, equipment, components and technology whose continuing functioning relies on supply of substances listed in Annex A and Annex B of the Montreal Protocol, in order to avert any adverse impact associated with the export of such products and equipment using technologies that are or will soon be obsolete because of their reliance on Annex A or Annex B substances and which would be inconsistent with the spirit of the Protocol, including decision I/12 C of the First Meeting of the Parties to the Protocol, held in Helsinki in 1989;
  - (b) that non-Article 5 Parties adopt appropriate measures to control, in co-operation with importing Article 5 Parties, the export of used products and equipment, other than personal effects, whose continuing functioning relies on supply of substances listed in Annex A and Annex B of the Montreal Protocol;
2. to note that in order for such export measures to be effective, both importing and exporting Parties need to take appropriate steps;
3. to note that the products and equipment listed below<sup>1</sup> constitute categories of products and equipment whose continued use relies on the supply of substances listed in Annex A or Annex B;
4. to invite, on a voluntary basis, those Parties that do not manufacture for domestic use products and equipment in a category listed below and that do not permit the importation of such products and equipment from any source, to inform the Secretariat, if they so choose, that they do not consent to the importation of such products and equipment;
5. to request the Secretariat to maintain a list of Parties that do not want to receive products and equipment from one or more categories listed below. This list shall be distributed to all Parties by the Secretariat at the Eleventh Meeting of the Parties and updated on an annual basis thereafter;
6. to acknowledge that the issue of imports and exports of products and equipment whose continued functioning relies on Annex A and Annex B substances should be further considered at the Eleventh Meeting of the Parties with a view to addressing more specifically the concerns of countries in the process of phasing out production of those products and equipment.

*(UNEP/OzL.Pro.10/9, Decision X/9).*

### **Continuing availability of CFCs**

The Ninth Meeting of the Parties decided:

1. to note that despite the phase-out of the production and consumption of CFCs by 1 January 1996 in Parties not operating under paragraph 1 of Article 5, CFCs continue to remain available in fairly significant quantities in a number of such Parties, thereby preventing the timely elimination of the use and emissions of CFCs;
2. to note that information suggests that illegal trade in CFCs is contributing to their continued availability, and therefore to increased and unnecessary damage to the ozone layer;
3. to note that apart from agreed exempted uses, the continued supply of new CFCs is no longer necessary, as

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<sup>1</sup> List of products and equipment containing a controlled substance specified in Annex A or B of the Montreal Protocol: 1) automobile and truck air conditioning units (whether incorporated in vehicles or not); 2) domestic and/or commercial refrigeration and air conditioning/heat pump equipment (when containing controlled substances in Annex A or Annex B as a refrigerant and/or in insulating material of the product) (e.g. refrigerators, freezers, dehumidifiers, water coolers, ice machines, air conditioning and heat pump units); 3) transport refrigeration units; 4) aerosol products, except medical aerosols; 5) portable fire extinguisher; 6) insulation boards, panels and pipe covers; 7) pre-polymers.



technically and economically feasible alternatives are widely available;

4. to request non-Article 5 Parties to consider banning the placing on the market and sale of virgin CFCs, except to meet the basic domestic needs of Parties operating under paragraph 1 of Article 5 and other exempted uses. Parties may also consider extending this ban to include other substances listed in Annex A and B to the Montreal Protocol and recovered, recycled and reclaimed substances, provided that adequate steps are taken to ensure their disposal;
5. to request the Parties concerned to report to the Secretariat in time for the Eleventh Meeting of the Parties on action taken under this decision.

*(UNEP/OzL.Pro.9/12, Decision IX/23).*

#### **Sources of CTC emissions and opportunities for reductions**

1. to request the Technology and Economic Assessment Panel to assess global emissions of carbon tetrachloride being emitted:
  - (a) from feedstock and process agent sources situated in Parties not operating under paragraph 1 of Article 5;
  - (b) from sources situated in Parties operating under paragraph 1 of Article 5 already addressed by existing agreements with the Executive Committee of the Multilateral Fund;
  - (c) from feedstock and process agent uses of carbon tetrachloride applied in Parties operating under paragraph 1 of Article 5 not yet addressed by agreements with the Executive Committee of the Multilateral Fund;
  - (d) from sources situated both in Parties operating under paragraph 1 of Article 5 and in those not so operating that co-produce carbon tetrachloride;
  - (e) from waste and incidental quantities of carbon tetrachloride that are not destroyed in a timely and appropriate manner;
2. to request the Technology and Economic Assessment Panel to assess potential solutions for the reduction of emissions for the categories above;
3. to request the Technology and Economic Assessment Panel to prepare a report for the consideration of the Parties at the Eighteenth Meeting of the Parties in 2006.

*(UNEP/OzL.Pro.16/17, Decision XVI/14).*

The Eighteenth Meeting of the Parties decided:

1. to request the Technology and Economic Assessment Panel to continue its assessment of global emissions of carbon tetrachloride, as set out in decision XVI/14 and other related decisions such as decision XVII/19, paragraph 6, paying particular attention:
  - (a) to obtaining better data for industrial emissions to enable resolution of the significant discrepancy with atmospheric measurements;
  - (b) to further investigating issues related to production of carbon tetrachloride (including its production as a by-product and its subsequent use, storage, recycling or destruction);
  - (c) to estimating emissions from other sources such as landfills;
2. to request that the Technology and Economic Assessment Panel prepare a final a report on the assessment referred to in paragraph 1 in time for the twenty-seventh meeting of the Open-ended Working Group for the consideration of the Nineteenth Meeting of the Parties in 2007.

*(UNEP/OzL.Pro.18/10, Decision XVIII/10).*

#### **ESSENTIAL USES OF CONTROLLED SUBSTANCES**

##### **Criteria and procedure**

The Fourth Meeting of the Parties decided to apply the following criteria and procedure in assessing an essential use for the purposes of control measures in Article 2 of the Protocol:

- (a) that a use of a controlled substance should qualify as "essential" only if:
  - (i) it is necessary for the health, safety or is critical for the functioning of society (encompassing cultural and intellectual aspects); and

- (ii) there are no available technically and economically feasible alternatives or substitutes that are acceptable from the standpoint of environment and health;
- (b) that production and consumption, if any, of a controlled substance for essential uses should be permitted only if:
  - (i) all economically feasible steps have been taken to minimize the essential use and any associated emission of the controlled substance; and
  - (ii) the controlled substance is not available in sufficient quantity and quality from existing stocks of banked or recycled controlled substances, also bearing in mind the developing countries' need for controlled substances;
- (c) that production, if any, for essential use, will be in addition to production to supply the basic domestic needs of the Parties operating under paragraph 1 of Article 5 of the Protocol prior to the phase-out of the controlled substances in those countries.

**Nominations**

The Parties decided to request each of the Parties to nominate, in accordance with the criteria in above paragraph 1 (a), any use it considers "essential", to the Secretariat at least six months for halons and nine months for other substances prior to each Meeting of the Parties that is to decide on this issue.

*(UNEP/OzL.Pro/4/15 Decision IV/25 (paras. 1,2).*

*(UNEP/OzL.Pro/5/12 Decision V/10).*

The Fifth Meeting of the Parties also requested the Parties to submit their nominations for each production and consumption exemption for substances other than halon for 1996 in accordance with decision IV/25, with the presumption that the Meeting of the Parties will be held on 1 September.

*(UNEP/OzL.Pro/5/12 Decision 5/18).*

The Eleventh Meeting of the Parties decided:

1. to note with appreciation the excellent work done by the Technology and Economic Assessment Panel and its Technical Options Committees;
2. that the levels of production and consumption necessary to satisfy essential uses of CFC-11, CFC-12, CFC-113 and CFC-114 for metered-dose inhalers for asthma and chronic obstructive pulmonary diseases, CFC-113 for torpedo maintenance, and halon 2402 for fire protection are authorized as specified in annex VII to the report of the Eleventh Meeting of the Parties, subject to the conditions established by the Meeting of the Parties in paragraph 2 of its Decision VII/28;
3. that the quantities approved in paragraph 2 above and all future approvals are for total CFC volumes with flexibility between CFCs within each group.

*(UNEP/OzL.Pro.11/10, Decision XI/14).*

**Essential-use nominations for 2005 and 2006**

The Sixteenth Meeting of the Parties decided:

2. to urge the Technology and Economic Assessment Panel to specify in the Handbook on Essential Use Nominations that a nominating Party may submit in its nomination data aggregated by region and product group for CFC-containing metered-dose inhalers intended for sale in Parties operating under paragraph 1 of Article 5 when more specific data are not available;
3. that, in the light of the fact that Aerosol Technical Options Committee's recommendations for future essential-use exemptions are based on past stock level information, Parties, when preparing essential use nominations for CFCs, should give due consideration to existing stocks, whether owned or agreed to be acquired from a metered-dose inhaler manufacturer, of banked or recycled controlled substances as described in paragraph 1 (b) of decision IV/25, with the objective of maintaining no more than one year's operational supply.

*(UNEP/OzL.Pro.16/17, Decision XVI/12, paras. 2, 3).*

**Essential-use nominations for 2007 and 2008**

The Eighteenth Meeting of the Parties decided:

1. to authorize the levels of production and consumption for 2007 and 2008 necessary to satisfy essential uses of chlorofluorocarbons for the production of metered-dose inhalers for asthma and chronic obstructive

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pulmonary disease specified below;

- that Parties not operating under paragraph 1 of Article 5 of the Montreal Protocol, when licensing, authorizing, or allocating essential-use exemptions for chlorofluorocarbons for a manufacturer of metered-dose inhalers for asthma and chronic obstructive pulmonary diseases, shall take into account pre- and post-1996 stocks of controlled substances as described in paragraph 1 (b) of decision IV/25, such that no more than a one-year operational supply is maintained by the manufacturer;
- that Parties not operating under Article 5 will request companies applying for metered dose inhaler essential use exemptions to demonstrate that they are making efforts, with all due diligence, on research and development with respect to chlorofluorocarbon-free alternatives to their products and are diligently seeking approval of their chlorofluorocarbon-free alternatives in their domestic and export markets aimed at transitioning those markets away from the chlorofluorocarbon products.

Party	2007		2008	
	Amount nominated	Amount approved	Amount nominated	Amount approved
European Community	535	535		
United States of America			385	385

*(UNEP/OzL.Pro.18/10, Decision XVIII/7).*

### Essential-use nominations for 2008 and 2009

The Nineteenth Meeting of the Parties decided:

- to authorize the levels of production and consumption for 2008 and 2009 necessary to satisfy essential uses of CFCs for metered-dose inhalers for asthma and chronic obstructive pulmonary disease specified in the annexes to the present decision;
- that Parties not operating under paragraph 1 of Article 5 of the Montreal Protocol, when licensing, authorizing or allocating essential-use exemptions for a manufacturer of metered-dose inhalers, shall ensure, in accordance with paragraph 1 (b) of decision IV/25, that pre- and post-1996 stocks of controlled substances are taken into account such that no more than a one year operational supply is maintained by the manufacturer;
- that Parties not operating under paragraph 1 of Article 5 of the Montreal Protocol will request each company, consistent with paragraph 1 of decision VIII/10, to notify the relevant authority, for each metered-dose inhaler product for which the production of CFCs is requested, of:
  - the company's commitment to the reformulation of the concerned products;
  - the timetable in which each reformulation process may be completed;
  - evidence that the company is diligently seeking approval of any chlorofluorocarbon-free alternative(s) in its domestic and export markets and transitioning those markets away from its chlorofluorocarbon products;
- the Parties listed in Annex A to the present decision shall not nominate for the production of essential use volumes of CFCs for the manufacture of metered-dose inhalers in 2010 or any year thereafter.

Annex A: Essential-use authorizations for 2008 of CFCs for metered dose inhalers approved by the Nineteenth Meeting of the Parties (in metric tonnes)

Party	2008 approved amount
European Community	200
Russian Federation	212

Annex B: Essential-use authorizations for 2009 of CFCs for metered-dose inhalers approved by the Nineteenth Meeting of the Parties (in metric tonnes)

Party	2009 approved amount
United States of America	282

*(UNEP/OzL.Pro.19/7, Decision XIX/13).*

The Nineteenth Meeting of the Parties also decided:

- to authorize the levels of production and consumption of CFC-113 in the Russian Federation for essential-use exemptions for chlorofluorocarbons in its aerospace industry in the amount of 140 metric tonnes in 2008;

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2. to authorize the volume of 130 metric tonnes of CFC-113 nominated for 2009 by the Russian Federation provided that no alternatives are identified by the Technology and Economic Assessment Panel that can be implemented by 2009;
3. to request the Russian Federation to explore further the possibility of importing CFC 113 for its aerospace industry needs from available global stocks in accordance with the recommendations of the Technology and Economic Assessment Panel and its Chemicals Technical Options Committee.  
(UNEP/OzL.Pro.19/7, Decision XIX/14).

### Essential-use nominations for 2009 and 2010

The Twentieth Meeting of the Parties decided:

1. to authorize the levels of production and consumption for 2009 and 2010 necessary to satisfy essential uses of chlorofluorocarbons for metered-dose inhalers for asthma and chronic obstructive pulmonary disease as specified in the annex to the present decision;
2. that Parties not operating under paragraph 1 of Article 5 of the Montreal Protocol, when licensing, authorizing or allocating essential-use exemptions for a manufacturer of metered dose inhalers, shall ensure, in accordance with paragraph 1 (b) of decision IV/25, that pre 1996 and post 1996 stocks of controlled substances are taken into account such that no more than a one-year operational supply is maintained by the manufacturer;

Annex to decision XX/2

Essential-use authorizations for 2009 and 2010 of chlorofluorocarbons for metered-dose inhalers approved by the Twentieth Meeting of the Parties

Party	Quantity (metric tonnes)	
	2009	2010
European Community	22	0
United States of America	-	92
Russian Federation	248	0

(UNEP/OzL.Pro.20/9, Decision XX/2).

The Twentieth Meeting of the Parties decided:

1. to make the following modifications to the decisions noted below:
  - (a) to remove reference to the term “not operating under Article 5” or, “for non Article 5 Parties” from the following titles and provisions of the following past decisions of the Parties:
    - (i) Title of decisions VIII/9, VIII/10, VIII/11, XI/14, XVII/5, XVIII/7, XIX/13;
    - (ii) Decision VIII/10, first line of paragraphs 1–9;
    - (iii) Decision XV/5, paragraphs 2, 3, 5(a) and 6;
    - (iv) Decision XVIII/7, paragraphs 2 and 3;
    - (v) Decision XVIII/16, first line of paragraph 7;
  - (b) to remove reference to the term “not operating under Article 5 of the Montreal Protocol” from the following titles and provisions of the following past decisions of the Parties:
    - (i) Decision XVII/5, paragraph 2;
    - (ii) Decision XIX/13, paragraphs 2 and 3;
  - (c) to remove and replace reference to the date “1996” with the term “phase-out” in the following provisions of past decisions of the Parties:
    - (i) Decision XVII/5, paragraph 2;
    - (ii) Decision XVIII/7, paragraph 2;
    - (iii) Decision XIX/13, paragraph 2;
  - (d) to add a new paragraph after paragraph 3 of decision XVII/5 to read as follows:
    - 3 bis with reference to paragraph 6 of decision XV/5, to request that Parties operating under paragraph 1 of Article 5 of the Montreal Protocol submit a date to the Ozone Secretariat prior to the Twenty-Second Meeting of the Parties, by which time a regulation or regulations to determine the non essentiality of the

vast majority of chlorofluorocarbons for metered-dose inhalers where the active ingredient is not solely salbutamol will have been proposed;

2. that both the Parties submitting nominations for essential-use exemptions and the Technology and Economic Assessment Panel reviewing nominations for essential-use exemptions shall consider the decisions noted above in their amended form when considering essential-use nominations in 2009 and beyond, subject to any further future decisions of the Parties.

*(UNEP/OzL.Pro.20/9, Decision XX/3)*

The Twenty-first Meeting of the Parties decided:

1. To authorize the levels of production and consumption for 2010 necessary to satisfy essential uses of chlorofluorocarbons for metered-dose inhalers for asthma and chronic obstructive pulmonary disease as specified in the annex to the present decision;
2. To request nominating Parties to supply to the Medical Technical Options Committee information to enable assessment of essential use nominations in accordance with the criteria set out in decision IV/25 and subsequent relevant decisions as set out in the Handbook on Essential Use Nominations;
3. To encourage Parties with essential use exemptions in 2010 to consider sourcing required pharmaceutical-grade chlorofluorocarbons initially from stockpiles where they are available and accessible;
4. To encourage Parties with stockpiles of pharmaceutical-grade chlorofluorocarbons potentially available for export to Parties with essential use exemptions in 2010 to notify the Ozone Secretariat of such quantities and a contact point by 31 December 2009;
5. To request the Secretariat to post on its website details of the potentially available stocks referred to in the preceding paragraph;
6. To request the Executive Committee to consider at its next meeting reviewing both of the chlorofluorocarbon production phase-out agreements with China and India with a view to allowing production of pharmaceutical-grade chlorofluorocarbons to meet the authorized levels of production and consumption specified in the annex to the present decision and any authorized amounts in the future years;
7. That the Parties listed in the annex to the present decision shall have full flexibility in sourcing the quantity of pharmaceutical-grade chlorofluorocarbons to the extent required for manufacturing of metered-dose inhalers, as authorized in paragraph 1 above, either from imports or from domestic producers or from existing stockpiles;
8. To request the Technology and Economic Assessment Panel and its Medical Technical Options Committee to organize and undertake a mission of experts to examine the technical, economic and administrative issues affecting the transition from CFC metered dose inhalers to CFC-free alternatives in the Russian Federation, and to report the results of this mission to the meeting of the thirtieth Open-ended Working Group. The Technology and Economic Assessment Panel is requested to examine:
  - a. The status of transition in the enterprises manufacturing CFC MDIs;
  - b. Technical, financial, logistical, administrative or other barriers to transition;
  - c. Possible options to overcome any barriers and facilitate the transition.

**Annex**

Essential-use authorizations for 2010\* of chlorofluorocarbons for metered-dose inhalers

<b>Party</b>	<b>2010</b>
Argentina	178
Bangladesh	156.7
China	972.2
Egypt	227.4
India	343.6
Iran (Islamic Republic of)	105
Pakistan	34.9

Russian Federation	212
Syrian Arab Republic	44.68

\* Note that the USA exemption for 2010 was authorized under Decision XX/2

*(UNEP/OzL.Pro.21/8, Decision XXI/4)*

**Essential-use nominations for 2011**

The Twenty-second Meeting of the Parties decided:

1. To authorize the levels of production and consumption for 2011 necessary to satisfy essential uses of chlorofluorocarbons for metered-dose inhalers for asthma and chronic obstructive pulmonary disease as specified in the annex to the present decision;
2. To request nominating parties to supply to the Medical Technical Options Committee information to enable assessment of essential-use nominations in accordance with the criteria set out in decision IV/25 and subsequent relevant decisions as set out in the handbook on essential-use nominations;
3. To encourage parties with essential-use exemptions in 2011 to consider sourcing required pharmaceutical-grade chlorofluorocarbons initially from stockpiles where they are available and accessible;
4. To encourage parties with stockpiles of pharmaceutical-grade chlorofluorocarbons potentially available for export to parties with essential-use exemptions in 2011 to notify the Ozone Secretariat of such quantities and of a contact point by 31 December 2010;
5. To request the Secretariat to post on its website details of the potentially available stocks referred to in the preceding paragraph;
6. That the parties listed in the annex to the present decision shall have full flexibility in sourcing the quantity of pharmaceutical-grade chlorofluorocarbons to the extent required for manufacturing metered-dose inhalers, as authorized in paragraph 1 above, from imports, from domestic producers or from existing stockpiles;
7. To approve the authorization given to the Dominican Republic by the Secretariat, in consultation with the Technology and Economic Assessment Panel, of the emergency essential use of 1.832 metric tonnes of CFC-113 as a diluter for silicon grease during the manufacture of medical devices, to cover the period 2010–2011;

**Annex to decision XXII/4**

Essential-use authorizations for 2011 of chlorofluorocarbons for metered-dose inhalers (in metric tonnes)

<i>Party</i>	<i>2011</i>
Argentina	107.2
Bangladesh	57.0
China	741.15
Pakistan	39.6
Russian Federation	212.0

*(UNEP/OzL.Pro.22/9, Decision XXII/4)*

**Essential-use nominations for 2013**

The Twenty-fourth Meeting of the Parties decided:

1. To authorize the levels of production and consumption for 2013 necessary to satisfy essential uses of CFCs for metered-dose inhalers for asthma and chronic obstructive pulmonary disease specified in the annex to the present decision;
2. To request nominating parties to supply to the Medical Technical Options Committee information to enable assessment of essential-use nominations in accordance with the criteria set out in decision IV/25 and subsequent relevant decisions as set out in the handbook on essential-use nominations;
3. To encourage parties with essential-use exemptions in 2013 to consider sourcing required pharmaceutical-grade CFCs initially from stockpiles where they are available and accessible, provided that such stockpiles are used subject to the conditions established by the Meeting of the Parties in paragraph 2 of its decision VII/28;

## VII. CONTROLLED SUBSTANCES

*Policies, procedures, guidelines, criteria (As at November 2017).*

4. To encourage parties with stockpiles of pharmaceutical-grade CFCs potentially available for export to parties with essential-use exemptions in 2013 to notify the Ozone Secretariat of such quantities and of a contact point by 31 December 2012;
5. To request the Secretariat to post on its website details of the potentially available stocks referred to in the paragraph 4 of the present decision;
6. That the parties listed in the annex to the present decision shall have full flexibility in sourcing the quantity of pharmaceutical-grade CFCs to the extent required for manufacturing metered dose inhalers, as authorized in paragraph 1 of the present decision, from imports, from domestic producers or from existing stockpiles;
7. To request parties to consider domestic regulations to ban the launch or sale of new CFC-based metered-dose inhaler products, even if such products have been approved;
8. To encourage parties to fast-track their administration processes for the registration of metered-dose inhaler products in order to speed up the transition to chlorofluorocarbon-free alternatives;
9. To request China, if it should nominate again in 2013 the use of CFC to be used in traditional Chinese medicine in remote areas, to provide more information about the absence of alternatives in the region, the phase out efforts undertaken for this use and other relevant information necessary to allow the Medical Technical Options Committee to evaluate the case fully;

### Annex

Essential-use authorizations for 2013 of chlorofluorocarbons for metered-dose inhalers

(Metric tonnes)

<i>Parties</i>	<i>2013</i>
China	388.82
Russian Federation	212

*(UNEP/OzL.Pro.24/10 Decision XXIV/3)*

The Twenty-fourth Meeting of the Parties decided:

1. To permit, for the agreed critical-use categories for 2014 set forth in table A of the annex to the present decision for each party, subject to the conditions set forth in the present decision and in decision Ex.I/4 to the extent that those conditions are applicable, the levels of production and consumption for 2014 set forth in table B of the annex to the present decision, which are necessary to satisfy critical uses, with the understanding that additional levels of production and consumption and categories of use may be approved by the Meeting of the Parties in accordance with decision IX/6;
2. As part of a final transition out of the rice sector, to approve Australia bringing forward up to 1.187 tonnes of methyl bromide from its critical use exemption to 2013 for fumigating packaged rice, with any quantity brought forward to 2013 deducted from its allocation in 2014 and for Australia to ensure that this amount is reported in full transparency to the Ozone Secretariat;
3. That parties shall endeavour to license, permit, authorize or allocate quantities of methyl bromide for critical uses as listed in table A of the annex to the present decision;
4. To recognize the continued contribution of the expertise of the Methyl Bromide Technical Options Committee and to agree that in accordance with section 4.1 of the terms of reference of the Technology and Economic Assessment Panel the Committee should ensure that it develops its recommendations in a consensus process that includes full discussion among all available Committee members and should ensure that members with relevant expertise are involved in developing its recommendations;
5. That each party that has an agreed critical-use exemption shall renew its commitment to ensuring that the criteria in paragraph 1 of decision IX/6, in particular the criterion laid down in paragraph 1 (b) (ii) of decision IX/6, are applied in licensing, permitting or authorizing critical uses of methyl bromide, with each party requested to report on the implementation of the present provision to the Ozone Secretariat by 1 February for the years to which the present decision applies;
6. To request that Canada and Australia take all reasonable steps to explore further the possibility of transitioning to technically and economically feasible alternatives, including soilless culture in the case of

## VII. CONTROLLED SUBSTANCES

*Policies, procedures, guidelines, criteria (As at November 2017).*

strawberry runners and to ensure that the Methyl Bromide Technical Options Committee is fully aware of these efforts;

7. To request that the United States of America takes all reasonable steps to explore further the possibility of transitioning to technically and economically feasible alternatives in the case of strawberry fruits and to ensure that the Methyl Bromide Technical Options Committee is fully aware of these efforts;

8. To request the Technology and Economic Assessment Panel to ensure that its consideration of nominations analyse the impact of national, subnational and local regulations and law on the potential use of methyl bromide alternatives and to include a description of the analysis in the critical use nomination report;

9. To urge parties operating under critical-use exemptions to put in place effective systems to discourage the accumulation of methyl bromide produced under the exemptions;

### Annex

Table A

#### Agreed critical-use categories for 2014

(Metric tonnes)

Australia	Strawberry runners (29.760), rice (1.187)
Canada	Mills (5.044), strawberry runners (Prince Edward Island) (5.261)
United States of America	Commodities (0.740), mills and food processing structures (22.800), cured pork (3.730), strawberry – field (415.067)

Table B

#### Permitted levels of production and consumption for 2014

(Metric tonnes)

Australia	30.947
Canada	10.305
United States of America	442.337 <sup>a</sup>

<sup>a</sup> Minus available stocks.

(UNEP/OzL.Pro.24/10 Decision XXIV/5)

#### Essential-use nominations for 2014

The Twenty-fifth Meeting of the Parties decided:

1. To authorize the levels of production and consumption for 2014 necessary to satisfy essential uses of chlorofluorocarbons for metered-dose inhalers for asthma and chronic obstructive pulmonary disease, as specified in the annex to the present decision;
2. To request nominating parties to provide the Medical Technical Options Committee with information to enable the assessment of essential-use nominations, in accordance with the criteria contained in decision IV/25 and subsequent relevant decisions, as set out in the handbook on essential use nominations;
3. To encourage parties with essential-use exemptions in 2014 to consider initially sourcing required pharmaceutical-grade chlorofluorocarbons from stockpiles where they are available and accessible, provided that such stockpiles are used subject to the conditions established by the Meeting of the Parties in paragraph 2 of its decision VII/28;
4. To encourage parties with stockpiles of pharmaceutical-grade chlorofluorocarbons potentially available for export to parties with essential-use exemptions in 2014 to notify the Ozone Secretariat of those quantities and to provide it with the details of a contact point by 31 December 2013;
5. To request the Secretariat to post on its website details of the potentially available stocks referred to in paragraph 4 of the present decision;



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*Policies, procedures, guidelines, criteria (As at November 2017).*

6. To urge the Russian Federation to expedite its conversion project with a view to phasing out chlorofluorocarbons;
7. That parties listed in the annex to the present decision shall have full flexibility in sourcing the quantity of pharmaceutical-grade chlorofluorocarbons to the extent required for manufacturing metered dose inhalers, as authorized in paragraph 1 of the present decision, from imports, from domestic producers or from existing stockpiles;
8. To request that parties consider domestic regulations to ban the launch or sale of new chlorofluorocarbon-based metered-dose inhaler products, even if such products have been approved;
9. To encourage parties to fast-track their administration processes for the registration of metered-dose inhaler products in order to speed up the transition to chlorofluorocarbon-free alternatives;

### Annex

#### Essential-use authorizations for 2014 of chlorofluorocarbons for metered-dose inhalers

(Metric tonnes)

<i>Party</i>	<i>2014</i>
China	235.05
Russian Federation	212

*(UNEP/OzL.Pro.25/9 Decision XXV/2)*

The Twenty-fifth Meeting of the Parties also decided:

1. To authorize the levels of production and consumption of chlorofluorocarbon 113 in the Russian Federation for essential-use exemptions for chlorofluorocarbons in its aerospace industry in the amount of 85 metric tonnes in 2014;
2. To request the Russian Federation to explore further the possibility of importing chlorofluorocarbon 113 for its aerospace industry needs from available global stocks;
3. To encourage the Russian Federation to continue its efforts to introduce alternative solvents and adopt newly designed equipment, with a view to completing the phase-out of chlorofluorocarbon 113 by 2016.

*(UNEP/OzL.Pro.25/9 Decision XXV/3)*

The Twenty-fifth Meeting of the Parties further decided:

1. To request that Australia submit, by the thirty-sixth meeting of the Open-ended Working Group, the available results of its research programme to the Technology and Economic Assessment Panel for its consideration;
2. To request that Canada submit, by the thirty-sixth meeting of the Open-ended Working Group, the available results of its assessment of the impact of chloropicrin on groundwater to the Technology and Economic Assessment Panel for its consideration;
3. To consider approving a critical-use nomination for the strawberry sector in California, United States of America, in 2014, and to approve sufficient methyl bromide for use in 2016 to enable that sector to complete its intended transition from critical uses for methyl bromide by the end of 2016;
4. To permit, for the agreed critical-use categories for 2015 set forth in table A of the annex to the present decision for each party, subject to the conditions set forth in the present decision and in decision Ex.I/4 to the extent that those conditions are applicable, the levels of production and consumption for 2015 set forth in table B of the annex to the present decision, which are necessary to satisfy critical uses, with the understanding that additional levels of production and consumption and categories of use may be approved by the Meeting of the Parties in accordance with decision IX/6;
5. That parties shall endeavour to license, permit, authorize or allocate quantities of methyl bromide for critical uses as listed in table A of the annex to the present decision;
6. That each party that has an agreed critical-use exemption shall renew its commitment to ensuring that the criteria in paragraph 1 of decision IX/6, in particular the criterion laid down in paragraph 1 (b) (ii) of decision IX/6, are applied in licensing, permitting or authorizing critical uses of methyl bromide, with each party

requested to report on the implementation of the present provision to the Ozone Secretariat by 1 February for the years to which the present decision applies;

7. To request the Technology and Economic Assessment Panel to ensure that its consideration of nominations analyses the impact of national, subnational and local regulations and law on the potential use of methyl bromide alternatives and to include a description of the analysis in the critical-use nomination report.

**Annex**

Table A

**Agreed critical-use categories for 2015**

(Metric tonnes)

Australia	Strawberry runners 29.760
Canada	Strawberry runners (Prince Edward Island) 5.261
United States of America	Strawberry field 373.66, cured pork 3.24

Table B

**Permitted levels of production and consumption for 2015**

(Metric tonnes)

Australia	29.760
Canada	5.261
United States of America	376.90 <sup>a</sup>

<sup>a</sup> Minus available stocks.

*(UNEP/OzL.Pro.25/9 Decision XXV/4)*

**Essential-use nominations for 2015**

The Twenty-sixth Meeting of the Parties decided:

1. To authorize the levels of production and consumption for 2015 necessary to satisfy essential uses of chlorofluorocarbons for metered-dose inhalers for asthma and chronic obstructive pulmonary disease, as specified in the annex to the present decision;
2. To request nominating parties to provide the Medical Technical Options Committee with information to enable the assessment of essential-use nominations, in accordance with the criteria contained in decision IV/25 and subsequent relevant decisions, as set out in the handbook on essential use nominations;
3. To encourage parties with essential-use exemptions in 2015 to consider initially sourcing required pharmaceutical-grade chlorofluorocarbons from stockpiles where they are available and accessible, provided that such stockpiles are used subject to the conditions established by the Meeting of the Parties in paragraph 2 of its decision VII/28;
4. To encourage parties with stockpiles of pharmaceutical-grade chlorofluorocarbons potentially available for export to parties with essential-use exemptions in 2015 to notify the Ozone Secretariat of those quantities and to provide it with the details of a contact point by 31 December 2014;
5. To request the Secretariat to post on its website details of the potentially available stocks referred to in paragraph 4 of the present decision;
6. That the party listed in the annex to the present decision shall have full flexibility in sourcing the quantity of pharmaceutical-grade chlorofluorocarbons to the extent required for manufacturing metered dose inhalers, as authorized in paragraph 1 of the present decision, from imports, from domestic producers or from existing stockpiles;
7. To request that parties consider domestic regulations to ban the launch or sale of new chlorofluorocarbon-based metered-dose inhaler products, even if such products have been approved;
8. To encourage parties to fast-track their administrative processes for the registration of metered-dose inhaler products in order to speed up the transition to chlorofluorocarbon-free alternatives;

**Annex**

## VII. CONTROLLED SUBSTANCES

*Policies, procedures, guidelines, criteria (As at November 2017).*

Essential-use authorizations for 2015 of chlorofluorocarbons for metered dose inhalers

(Metric tonnes)

<i>Party</i>	<i>2015</i>
China	182.61

*(UNEP/OzL.Conv.10/7-UNEP/OzL.Pro.26/10, Decision XXVI/2)*

The Twenty-sixth Meeting of the Parties also decided:

1. To authorize the production and consumption of chlorofluorocarbon 113 in the Russian Federation for essential uses in its aerospace industry in the amount of 75 metric tonnes in 2015;
2. To request the Russian Federation to explore further the possibility of importing chlorofluorocarbon 113 for its aerospace industry needs from available global stocks;
3. To encourage the Russian Federation to continue its efforts to introduce alternative solvents, adopt newly designed equipment and complete the phase-out of chlorofluorocarbon 113 by 2016;

*(UNEP/OzL.Conv.10/7-UNEP/OzL.Pro.26/10, Decision XXVI/3)*

The Twenty-sixth Meeting of the Parties further decided:

1. To encourage that party, which has applied for an exemption, to complete the revision of its relevant national standard and to ensure that a revised national standard is brought into force as soon as possible, with a view to ensuring a smooth transition to a method that does not use ozone depleting substances;
2. To authorize the level of consumption for 2015 necessary to satisfy essential uses of carbon tetrachloride for the testing of oil, grease and total petroleum hydrocarbons in water, as specified in the annex to the present decision;

### **Annex**

Essential-use authorizations for 2015 for carbon tetrachloride for testing of oil, grease and total petroleum hydrocarbons in water

(Metric tonnes)

<i>Party</i>	<i>2015</i>
China	80

*(UNEP/OzL.Conv.10/7-UNEP/OzL.Pro.26/10, Decision XXVI/4)*

The Twenty-sixth Meeting of the Parties decided:

1. To permit, for the agreed critical-use categories for 2015 and 2016 set forth in table A of the annex to the present decision for each party, subject to the conditions set forth in the present decision and in decision Ex.I/4 to the extent that those conditions are applicable, the levels of production and consumption for 2015 and 2016 set forth in table B of the annex to the present decision, which are necessary to satisfy critical uses, with the understanding that additional levels of production and consumption and categories of use may be approved by the Meeting of the Parties in accordance with decision IX/6;
2. That parties shall endeavour to license, permit, authorize or allocate quantities of methyl bromide for critical uses as listed in table A of the annex to the present decision;
3. That each party that has an agreed critical-use exemption shall renew its commitment to ensuring that the criteria in paragraph 1 of decision IX/6, in particular the criterion laid down in paragraph 1 (b) (ii) of decision IX/6, are applied in licensing, permitting or authorizing critical uses of methyl bromide, with each party requested to report on the implementation of the present provision to the Ozone Secretariat by 1 February for the years to which the present decision applies;

### **Annex Table A**

#### **Agreed critical-use categories**

(Metric tonnes)

<b>2016</b>	
Australia	Strawberry runners 29.760
Canada	Strawberry runners (Prince Edward Island) 5.261
United States of America	Strawberry field 231.54, cured pork 3.24
<b>2015</b>	
Argentina	Strawberry fruit 64.3, green pepper/tomato 70
China	Ginger protected 24.0, ginger open field 90.0
Mexico	Strawberry nursery 43.539, raspberry nursery 41.418

Table B

**Permitted levels of production and consumption<sup>a</sup>**

(Metric tonnes)

<b>2016</b>	
Australia	29.760
Canada	5.261
United States of America	234.78
<b>2015</b>	
Argentina	134.3
China	114.0
Mexico	84.957

<sup>a</sup> Minus available stocks.

(UNEP/OzL.Conv.10/7-UNEP/OzL.Pro.26/10, Decision XXVI/6)

**Essential-use nominations for 2016**

The Twenty-seventh Meeting of the Parties decided:

1. To encourage China, which has applied for an exemption, to complete the revision of its relevant national standard and to ensure that a revised national standard is brought into force as soon as possible with a view to ensuring a smooth transition to a method that does not use ozone depleting substances;
2. To authorize the level of consumption for China for 2016 necessary to satisfy essential uses of carbon tetrachloride for the testing of oil, grease and total petroleum hydrocarbons in water, as specified in the annex to the present decision;

**Annex**

Essential-use authorizations for 2016 for carbon tetrachloride for the testing of oil, grease and total petroleum hydrocarbons in water

(Metric tonnes)

<i>Party</i>	<i>2016</i>
China	70

UNEP/OzL.Pro.27/13, Decision XXVII/2)

The Twenty-seventh Meeting of the Parties decided:

1. To permit, for the agreed critical-use categories for 2016 and 2017 set forth in table A of the annex to the present decision for each party, subject to the conditions set forth in the present decision and in decision Ex.I/4 to the extent that those conditions are applicable, the levels of production and consumption for 2016 and 2017 set forth in table B of the annex to the present decision, which are necessary to satisfy critical uses, with the understanding that additional levels of production and consumption and categories of use may be approved by the Meeting of the Parties in accordance with decision IX/6;

## VII. CONTROLLED SUBSTANCES

*Policies, procedures, guidelines, criteria (As at November 2017).*

2. That parties shall endeavour to license, permit, authorize or allocate quantities of methyl bromide for critical uses as listed in table A of the annex to the present decision;
3. That each party that has an agreed critical-use exemption shall renew its commitment to ensuring that the criteria in paragraph 1 of decision IX/6, in particular the criterion laid down in paragraph 1 (b) (ii) of decision IX/6, are applied in licensing, permitting or authorizing critical uses of methyl bromide, with each party requested to report on the implementation of the present provision to the Ozone Secretariat by 1 February for the years to which the present decision applies;

### **Annex Table A** Agreed critical-use categories

(Metric tonnes)

<b>2017</b>	
Australia	Strawberry runners 29.760
<b>2016</b>	
Argentina	Strawberry fruit 71.25 ; tomato 58
China	Ginger, protected 21.0 ; ginger, open field 78.75
Mexico	Strawberry, nursery 43.539 ; raspberry, nursery 41.418
South Africa	Mills 5.462 ; houses 68.6

Table B

### **Permitted levels of production and consumption<sup>a</sup>**

(Metric tonnes)

<b>2017</b>	
Australia	29.760
<b>2016</b>	
Argentina	129.25
China	99.75
Mexico	84.957
South Africa	74.062

<sup>a</sup> Minus available stocks

*UNEP/OzL.Pro.27/13, Decision XXVII/3)*

### **Essential-use nominations for 2017**

The Twenty-eighth Meeting of the Parties decided:

1. To encourage China, which has applied for an essential-use exemption for the use of carbon tetrachloride for the testing of oil, grease and total petroleum hydrocarbons in water, to complete the revision of its relevant national standard and to ensure that a revised national standard is brought into force as soon as possible with a view to ensuring a smooth transition to a method that does not use ozone depleting substances;
2. To request that China, prior to submitting any further requests for essential-use exemptions for the use of ozone depleting substances for the testing of oil, grease and total petroleum hydrocarbons in water, provide information on its evaluation of the use of other international analytical methods for such testing, on the national circumstances that make using them difficult and on progress in the development of its own method and in the revision of the relevant national standard, as well as a timeline for the phase-out of carbon tetrachloride for laboratory and analytical uses, indicating the anticipated steps and dates in that process;
3. To authorize the level of consumption for China for 2017 necessary to satisfy essential uses of carbon tetrachloride for the testing of oil, grease and total petroleum hydrocarbons in water, as specified in the annex to the present decision;

### **Annex**

**Essential-use authorization for 2017 for carbon tetrachloride for the testing of oil, grease and total petroleum hydrocarbons in water**

(Metric tonnes)

<i>Party</i>	<i>2017</i>
China	65

*UNEP/OzL.Pro.28/11, Decision XXVIII/6)*

The Twenty-eighth Meeting of the Parties decided:

1. To permit, for the agreed critical-use categories for 2017 and 2018 set forth in table A of the annex to the present decision for each party, subject to the conditions set forth in the present decision and in decision Ex.I/4, to the extent that those conditions are applicable, the levels of production and consumption for 2017 and 2018 set forth in table B of the annex to the present decision, which are necessary to satisfy critical uses, with the understanding that additional production and consumption and categories of use may be approved by the Meeting of the Parties in accordance with decision IX/6;
2. That parties shall endeavour to license, permit, authorize or allocate quantities of methyl bromide for critical uses as listed in table A of the annex to the present decision;
3. That each party that has an agreed critical-use exemption shall renew its commitment to ensuring that the criteria in paragraph 1 of decision IX/6, in particular the criterion laid down in paragraph 1 (b) (ii) of decision IX/6, are applied in licensing, permitting or authorizing critical uses of methyl bromide, with each party requested to report on the implementation of the present provision to the Ozone Secretariat by 1 February for the years to which the present decision applies;

**Annex to decision XXVIII/7**

Table A

**Agreed critical-use categories**

(Metric tonnes)

<i>2018</i>	
Australia	Strawberry runners 29.730
<i>2017</i>	
Argentina	Strawberry fruit 38.84, tomato 64.10
Canada	Strawberry runners (Prince Edward Island) 5.261
China	Ginger, open field 74.617; ginger, protected 18.36
South Africa	Mills 4.1, structures 55.0

Table B

**Permitted levels of production and consumption<sup>a</sup>**

(Metric tonnes)

<i>2018</i>	
Australia	29.730
<i>2017</i>	
Argentina	102.94
Canada	5.261
China	92.977
South Africa	59.1

<sup>a</sup> Minus available stocks.

*UNEP/OzL.Pro.28/11, Decision XXVIII/7)*

**Essential-use nominations for 2018**

The Twenty-ninth Meeting of the Parties decided:

## VII. CONTROLLED SUBSTANCES

*Policies, procedures, guidelines, criteria (As at November 2017).*

1. To authorize the level of consumption for China for 2018 necessary to satisfy essential uses of carbon tetrachloride for the testing of oil, grease and total petroleum hydrocarbons in water, as specified in the annex to the present decision;
2. To welcome the undertaking from China to cease the use of carbon tetrachloride for the testing of oil, grease and total petroleum hydrocarbons in water from 2019 onwards;

*UNEP/OzL.Pro.29/8, Decision XXVIII/5)*

Annex to decision XXIX/5

### **Essential-use authorization for 2018 for carbon tetrachloride for the testing of oil, grease and total petroleum hydrocarbons in water**

(Metric tonnes)

<i>Party</i>	<i>2018</i>
China	65

*UNEP/OzL.Pro.29/8, Decision XXVIII/5)*

The Twenty-ninth Meeting of the Parties decided:

1. To permit, for the agreed critical-use categories for 2018 and 2019 set forth in table A of the annex to the present decision for each party, subject to the conditions set forth in the present decision and in decision Ex.I/4, to the extent that those conditions are applicable, the levels of production and consumption for 2018 and 2019 set forth in table B of the annex to the present decision, which are necessary to satisfy critical uses, with the understanding that additional production and consumption and categories of use may be approved by the Meeting of the Parties in accordance with decision IX/6;
2. That parties shall endeavour to license, permit, authorize or allocate quantities of methyl bromide for critical uses as listed in table A of the annex to the present decision;
3. That each party that has an agreed critical-use exemption shall renew its commitment to ensuring that the criteria in paragraph 1 of decision IX/6, in particular the criterion laid down in paragraph 1 (b) (ii) of decision IX/6, are applied in licensing, permitting or authorizing critical uses of methyl bromide, with each party requested to report on the implementation of the present provision to the Secretariat by 1 February for the years to which the present decision applies;
4. That parties submitting future requests for critical-use nominations for methyl bromide shall also comply with paragraph 1 (b) (iii) of decision IX/6 and that parties not operating under paragraph 1 of Article 5 shall demonstrate that research programmes are in place to develop and deploy alternatives to and substitutes for methyl bromide.

### **Annex to decision XXIX/6**

Table A

#### **Agreed critical-use categories**

(Metric tonnes)

<b>2019</b>	
Australia	Strawberry runners 28.98
<b>2018</b>	
Argentina	Strawberry fruit 29.0 Tomatoes 47.7
Canada	Strawberry runners (Prince Edward Island) 5.261
China	Ginger, open field 68.88 Ginger, protected 18.36
South Africa	Mills 2.9 Houses 42.75

Table B

**Permitted levels of production and consumption<sup>a</sup>**

(Metric tonnes)

<b>2019</b>	
Australia	28.98
<b>2018</b>	
Argentina	76.7
Canada	5.261
China	87.24
South Africa	45.65

*UNEP/OzL.Pro.29/8, Decision XXVIII/6)***LABORATORY AND ANALYTICAL USES**

The Seventh Meeting of the Parties decided:

- to urge Parties to organize National Consultative Committees to review and identify alternatives to laboratory and analytical uses and to encourage the sharing of information concerning alternatives and their wider use;
- to encourage national standards organizations to identify and review those standards which mandate the use of ozone-depleting substances in order to adopt where possible ODS-free solvents and technologies;
- to urge Parties to develop an international labeling scheme and encourage its voluntary adoption to stimulate awareness of the issue;
- to adopt an illustrative list of laboratory uses as specified in Annex VII.1 (Annex IV of the report of the Sixth Meeting of the Parties) to facilitate reporting as required by decision VI/9 of the Sixth Meeting of the Parties;
- to exclude the following uses from the global essential-use exemption, as they are not exclusive to laboratory and analytical uses and/or alternatives are available:
  - (a) refrigeration and air-conditioning equipment used in laboratories, including refrigerated laboratory equipment such as ultra-centrifuges;
  - (b) cleaning, reworking, repair, or rebuilding of electronic components or assemblies;
  - (c) preservation of publications and archives; and
  - (d) sterilization of materials in a laboratory;
- to request the Technology and Economic Assessment Panel to evaluate the current status of use of controlled substances and alternatives and report progress on the availability of alternatives to the Ninth Meeting of the Parties and later meetings;
- to urge Parties operating under Article 2 to provide funding within their countries and on a bilateral basis for Parties operating under Article 5 to undertake research and development and activities aimed at ODS alternatives for laboratory and analytical uses;
- to agree that controlled substances used for laboratory and analytical purposes shall meet the standards for purity as specified in decision VI/9.

*(UNEP/OzL.Pro.7/12 Decision VII/11 (paras. 2-9)).*

The Ninth Meeting of the Parties decided:

1. that for 1999, for Parties not operating under paragraph 1 of Article 5 of the Protocol, production and consumption necessary to satisfy essential uses of controlled substances in Annexes A and B of the Protocol only for laboratory and analytical uses, as listed in annex IV to the report of the Seventh Meeting of the Parties, are authorized, subject to the conditions applied to exemption for laboratory and analytical uses as contained in annex II to the report of the Sixth Meeting of the Parties;



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*Policies, procedures, guidelines, criteria (As at November 2017).*

2. that data for consumption and production should be reported annually under a global essential-use exemption framework to the Secretariat so that the success of reduction strategies may be monitored;
3. to clarify that essential-use exemptions for laboratory and analytical uses of controlled substances shall continue to exclude the production of products made with or containing such substances.

*(UNEP/OzL.Pro.9/12, Decision IX/17 (paras. 1-4)).*

The Tenth Meeting of the Parties decided:

1. to extend the global laboratory and analytical essential-use exemption until 31 December 2005 under the conditions set out in Annex VII.1 (Annex II of the report of the Sixth Meeting of the Parties);
2. to request the Technology and Economic Assessment Panel to report annually on the development and availability of laboratory and analytical procedures that can be performed without using the controlled substances in Annexes A and B of the Protocol;
3. that the Meeting of the Parties shall each year, on the basis of information reported by the Technology and Economic Assessment Panel in accordance with paragraph 2 above, decide on any uses of controlled substances which should no longer be eligible under the exemption for laboratory and analytical uses and the date from which any such restriction should apply;
4. that the Secretariat should make available to the Parties each year a consolidated list of laboratory and analytical uses that the Parties have agreed should no longer be eligible for production and consumption of controlled ozone-depleting substances under the global exemption;
5. that any decision taken to remove the global exemption should not prevent a Party from nominating a specific use for an exemption under the essential uses procedure set out in decision IV/25.

*(UNEP/OzL.Pro.10/9, Decision X/19).*

The Eleventh Meeting of the Parties decided to eliminate the following uses from the global exemption for laboratory and analytical uses for controlled substances, approved in decision X/19, from the year 2002:

- (a) testing of oil, grease and total petroleum hydrocarbons in water;
- (b) testing of tar in road-paving materials; and
- (c) forensic finger-printing.

*(UNEP/OzL.Pro.11/10, Decision XI/15).*

The Fifteenth Meeting of the Parties decided:

1. to extend the global laboratory and analytical use exemption under the conditions set out in annex II of the report of the Sixth Meeting of the Parties until 31 December 2007;
2. to request the Technology and Economic Assessment Panel to report annually on the development and availability of laboratory and analytical procedures that can be performed without using the controlled substances in Annexes A, B and C (group II and group III substances) of the Protocol;
3. to apply the conditions set out in paragraphs 3, 4 and 5 of decision X/19 to paragraphs 1 and 2 of the present decision.

*(UNEP/OzL.Pro.15/9, Decision XV/8).*

The Sixteenth Meeting of the Parties decided:

1. to include in the global laboratory and analytical use exemption under the conditions set out in Annex II of the report of the Sixth Meeting of the Parties substances in Annex C, groups II and III, of the Protocol,
2. to apply the conditions set out in paragraphs 3, 4 and 5 of decision X/19 to paragraph 1 of the present decision.

*(UNEP/OzL.Pro.16/17, Decision XVI/16).*

The Nineteenth Meeting of the Parties decided:

1. to extend until 31 December 2011 the global laboratory and analytical-use exemption, under the conditions set out in annex II of the report of the Sixth Meeting of the Parties<sup>2</sup> and decisions XV/8, XVI/16, and XVIII/15, for the controlled substances in all annexes and groups of the Montreal Protocol except Annex C,

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<sup>2</sup> UNEP/OzL.Pro.6/7.

group 1;

2. to request the Technology and Economic Assessment Panel and its Chemicals Technical Options Committee to provide, by the Twenty-first Meeting of the Parties, a list of laboratory and analytical uses of ozone-depleting substances, indicating those for which alternatives exist and which are therefore no longer necessary and describing those alternatives;
3. to eliminate the testing of organic matter in coal from the global exemption for laboratory and analytical uses of controlled substances.

*(UNEP/OzL.Pro.19/7, Decision XIX/18).*

The Twenty-first Meeting of the Parties decided:

1. to extend the applicability of the global laboratory and analytical use exemption also to countries operating under Article 5(1) from 1 January 2010 until 31 December 2010 for all ODS except those in Annex B Group III, Annex C Group I and Annex E.
2. to extend the global laboratory and analytical use exemption beyond 31 December 2010 until 31 December 2014:
  - (a) for Parties operating under Article 5(1) for all ODS except those in Annex B Group III, Annex C Group I and Annex E, and
  - (b) for Parties not operating under Article 5(1) for all ODS except those in Annex C Group I
3. to request all Parties to urge their national standards-setting organisations to identify and review those standards which mandate the use of ODS in laboratory and analytical procedures with a view to adopting, where possible, ODS-free laboratory and analytical products and processes;
4. to request the Ozone Secretariat to enter into discussion with the International Organization for Standardization (ISO), ASTM International (ASTM), the European Committee for Standardization (CEN) as well as with other relevant multinational standardisation organisations encouraging them to identify methods based on ODS and to expedite the inclusion of non-ODS alternative methods, techniques and substances in their standard methods;
5. to request the TEAP and its Chemicals Technical Options Committee to complete the report as requested under Decision XIX/18 and to provide for the 30th Open-ended Working Group meeting
  - (a) a list of laboratory and analytical uses of ODS, including those uses where no alternatives exist.
  - (b) to identify the international and national standards that require the use of ODS and to indicate the corresponding alternative standard methods not mandating the use of ODS.
  - (c) to consider the technical and economical availability of those alternatives in Article-5 and non-Article-5 parties as well as to ensure that the alternative methods show similar or better statistical properties (for example accuracy or detection limits).
6. to request TEAP while continuing its work as described in paragraph 5, to evaluate the availability of alternatives for those uses already banned under the global exemption in Parties operating under Article 5(1), considering technical and economical aspects. By the 30th meeting of the Open-ended Working Group TEAP should present its findings and recommendations whether exemptions would be required for parties operating under paragraph 1 of Article 5 for any of the uses already banned.
7. to allow Parties operating under paragraph 1 of Article 5 until 31 December 2010 to deviate from the existing laboratory and analytical use bans in individual cases, where a Party considers that this is justified, and to ask Parties to revisit this issue at the 22nd Meeting of the Parties.
8. to request the Ozone Secretariat to update the list of laboratory and analytical uses that the Parties have agreed should no longer be eligible under the global exemption, as required by Decision X/19 and to write to Parties reporting laboratory and analytical uses of ozone depleting substances encouraging them to transition to non-ozone depleting alternatives, where allowed by their national standards.
9. to request Parties to continue to investigate domestically the possibility of replacing ODS in those laboratory and analytical uses listed in the report by the TEAP and to make this information available to the Ozone Secretariat by 30 April 2010.
10. To encourage UNEP to invite representatives of the Chemicals Technical Options Committee to regional

network meetings to raise awareness of ODS alternatives for laboratory and analytical uses where problems have been specifically identified by members of that network. Where considered necessary other representatives from competent authorities of Parties could be invited to participate in the meeting.

*(UNEP/OzL.Pro.21/8, Decision XXI/16).*

The Twenty-second Meeting of the Parties decided:

1. To allow parties operating under paragraph 1 of Article 5 until 31 December 2011 to deviate from the existing laboratory and analytical use bans in individual cases, where a party considers that this is justified, and to ask parties to revisit the issue at the Twenty-Third Meeting of the Parties;
2. To request parties to continue to investigate domestically the possibility of replacing ozone-depleting substances in those laboratory and analytical uses listed in the reports of the Technology and Economic Assessment Panel prepared in accordance with decisions XVII/10 and XIX/18 and to report progress to the Ozone Secretariat by 30 April 2011;

*(UNEP/OzL.Pro.22/9, Decision XXII/7).*

The Twenty-sixth Meeting of the Parties decided:

1. To extend the global laboratory and analytical-use exemption until 31 December 2021, under the conditions set out in annex II to the report of the Sixth Meeting of the Parties and decisions XV/8, XVI/16 and XVIII/15, for the controlled substances under the Montreal Protocol in all annexes and groups except Annex C, group 1;
2. To request the Technology and Economic Assessment Panel to report no later than 2018 on the development and availability of laboratory and analytical procedures that can be performed without using controlled substances under the Montreal Protocol;
3. To encourage parties to continue to investigate domestically the possibility of replacing ozone-depleting substances in laboratory and analytical uses and to share the resulting information;

*(UNEP/OzL.Conv.10/7-UNEP/OzL.Pro.26/10, Decision XXVI/5)*

#### **Laboratory and analytical critical uses of methyl bromide**

The Seventeenth Meeting of the Parties decided:

1. to authorize, for Parties not operating under paragraph 1 of Article 5 of the Protocol, production and consumption of the controlled substance in Annex E of the Protocol, necessary to satisfy laboratory and analytical critical uses;
2. to agree, subject to paragraph 3 of the present decision, that the relevant illustrative uses listed in annex IV to the report of the Seventh Meeting of the Parties are laboratory and analytical critical uses until 31 December 2006, subject to the conditions applied to exemption for laboratory and analytical uses contained in annex II to the report of the Sixth Meeting of the Parties;
3. that the uses listed in subparagraphs (a) and (c) of paragraph 6 of decision VII/11 and decision XI/15 are excluded from the uses agreed in paragraph 2 of the present decision;
4. to request the Technology and Economic Assessment Panel to consider the uses and criteria referred to in paragraph 2 of the present decision in terms of the relevance of their application to laboratory and analytical critical uses of methyl bromide;
5. to further request the Technology and Economic Assessment Panel to consider other possible laboratory and analytical uses for methyl bromide for which information is available;
6. that the Technology and Economic Assessment Panel report to the Open-ended Working Group at its twenty-sixth meeting on the outcomes of paragraphs 4 and 5 of the present decision;
7. to adopt an illustrative list of analytical and laboratory critical uses for methyl bromide at its Eighteenth Meeting of the Parties;
8. to request the Technology and Economic Assessment Panel to report in 2007 and every other year thereafter on the development and availability of laboratory and analytical procedures that can be performed without using the controlled substance in Annex E of the Protocol;
9. that the Meeting of the Parties shall, on the basis of information reported by the Technology and Economic Assessment Panel in accordance with paragraph 8 of the present decision, decide on any uses which should

no longer be agreed as laboratory and analytical critical uses and the date from which any such restriction should apply;

10. that the Secretariat should establish and maintain for the Parties a current and consolidated list of laboratory and analytical critical uses that the Parties have agreed are no longer laboratory and analytical critical uses;
11. that any decision taken pursuant to paragraph 9 of the present decision should not prevent a Party from nominating a specific use under the critical use procedure set out in decision IX/6.

*(UNEP/OzL.Pro.17/11, Decision XVII/10).*

The Eighteenth Meeting of the Parties decided:

1. to authorize, for Parties not operating under paragraph 1 of Article 5, the production and consumption of the controlled substance in Annex E of the Protocol necessary to satisfy laboratory and analytical critical uses and subject to the conditions established in paragraph 2 of the present decision;
2. Subject to the conditions applied to the exemption for laboratory and analytical uses contained in annex II to the report of the Sixth Meeting of the Parties, to adopt a category of laboratory and analytical critical use to allow methyl bromide to be used:
  - (a) as a reference or standard:
    - (i) to calibrate equipment which uses methyl bromide;
    - (ii) to monitor methyl bromide emission levels;
    - (iii) to determine methyl bromide residue levels in goods, plants and commodities;
  - (b) in laboratory toxicological studies;
  - (c) to compare the efficacy of methyl bromide and its alternatives inside a laboratory;
  - (d) as a laboratory agent which is destroyed in a chemical reaction in the manner of feedstock;
3. That any decision taken pursuant to the present decision does not preclude a Party from nominating a specific use under the critical use procedure described in decision IX/6.

*(UNEP/OzL.Pro.18/10, Decision XVIII/15).*

#### **Use of CTC for laboratory and analytical uses in Article 5 Parties**

The Seventeenth Meeting of the Parties decided:

1. that the Implementation Committee and Meeting of the Parties should defer until 2007 consideration of the compliance status in relation to control measures for carbon tetrachloride of Parties operating under paragraph 1 of Article 5 which provide evidence to the Ozone Secretariat with the data report, submitted in accordance with Article 7, showing that the deviation from the respective consumption target is due to the usage of carbon tetrachloride for analytical and laboratory processes. This deferral should be reviewed at the Nineteenth Meeting of the Parties in order to address the period 2007–2009;
2. to urge Parties operating under paragraph 1 of Article 5 to minimize the consumption of carbon tetrachloride in laboratory and analytical uses by applying the criteria and procedures of global exemption for carbon tetrachloride in laboratory and analytical uses that are currently established for Parties not operating under paragraph 1 of Article 5.

*(UNEP/OzL.Pro.17/11, Decision XVII/13).*

The Nineteenth Meeting of the Parties decided:

1. that the Implementation Committee and the Meeting of the Parties should defer until 2010 consideration of the compliance status in relation to the control measures for carbon tetrachloride of Parties operating under paragraph 1 of Article 5 which provide evidence to the Ozone Secretariat with their data reports, submitted in accordance with Article 7, showing that any deviation from the respective consumption target is due to the use of carbon tetrachloride for analytical and laboratory processes;
2. to urge Parties operating under paragraph 1 of Article 5 to minimize the consumption of carbon tetrachloride in laboratory and analytical uses by applying the global exemption criteria and procedures for laboratory and analytical uses of carbon tetrachloride currently established for Parties not operating under paragraph 1 of Article 5.

*(UNEP/OzL.Pro.19/7, Decision XIX/17).*

**FEEDSTOCK**

The Seventh Meeting of the Parties decided that the amount of controlled substances produced and exported for the purpose of being entirely used as feedstock in the manufacture of other chemicals in importing countries should not be the subject of the calculation of "production" or "consumption" in exporting countries. Importers shall, prior to export, provide exporters with a commitment that the controlled substances imported shall be used for this purpose. In addition, importing countries shall report to the Secretariat on the volumes of controlled substances imported for these purposes.

The Parties also decided that the amount of controlled substances entirely used as feedstock in the manufacture of other chemicals should not be the subject of calculation of "consumption" in importing countries.

*(UNEP/OzL.Pro.7/12 Decision VII/30).*

**Feedstock uses**

The Twenty-fourth Meeting of the Parties decided:

1. To encourage parties to exchange information on known alternatives being applied to replace ozone-depleting substances in feedstock uses;
2. To encourage parties with feedstock uses to exchange information on systems they have in place for qualifying a specific ozone depleting substance use as feedstock use and for identification and/or monitoring of containers placed on the market and intended for feedstock uses, for example reporting or labelling requirements;
3. To confirm that the use of carbon tetrachloride in the production of vinyl chloride monomer by pyrolysis of ethylene dichloride in the processes evaluated by the Panel in its 2012 progress report is considered to be a feedstock use;
4. To request parties with vinyl chloride monomer production facilities in which carbon tetrachloride is used and that have not yet reported the information requested by the parties in decision XXIII/7 to provide such information to the Panel before 28 February 2013 to allow it to clarify whether the use in a particular facility is a feedstock use or process agent use;

*(UNEP/OzL.Pro.24/10 Decision XXIV/6).*

**Trade in previously used ODS**

The Sixth Meeting of the Parties decided with respect to trade in previously used ozone-depleting substances,

- (a) to reaffirm the Parties' intent embodied in decision IV/24;
- (b) to restate that only used controlled substances may be excluded from the calculated level of consumption of countries importing or exporting such substances;
- (c) to note further that, as required by decision IV/24, such exclusions from a Party's calculated level of consumption is made contingent on reporting of such imports and exports to the Secretariat and Parties should make their best efforts to report this information in a timely manner;
- (d) to request all Parties with reclamation facilities to submit to the Secretariat prior to the Seventh Meeting of the Parties and on an annual basis thereafter a list of the reclamation facilities and their capacities available in their countries;
- (e) to request all Parties that export previously used substances to take, where appropriate, steps to ensure that such substances are labeled correctly and are of the nature claimed and to report any related activities through the Secretariat to the Seventh Meeting of the Parties;
- (f) to request such exporting Parties to make best efforts to require their companies to include in documentation accompanying such exports, the name of the source firm of the used controlled substance and whether it was recovered, recycled or reclaimed and any further information available to allow for verification of the nature of the substance.

*(UNEP/OzL.Pro/6/7 Decision VI/19).*

**Oversupply and dumping of ODS**

The Seventh Meeting of the Parties decided that in order to prevent oversupply and dumping of ozone-depleting substances, all Parties importing and exporting ozone-depleting substances should monitor and regulate this trade by means of import and export licenses.

They also decided that in addition to the reporting required under Article 7 of the Protocol, exporting Parties should report to the Ozone Secretariat by 30 September each year on the types, quantities and destinations of

their exports of ozone-depleting substances during the previous year.

*(UNEP/OzL.Pro.7/12 Decision VII/9 (paras. 3, 4).*

**Legislative and administrative measures to regulate export and import**

The Parties recommended that each Party adopt legislative and administrative measures, including labeling of products and equipment, to regulate the export and import, as appropriate, of products and equipment containing substances listed in Annexes A and B of the Montreal Protocol and of technology used in the manufacturing of such products and equipment, in order to avert any adverse impact associated with the export of such products and equipment using technologies that are or will soon be obsolete because of their reliance on Annex A or Annex B substances and which would be inconsistent with the spirit of the Protocol, including decision I/12C of the First Meeting of the Parties to the Protocol, held in Helsinki in 1989. They also recommended that Parties report on action taken to implement the present decision at future Meetings of the Parties.

*(UNEP/OzL.Pro.7/12 Decision VII/32).*

The Tenth Meeting of the Parties decided to request the Technology and Economic Assessment Panel to investigate further and to report to the Parties at their Twelfth Meeting on:

- (a) emissions of carbon tetrachloride from its use as feedstock, including currently available and future possible options individual Parties may consider for the reduction of such emissions;
- (b) emissions of other ozone-depleting substances arising from the use of controlled substances as feedstock;
- (c) the impact of CFC production phase-out on the future use of carbon tetrachloride as feedstock and emissions from such use.

*(UNEP/OzL.Pro.10/9, Decision X/12).*

**STOCKPILED ODS RELATIVE TO COMPLIANCE**

The Eighteenth Meeting of the Parties decided:

1. to note that the Secretariat has reported that Parties which had exceeded the allowed level of production or consumption of a particular ozone-depleting substances in a given year have in some cases explained that their excess production or consumption represented one of the four following scenarios:
  - (a) ozone-depleting substance production in that year which had been stockpiled for domestic destruction or export for destruction in a future year;
  - (b) ozone-depleting substance production in that year which had been stockpiled for domestic feedstock use or export for that use in a future year;
  - (c) ozone-depleting substance production in that year which had been stockpiled for export to meet basic domestic needs of developing countries in a future year;
  - (d) ozone-depleting substances imported in that year which had been stockpiled for domestic feedstock use in a future year;
2. to recall that the Implementation Committee under the Non-compliance Procedure of the Montreal Protocol had concluded that scenario (d) was, in any event, in conformity with the provisions of the Montreal Protocol and decisions of the Meetings of the Parties;
3. to request the Secretariat to maintain a consolidated record of the cases in which the Parties have explained that their situations are the consequence of scenarios (a), (b) or (c), and incorporate that record in the documentation of the Implementation Committee, for information purposes only, as well as in the Secretariat's report on data submitted by the Parties in accordance with Article 7 of the Protocol;
4. to recognize that new scenarios not covered by paragraph 1 will be addressed by the Implementation Committee in accordance with the non-compliance procedure of the Protocol and the established practice thereunder;
5. to agree to revisit this issue at the Twenty-first Meeting of the Parties, in the light of the information gathered in accordance with paragraph 3 of the present decision, with a view to considering the need for further action.

*(UNEP/OzL.Pro.18/10, Decision XVIII/17).*

The Twenty-second Meeting of the Parties decided:

1. To remind all parties to report all production of ozone-depleting substances, whether intended or unintended, to enable the calculation of their production and consumption according to Article 3 of the Protocol;

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2. To request parties, when reporting data under Article 7 of the Protocol, to identify any excess production and consumption that is a consequence of ozone-depleting substance production in the reporting year:
  - (a) For domestic destruction or export for destruction in a future year;
  - (b) For domestic feedstock use or export for that use in a future year;
  - (c) For export to meet basic domestic needs of developing countries in a future year;
3. That in any case mentioned in paragraph 2 no follow-up action from the Implementation Committee is deemed necessary if the party reports that it has the necessary measures in place to prohibit the use of the ozone-depleting substances for any other purpose than those designated in items (a)–(c) of paragraph 2 at the time of production;
4. To request the Secretariat to continue to maintain a consolidated record of the cases covered by paragraph 2, to incorporate that record in the documentation prepared for each meeting of the Implementation Committee, and to include it in the Secretariat's report on data submitted by the parties in accordance with Article 7 of the Protocol;

*(UNEP/OzL.Pro.22/9, Decision XXII/20).*

### **CONTROL OF NEW SUBSTANCES WITH OZONE-DEPLETING POTENTIAL**

The Ninth Meeting of the Parties decided:

1. that any Party may bring to the attention of the Secretariat the existence of new substances which it believes have the potential to deplete the ozone layer and have the likelihood of substantial production, but which are not listed as controlled substances under Article 2 of the Protocol;
2. to request the Secretariat to forward such information forthwith to the Scientific Assessment Panel and the Technology and Economic Assessment Panel;
3. to request the Scientific Assessment Panel to carry out an assessment of the ozone-depleting potential of any such substances of which it is aware either as a result of information provided by Parties, or otherwise, to pass that information to the Technology and Economic Assessment Panel as soon as possible, and to report to the next ordinary Meeting of the Parties;
4. to request the Technology and Economic Assessment Panel to report to each ordinary Meeting of the Parties on any such new substances of which it is aware either as a result of information provided by Parties, or otherwise, and for which the Scientific Assessment Panel has estimated to have a significant ozone-depleting potential. The report shall include an evaluation of the extent of use or potential use of each substance and if necessary the potential alternatives, and shall make recommendations on actions which the Parties should consider taking;
5. to request Parties to discourage the development and promotion of new substances with a significant potential to deplete the ozone layer, technologies to use such substances and use of such substances in various applications.

*(UNEP/OzL.Pro.9/12, Decision IX/24).*

The Tenth Meeting of the Parties decided:

1. that all Parties should take measures actively to discourage the production and marketing of bromochloromethane;
2. to encourage Parties, in the light of reports from the Scientific Assessment Panel and the Technology and Economic Assessment Panel, to take measures actively, as appropriate, to discourage the production and marketing of new ozone-depleting substances;
3. that should new substances be developed and marketed which, following application of decision IX/24, are agreed by the Parties to pose a significant threat to the ozone layer, the Parties will take appropriate steps under the Protocol to ensure their control and phase-out;
4. that Parties should report to the Secretariat, as far as possible by 31 December 1999, and as necessary thereafter, on any new ozone depleting substances notified and evaluated under the terms of decision IX/24 being produced or sold in their territories, including the nature of the substances, the quantities involved, the purposes for which these substances are being marketed or used and, if possible, the names of the producers and distributors;
5. to request the Technology and Economic Assessment Panel and the Science Assessment Panel, taking into

account, as appropriate, assessments carried out under decision IX/24, to collaborate in undertaking further assessments:

- (a) to determine whether substances such as n-propyl bromide, with a very short atmospheric life-time of less than one month, pose a threat to the ozone layer;
- (b) to identify the sources and availability of halon-1202;

and to report back to the Meeting of the Parties as soon as possible, but not later than the Twelfth Meeting of the Parties;

6. to request the legal drafting group which the Open-ended Working Group may establish to consider and report back to the Eleventh Meeting of the Parties through the Open-ended Working Group on the options available under the Montreal Protocol to introduce controls on new ozone depleting substances.

*(UNEP/OzL.Pro.10/9, Decision X/8).*

#### **Assessment of new substances**

The Eleventh Meeting of the Parties decided:

1. to recall that decision X/8 requested Parties that, should new substances be developed and marketed which, following application of decision IX/24, are agreed by the Parties to pose a significant threat to the ozone layer, appropriate steps are taken under the Montreal Protocol to ensure their control and phase-out;
2. to note that many new chemicals are brought into the market by the chemical industry so that criteria for assessing the potential ODP of these chemicals will be useful;
3. to request the Scientific Assessment Panel and the Technology and Economic Assessment Panel:
  - (a) to develop criteria to assess the potential ODP of new chemicals;
  - (b) to develop a guidance paper on mechanisms to facilitate public-private sector co-operation in the evaluation of the potential ODP of new chemicals in a manner that satisfies the criteria to be set by the Panels;
4. to request the Panels to report back to the Thirteenth Meeting of the Parties.

*(UNEP/OzL.Pro.11/10, Decision XI/19).*

#### **Procedure for new substances**

The Eleventh Meeting of the Parties decided to continue to give full consideration to ways to expedite the procedure for adding new substances and their associated control measures to the Protocol and for removing them therefrom.

*(UNEP/OzL.Pro.11/10, Decision XI/20).*

The Thirteenth Meeting of the Parties decided to request the Ozone Secretariat to compile precedents in other Conventions regarding the procedures for adding new substances and to provide a report at the 22nd Meeting of the Open-ended Working Group, in 2002.

*(UNEP/OzL.Pro/13/10, Decision XIII/6).*

#### **Procedures for assessing the ODP of new substances**

The Thirteenth Meeting of the Parties decided:

1. to request the Secretariat to keep the list of new substances submitted by Parties pursuant to decision IX/24 on the UNEP Website up to date and to distribute the current version of the list to all Parties about six weeks in advance of the meeting of the Open-ended Working Group and the Meeting of the Parties;
2. to ask the Secretariat to request a Party that has an enterprise producing a listed new substance to request that enterprise to undertake a preliminary assessment of its ODP following procedures to be developed by the Scientific Assessment Panel and to submit, if available, toxicological data on the listed new substance, and further to request the Party to report the outcome of the request to the Secretariat;
3. to call on Parties to encourage their enterprises to conduct the preliminary assessment of its ODP within one year of the request of the Secretariat and, in cases where the substance is produced in more than one territory, to request the Secretariat to notify the Parties concerned in order to promote the coordination of the assessment;
4. to request the Secretariat to notify the Scientific Assessment Panel of the outcome of the preliminary



assessment of the ODP to enable the Panel to review the assessment for each new substance in its annual report to the Parties and to recommend to the Parties when a more detailed assessment of the ODP of a listed new substance may be warranted.

*(UNEP/OzL.Pro/13/10, Decision XIII/5).*

**Additional information on alternatives to ozone-depleting substances**

The Twenty-fourth Meeting of the Parties decided:

1. To request the Technology and Economic Assessment Panel in consultations with experts from outside the Panel with the relevant expertise if necessary, to update information on alternatives and technologies in various sectors and prepare a draft report for consideration by the Open-ended Working Group at its thirty-third meeting and a final report to be submitted to the Twenty-Fifth Meeting of the Parties that would by end use:

- (a) Describe all available alternatives to ozone-depleting substances that are commercially available, technically proven, environmentally-sound, taking into account their efficacy, health, safety and environmental characteristics, cost-effectiveness, and their use including in high ambient temperatures and high urban density cities;
- (b) Update information provided by previous Panel reports on alternatives under development;
- (c) Identify barriers and restrictions to the adoption and commercial use of certain environmentally-sound alternatives to ozone-depleting substances;
- (d) Estimate, if possible, the approximate amount of alternatives with negative environmental impacts that could be or could have been avoided or eliminated by both non-Article 5 and Article 5 parties in the process of phasing-out ozone-depleting substances;
- (e) Identify the opportunities for the selection of environmentally-sound alternatives to HCFCs in the future;

2. To invite the Panel to take into account any information relevant for the report to be prepared under paragraph 1 of the present decision provided by parties to the Secretariat;

*(UNEP/OzL.Pro/24/10, Decision XXIV/7).*

The Twenty-fifth Meeting of the Parties decided:

1. To request the Technology and Economic Assessment Panel, in consultation with external experts if necessary, to prepare a report for consideration by the Open-ended Working Group at its thirty-fourth meeting and an updated report to be submitted to the Twenty-Sixth Meeting of the Parties that would:

- (a) Provide an update on information on alternatives to ozone-depleting substances in various sectors and subsectors, and differentiating between parties operating under paragraph 1 of Article 5 and parties not so operating, considering regional differences, and assessing whether such alternatives are:
  - (i) Commercially available;
  - (ii) Technically proven;
  - (iii) Environmentally sound;
  - (iv) Energy efficient;
  - (v) Economically viable and cost-effective;
  - (vi) Suitable for regions with high ambient temperatures, in particular considering the refrigeration and air-conditioning sector and their use in high-urban-density cities;
  - (vii) Suitable for safe uses, in particular considering their potential flammability or toxicity, and their suitability for use in densely populated urban areas, and describing potential limitations of their use;
  - (viii) Easily used;
- (b) Estimate current and future demand for alternatives to ozone-depleting substances, taking into account increased demand, in particular in the refrigeration and air-conditioning sectors and in parties operating under paragraph 1 of Article 5;
- (c) Assess, differentiating between parties operating under paragraph 1 of Article 5 and those not so

operating, the economic costs and implications, and environmental benefits of various scenarios of avoiding high-global-warming-potential alternatives to ozone-depleting substances, where such avoidance is possible, considering the list in subparagraph (a) of the present decision;

(d) Request the Scientific Assessment Panel, in liaison with the Intergovernmental Panel on Climate Change, to provide information from the contribution of Working Group 1 to the fifth assessment report on the main climate metrics, considering the updated information provided in paragraph 1 (a) of the present decision;

2. To convene a workshop, back to back with the thirty-fourth meeting of the Open-ended Working Group, to continue discussions on hydrofluorocarbon management, taking into account the information requested in the present decision and previous reports provided in response to decisions XXIII/9 and XXIV/7;
3. To encourage parties to provide to the Secretariat, on a voluntary basis, information on their implementation of paragraph 9 of decision XIX/6, including information on available data, policies and initiatives pertaining to the promotion of a transition from ozone-depleting substances that minimize environmental impact wherever the required technologies are available, and to request the Secretariat to compile any submissions received for consideration by the Open-ended Working Group at its thirty-fourth meeting;
4. To request the Executive Committee of the Multilateral Fund to consider the information provided in the report on additional information on alternatives to ozone-depleting substances prepared by the Technology and Economic Assessment Panel pursuant to decision XXIV/7 and other related reports, with a view to considering whether additional demonstration projects to validate whether low-global warming potential alternatives and technologies, together with additional activities to maximize the climate benefits in the hydrochlorofluorocarbon production sector, would be useful in assisting parties operating under paragraph 1 of Article 5 in further minimizing the environmental impact of the hydrochlorofluorocarbon phase-out;

*(UNEP/OzL.Pro.25/9, Decision XXV/5).*

The Seventy-first Meeting of the Executive Committee decided:

- (a) To request the Secretariat to prepare for the 72nd meeting:
  - (i) An overview of approved HCFC demonstration projects, including countries and regions covered, and technologies selected;
  - (ii) A discussion paper, in consultation with the bilateral and implementing agencies, on options for a number of additional projects to demonstrate climate-friendly and energy-efficient alternative technologies to HCFCs, including not-in-kind technologies, taking into account discussion during the 71st meeting; and

*(UNEP/OzL.Pro/ExCom/71/64, Decision 71/51, para.196(a)).*

The Seventy-second Meeting of the Executive Committee decided:

- (a) To note the overview of approved HCFC demonstration projects and options for additional projects to demonstrate climate-friendly and energy efficient alternative technologies to HCFCs contained in document UNEP/OzL.Pro/ExCom/72/40;
- (b) Pursuant to decision XXV/5 of the Twenty-Fifth Meeting of the Parties, to consider at its 75th and 76th meetings proposals for demonstration projects for low-global-warming potential (GWP) alternatives to HCFCs within the following framework:
  - (i) The following criteria would be applied when selecting projects:
    - a. The project offered a significant increase in current know-how in terms of a low-GWP alternative technology, concept or approach or its application and practice in an Article 5 country, representing a significant technological step forward;
    - b. The technology, concept or approach had to be concretely described, linked to other activities in a country and have the potential to be replicated in the medium future in a significant amount of activities in the same sub-sector;
    - c. For conversion projects, an eligible company willing to undertake conversion of the manufacturing process to the new technology had been identified and had indicated whether it was in a position to cease using HCFCs after the conversion;

- d. The project proposals should prioritize the refrigeration and air conditioning sector, not excluding other sectors;
  - e. They should aim for a relatively short implementation period in order to maximize opportunities for the results to be utilized for activities funded by the Multilateral Fund as part of their stage II HCFC phase-out management plans (HPMPs);
  - f. The project proposals should promote energy efficiency improvements, where relevant, and address other environmental impacts;
- (ii) Total funding for such projects described in sub-paragraph (b) above would not exceed US \$10 million. The project proposals should also contain information on co-financing;
  - (iii) Funding requests for project preparation and project concepts where no project preparation funding was required, including indicative costs of the final demonstration project for projects described in sub-paragraph (b) above, would be considered at the 74th meeting. The funding requirements and project concepts should address the criteria described in sub-paragraph (b) above;
  - (iv) If not extended by decision of the Executive Committee, the demonstration project would be considered financially completed 12 months after the intended completion date, and remaining funds would be returned; reporting obligations for the demonstration project would become part of regular progress reporting under the HPMP, and their fulfilment would be required to allow submission of a tranche;
  - (v) Any reductions in the consumption of HCFCs would be deducted from the starting point for sustained aggregate reductions in eligible consumption;
- (c) To invite bilateral and implementing agencies to provide proposals for feasibility studies, including business cases for district cooling, no later than the 75th meeting. The resulting studies should assess possible projects, their climate impact, economic feasibility and options for financing such undertakings. The studies should enable stakeholders to understand the advantages and challenges as compared to business as usual. The funding for each study would be limited to a maximum of US \$100,000, with a maximum of four studies to be funded. The Executive Committee is not agreeing with this approval to consider further funding beyond the feasibility studies; and
  - (d) To request the Secretariat to prepare a paper analyzing the remaining eligible HCFC consumption in various sectors and subsectors of potential demonstration relevance, for consideration by the Executive Committee at its 74th meeting.

*(UNEP/OzL.Pro/ExCom/72/47, Decision 72/40, para.170).*

*(Supporting document: UNEP/OzL.Pro/ExCom/72/40).*

The Seventy-third Meeting of the Executive Committee decided:

- (d) To request that demonstration projects for low-GWP alternatives and technical assistance for feasibility studies in district cooling, be submitted as per decision 72/40(b), without a requirement for those activities to be included in business plans;

*(UNEP/OzL.Pro/ExCom/73/62, Decision 73/27(d), para.98).*

*(Supporting document: UNEP/OzL.Pro/ExCom/73/18).*

At the Seventy-third Meeting of the Executive Committee a contact group was established to discuss the issues raised in the context of the agenda item on the 2015-2017 Consolidated business plan of the Multilateral Fund. During the group's discussion there had been consensus that the business plan would include a US \$10 million window for the demonstration projects in line with decision 72/40, and that the list of demonstration projects included in the consolidated business plan as submitted by the bilateral and implementing agencies would remain open for additional ideas and proposals, to enable the Executive Committee to make decisions, at the 74th meeting, on which of these project preparation proposals might be funded. Guidance was also provided in order to ensure that the best proposals for demonstration projects were submitted to the Executive Committee for its consideration. The following suggestions were made by Executive Committee members:

- (a) Project proposals should: clearly describe the technology to be demonstrated; provide information on its replicability and its demonstration value and how those elements would contribute to the direction being taken by the Executive Committee in facilitating the introduction of new low-GWP technologies as alternatives in HCFC phase-out plans; and target sectors or regions for which the technology had not been

demonstrated in the past;

- (b) Projects in the refrigeration and air-conditioning sector would be prioritized, particularly air-conditioning manufacturing, where there were emerging technologies that could be demonstrated. Some delegations that commented on the air-conditioning manufacturing sector emphasized demonstration on unitary systems or larger mini-splits, for example using low-GWP hydrofluoroolefin (HFO) blends, as well as the importance of focusing on the challenges of high ambient temperatures. Some Executive Committee members also suggested that the following might be addressed in demonstration projects: adsorption-based systems, the design of centralized cooling systems, or ways to best address the safe use of ammonia, CO<sub>2</sub> or hydrocarbons in refrigeration or air conditioning equipment. If possible, applications with a significant share of HCFC use should be highlighted rather than niche applications;
- (c) Projects that demonstrated already established technologies should clearly describe the value of those projects;
- (d) Demonstration projects for the foam sector should clearly describe and delineate the added value of those projects compared to projects completed in stage I, what was new, and how relevant all this was to the remaining consumption to be phased out in the sector;
- (e) Projects should also consider regional and geographical distribution;
- (f) Some Executive Committee members would prefer not to see projects looking at leak reductions, projects on the supply, quality and handling of refrigerants, and global or regional projects; and
- (g) Some Executive Committee members would prefer not to see demonstration projects in the servicing sector, except for those covering local assembly of equipment.

*(UNEP/OzL.Pro/ExCom/73/62, Decision 73/27(d), paragraph.97).*

The Twenty-sixth Meeting of the Parties decided:

1. To request the Technology and Economic Assessment Panel, if necessary in consultation with external experts, to prepare a report identifying the full range of alternatives, including not-in-kind technologies, and identifying applications where alternatives fulfilling the criteria identified in paragraph 1 (a) of the present decision are not available, and to make that report available for consideration by the Open-ended Working Group at its thirty-sixth meeting and an updated report to be submitted to the Twenty-Seventh Meeting of the Parties that would:
  - (a) Update information on alternatives to ozone-depleting substances in various sectors and subsectors and differentiating between parties operating under paragraph 1 of Article 5 and parties not so operating, considering energy efficiency, regional differences and high ambient temperature conditions in particular, and assessing whether they are:
    - (i) Commercially available;
    - (ii) Technically proven;
    - (iii) Environmentally sound;
    - (iv) Economically viable and cost effective;
    - (v) Safe to use in areas with high urban densities considering flammability and toxicity issues, including, where possible, risk characterization;
    - (vi) Easy to service and maintain;and describe the potential limitations of their use and their implications for the different sectors, in terms of, but not limited to, servicing and maintenance requirements, and international design and safety standards;
  - (b) Provide information on energy efficiency levels in the refrigeration and air conditioning sector referring to high-ambient temperature zones in international standards;
  - (c) Taking into account the uptake of various existing technologies, revise the scenarios for current and future demand elaborated in the October 2014 final report on additional information on alternatives to ozone-depleting substances of the Technology and Economic Assessment Panel's task force on decision XXV/5,

## VII. CONTROLLED SUBSTANCES

*Policies, procedures, guidelines, criteria (As at November 2017).*

and improve information related to costs and benefits with regard to the criteria set out in paragraph 1 (a) of the present decision, including reference to progress identified under stage I and stage II of HCFC phase-out management plans;

2. To convene a two-day workshop, back to back with an additional three-day meeting of the Open-Ended Working Group in 2015, to continue discussions on all issues in relation to hydrofluorocarbon management, including a focus on high-ambient temperature and safety requirements as well as energy efficiency, taking into account the information requested in the present decision and other relevant information;
3. To encourage parties to continue to provide to the Secretariat, on a voluntary basis, information on their implementation of paragraph 9 of decision XIX/6, including information on available data, policies and initiatives pertaining to the promotion of a transition from ozone-depleting substances that minimizes environmental impact wherever the required technologies are available, and to request the Secretariat to compile any such submissions received;
4. To request the Executive Committee of the Multilateral Fund to consider providing additional funding to conduct inventories or surveys on alternatives to ozone-depleting substances in interested parties operating under paragraph 1 of Article 5 upon their request;

*(UNEP/OzL.Conv.10/7-UNEP/OzL.Pro.26/10, Decision XXVI/9)*

At the Seventy-fourth meeting, after hearing the report of the contact group, the Executive Committee decided:

- (a) To note:
  - (i) The request to the Executive Committee from the Meeting of the Parties as contained in decision XXVI/9 (paragraph 4);
  - (ii) Document UNEP/OzL.Pro/ExCom/74/53 on Follow-up to decision XXVI/9 (paragraph 4) of the Twenty-sixth Meeting of the Parties on additional funding to conduct inventories or surveys of ODS alternatives;
- (b) That the objective of the surveys was to give effect to paragraph 4 of decision XXVI/9, which requested the Executive Committee to consider providing additional funding to conduct inventories or surveys of alternatives to ozone-depleting substances (ODS) in interested Article 5 parties upon their request;
- (c) That the scope of the surveys was to obtain information on ODS alternatives in Article 5 countries. Information would include data (where available) and estimates of ODS alternatives currently in use by sector and subsector, and forecasts of ODS alternatives most commonly used;
- (d) To limit the maximum funding provided for the preparation of surveys of ODS alternatives according to the table below, based on the countries' HCFC consumption, with the exception of those Article 5 countries which had conducted similar surveys outside the Multilateral Fund, which would only be eligible for 50 per cent of the funding levels indicated:

<b>HCFC baseline consumption (ODP tonnes)</b>	<b>Funding (US \$)</b>
Below 6	40,000
6 and below 20	70,000
20 and below 150	110,000
150 and below 1,000	130,000
1,000 and above	On a case-by-case basis

- (e) To consider the requests for funding surveys of ODS alternatives submitted by bilateral and implementing agencies, as contained in their work programmes submitted for consideration at the 74th meeting, on the condition that these were supported by letters of endorsement from the respective Article 5 countries;
- (f) To allow the submission of funding requests for national surveys of alternatives to ODS from countries that had not submitted a request to the 74th meeting;
- (g) To request the Secretariat, in consultation intersessionally with bilateral and implementing agencies and interested Executive Committee members, to prepare a format for preparation of the surveys and

presentation of the resulting data for the consideration of the Executive Committee at its 75th meeting, on the understanding that interested countries could initiate the surveys before the format was agreed; and

- (h) To request the Secretariat to provide an overall analysis of the results of the surveys for consideration of the Executive Committee by its first meeting in 2017.

*(UNEP/OzL.Pro/ExCom/74/56, Decision 74/6 para.175).*

*(Supporting document: UNEP/OzL.Pro/ExCom/74/53).*

The Seventy-fifth meeting decided:

- (a) To note:

- (i) The format for the surveys of ODS alternatives contained in document UNEP/OzL.Pro/ExCom/75/77/Rev.1 on the understanding that information contained in Part I (Preparation of the surveys) and Annex I (Use of ODS alternatives per sector) of the document was provided for guidance purposes only;
- (ii) That surveys would be conducted on a voluntary basis, information would be collected where available, and the results would solely be for information purposes;
- (b) That national surveys on ODS alternatives would be undertaken by Article 5 countries that had received funding from the Multilateral Fund to cover the years 2012–2015, with the assistance of the relevant bilateral or implementing agency and using the methodology and approach agreed between the country and the agency; and
- (c) That results of the survey would be presented as per Part II (Presentation of the results of the surveys) and Annex II (Data analysis tables by sectors) of document UNEP/OzL.Pro/ExCom/75/77/Rev.1.

*(UNEP/OzL.Pro/ExCom/75/85, decision 75/67 para.280).*

*(Supporting document: UNEP/OzL.Pro/ExCom/75/77/Rev.1).*

The Seventy-eighth meeting decided:

- (b) To urge bilateral and implementing agencies to work with relevant Article 5 countries to complete and submit, no later than 8 May 2017, as many ODS alternatives survey reports as possible; and
- (c) To request the bilateral and implementing agencies to return to the 81st meeting unspent balances for those surveys of ODS alternatives that had not been submitted to either the 79th or 80th meeting of the Executive Committee.

*((UNEP/OzL.Pro/ExCom/78/11, Decision 78/1)*

*(Supporting document: UNEP/OzL.Pro/ExCom/78/4 & Corr.1).*

The Seventy-ninth meeting decided:

- (a) To note the overall preliminary analysis of the results of the surveys of ODS alternatives (decision 74/53) contained in documents UNEP/OzL.Pro/ExCom/79/45 and Corr.1;
- (b) To urge bilateral and implementing agencies to work with relevant Article 5 countries to complete and submit all outstanding surveys on ODS alternatives no later than 18 September 2017, noting that unspent balances of surveys not submitted to the 80th meeting had to be returned to the 81st meeting in line with decision 78/2(c); and
- (c) To request the Secretariat to submit, to the 80th meeting, an overall analysis of the results of the surveys of ODS alternatives, updated to include all surveys submitted to the Secretariat by 18 September 2017.

*((UNEP/OzL.Pro/ExCom/79/51, Decision 79/43)*

*(Supporting document: UNEP/OzL.Pro/ExCom/79/45 & Corr.1).*

The Eightieth Meeting of the Executive Committee decided:

- (a) To note the overall analysis of the results of the surveys of ODS alternatives (decision 79/43(c)) contained in documents UNEP/OzL.Pro/ExCom/80/54 and Add.1;
- (b) To request bilateral and implementing agencies to use the findings and the lessons from the results of the surveys of ODS alternatives while undertaking enabling activities, with particular attention to strengthening data collection and reporting of HFCs and HFC blends;
- (c) To request bilateral and implementing agencies:

- (i) To return, no later than the 82nd meeting, balances related to the completed surveys of ODS alternatives; and
- (ii) To return, to the 81st meeting, balances related to surveys of ODS alternatives that had not been submitted to the 80th meeting from Algeria, Antigua and Barbuda, Bahamas, Democratic People's Republic of Korea, Fiji, Morocco and Myanmar, in line with decision 79/43.

*(UNEP/OzL.Pro/ExCom/80/59, Decision 80/75, para 240)*

*(Supporting document: UNEP/OzL.Pro/ExCom/80/54 & Add.1).*

### **Environmental assessment of RC-316c**

The Twenty-fourth Meeting of the Parties decided:

1. To invite parties in a position to do so to provide environmental assessments of RC 316c (1,2-dichloro-1,2,3,3,4,4-hexafluorocyclobutane, CAS 356-18-3), a chlorofluorocarbon not controlled by the Montreal Protocol, and any guidance on practices that can reduce intentional releases of the substance;
2. To request the Scientific Assessment Panel to conduct a preliminary assessment of RC 316c and report to the Open-ended Working Group at its thirty-third meeting on the ozone depletion potential and global-warming potential of the substance and other factors that the Panel deems relevant;

*(UNEP/OzL.Pro/24/10, Decision XXIV/10).*

### **DESTRUCTION TECHNOLOGIES**

The Fourth Meeting of the Parties approved, for the purposes of paragraph 5 of Article 1 of the Protocol, the destruction technologies listed in Annex VII.2 which are operated in accordance with the suggested minimum standards (Annex VII to the report of the Fourth Meeting of the Parties) unless similar standards currently exist domestically (this also applies to pilot-scale as well as demonstration-scale destruction technologies).

The Parties also decided to call on each Party that operates, or plans to operate, facilities for the destruction of ozone-depleting substances:

- (a) to ensure that its destruction facilities are operated in accordance with the Code of Good Housekeeping Procedures set out in section 5.5 of the report of the Ad Hoc Technical Advisory Committee on Destruction Technologies, unless similar procedures currently exist domestically; and
- (b) for the purposes of paragraph 5 of Article 1 of the Protocol, to provide each year, in its report under Article 7 of the Protocol, statistical data on the actual quantities of ozone-depleting substances it has destroyed, calculated on the basis of the destruction efficiency of the facility employed.

The Parties decided to facilitate access and transfer of approved destruction technologies in accordance with Article 10 of the Protocol, together with provision for financial support under Article 10 of the Protocol for Parties operating under paragraph 1 of Article 5.

*(UNEP/OzL.Pro/4/15 Decision IV/11 (paras. 3, 7)).*

### **Task force on destruction technologies**

The Twelfth Meeting of the Parties decided:

1. to request the Technology and Economic Assessment Panel to establish a task force on destruction technologies;
2. that the task force on destruction technologies shall:
  - (a) report to the Parties at their Fourteenth Meeting in 2002 on the status of destruction technologies of ozone-depleting substances, including an assessment of their environmental and economic performance, as well as their commercial viability;
  - (b) when presenting its first report, include a recommendation on when additional reports would be appropriate;
  - (c) review existing criteria for the approval of destruction facilities, as provided for in section 2.4 of the Handbook for the International Treaties for the Protection of the Ozone Layer;
3. to request the Technology and Economic Assessment Panel:
  - (a) to evaluate the technical and economic feasibility for the long-term management of contaminated and

surplus ozone-depleting substances in Article 5 and non-Article 5 countries, including options such as long-term storage, transport, collection, reclamation and disposal of such ozone-depleting substances;

(b) to consider possible linkages to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal and other international treaties as appropriate regarding the issue of disposal;

(c) report to the Parties on these issues at their Fourteenth Meeting in 2002.

*(UNEP/OzL.Pro/12/9, Decision XII/8).*

The Fourteenth Meeting of the Parties decided:

1. to note with appreciation the Report of the Task Force on Destruction Technologies presented to the twenty-second meeting of the Open-ended Working Group;
2. to note that the Task Force has determined that the destruction technologies listed in paragraph 3 of this decision meet the suggested minimum emission standards that were approved by the Parties at their Fourth Meeting;
3. to approve the following destruction technologies for the purposes of paragraph 5 of Article 1 of the Protocol, in addition to the technologies listed in annex VI to the report of the Fourth Meeting and modified by decisions V/26 and VII/35:
  - (a) for CFC, HCFC and halons: argon plasma arc;
  - (b) for CFC and HCFC: nitrogen plasma arc, microwave plasma, gas phase catalytic dehalogenation and super-heated steam reactor;
  - (c) for foam containing ODS: rotary kiln incinerator;
4. to request the Technology and Economic Assessment Panel to update, in time for consideration by the twenty-third Open-ended Working Group, the Code of Good Housekeeping to provide guidance on practices and measures that could be used to ensure that during the operation of the approved destruction technologies, environmental release of ODS through all media and environmental impact of those technologies is minimized;
5. to consider, at the twenty-fourth meeting of the Open-ended Working Group, the need to review the status of destruction technologies in 2005, including an assessment of their environmental and economic performance, as well as their commercial viability.

*(UNEP/OzL.Pro.14/9, Decision XIV/6).*

The Sixteenth Meeting of the Parties decided:

1. to request the initial co-chairs of the task force on destruction technologies to reconvene in order to solicit information from the technology proponents exclusively on destruction technologies identified as “emerging” in the 2002 report of the task force on destruction technologies;
2. further to request the co-chairs, if new information is available, to evaluate and report, based on the development status of these emerging technologies, whether they warrant consideration for addition to the list of approved destruction technologies;
3. to request that that report be presented through the Technical and Economic Assessment Panel to the Open-ended Working Group at its twenty-fifth meeting.

*(UNEP/OzL.Pro.16/17, Decision XVI/15).*

The Twenty-ninth Meeting of the Parties decided:

1. To request the Technology and Economic Assessment Panel to report by 31 March 2018, and if necessary to submit a supplemental report to the Open ended Working Group at its fortieth meeting, on:
  - (a) An assessment of the destruction technologies as specified in the annex to decision XXIII/12 with a view to confirming their applicability to hydrofluorocarbons;
  - (b) A review of any other technology for possible inclusion in the list of approved destruction technologies in relation to controlled substances;
2. To invite parties to submit to the Secretariat by 1 February 2018 information relevant to the tasks set out in paragraph 1 above;



*UNEP/OzL.Pro.29/8, Decision XXIX/4).*

**Code of good housekeeping**

The Fifteenth Meeting of the Parties decided:

1. to recall that the Montreal Protocol on Substances that Deplete the Ozone Layer does not require the Parties to destroy ozone-depleting substances;
2. to note that the report of the Technology and Economic Assessment Panel of April 2002 (volume 3, report on the Task Force on Destruction Technologies) provides information on the technical and economic performance and commercial viability of destruction technologies for ozone-depleting substances;
3. to take note of the previous decisions of the Meeting of the Parties on the approval of destruction technologies (decisions IV/11, VII/35 and XIV/6) and, in particular, to note that those decisions did not distinguish between the capabilities of destruction technologies for specific types of ozone-depleting substances;
4. to approve, for the purposes of paragraph 5 of Article 1 of the Montreal Protocol, the destruction technologies listed as “approved” in Annex VII.2 to the present report, which were found by the Task Force on Destruction Technologies to meet the destruction and removal efficiencies set out therein;
5. to recognize that, in approving the technologies listed in annex I, the Parties acknowledge that two technologies previously approved for all ozone depleting substances have been limited in their scope to omit halons;
6. to call on each Party that operates, or plans to operate, approved technologies in accordance with paragraph 2 above to ensure that its destruction facilities are operated in accordance with the Code of Good Housekeeping Procedures, contained in annex VII.3 to the present report, as updated in the progress report of the Technology and Economic Assessment Panel in May 2003 and subsequently amended by the Parties, unless similar or stricter procedures currently exist domestically;
7. to highlight the need for Parties to pay particular attention to the adherence of facilities for the destruction of ozone-depleting substances to relevant international or national standards addressing hazardous substances and taking into account cross-media emissions and discharges, including those identified in Annex VII.2 to the present report.

*(UNEP/OzL.Pro.15/9, Decision XV/9).*

**Guidelines relating to collection, recovery, recycling and destruction of ODSs**

The Forty-fourth Meeting of the Executive Committee recalling decision IV/18 by which the Meeting of the Parties identified, as agreed incremental costs for illustration, the cost of collection, recovery, recycling, and, if cost effective, destruction of ozone-depleting substances, recalling also that decision IV/11 facilitated access to and transfer of approved destruction technologies in accordance with Article 10 of the Protocol, together with provision for financial support under Article 10 of the Protocol for the Parties operating under paragraph 1 of Article 5, noting that decision IV/24 urged the Parties to take all practicable measures to prevent releases of controlled substances into the atmosphere, including, inter alia, the recovery of controlled substances for the purposes of recycling, reclamation or destruction and the destruction of unneeded ozone-depleting substances where economically feasible and environmentally appropriate, noting that decision X/7 requested the Parties to consider promoting appropriate measures to ensure the environmentally safe and effective recovery, storage, management and destruction of halons in preparing halon management strategies, mindful that the Technology and Economic Assessment Panel Task Force on Collection, Recovery and Storage, in its 2002 report, pursuant to decision XII/8, had concluded that the collection, recovery and storage of ozone-depleting substances was technically feasible and economically viable, recognizing that several million ODP tonnes of ozone-depleting substances were estimated to have been installed in equipment and as foams in 2002, according to the report of the Task Force, and were likely to be released into the atmosphere if preventive measures were not taken, decided:

- (a) to request the Secretariat to collect existing guidelines relating to collection, recovery, recycling and destruction of ozone-depleting substances in the light of paragraph 6 of decision IV/18 of the Meeting of the Parties on the indicative list of categories of incremental costs and to report its findings to the 46th Meeting of the Executive Committee; and
- (b) to consider whether to elaborate further guidelines for the funding of projects for the collection, recovery,

recycling and destruction of ozone-depleting substances while ensuring economically feasible and environmentally appropriate management of ozone-depleting substances at the 46th Meeting on the basis of the report of the Secretariat.

*(UNEP/OzL.Pro/ExCom/44/73, Decision 44/63, para. 262).*

The Forty-sixth Meeting of the Executive Committee decided:

- (a) to note with appreciation the report on the review of guidelines relating to collection, recovery, recycling and destruction of ozone depleting substances in documents UNEP/OzL.Pro/ExCom/46/42 and Corr.1;
- (b) to request the Secretariat to prepare a paper covering terms of reference, budget and modalities for a study regarding collection, recovery, recycling, reclamation, transportation and destruction of unwanted ODS, taking into account the proposal of Austria and Japan set out in Annex VII.4 to the present report and the comments made at the 46th Meeting of the Executive Committee; and
- (c) to request the Secretariat to present the paper to the 47th Meeting of the Executive Committee.

*(UNEP/OzL.Pro/ExCom/46/47, Decision 46/36, para. 156).*

*(Supporting document: UNEP/OzL.Pro/ExCom/46/42 and Corr.1).*

### **Implications of the environmentally sound destruction of concentrated and diluted sources of ODS**

The Seventeenth Meeting of the Parties decided:

1. to request the Technology and Economic Assessment Panel to prepare terms of reference for the conduct of case-studies in Parties operating under paragraph 1 of Article 5 of the Protocol, with regional representation, on the technology and costs associated with a process for the replacement of chlorofluorocarbon-containing refrigeration and air conditioning equipment, including the environmentally sound recovery, transport and final disposal of such equipment and of the associated chlorofluorocarbons;
2. that these studies should explore economic and other incentives which will encourage users to phase out equipment and ozone-depleting substances and to reduce emissions, as well as the viability and costs of setting up destruction facilities in countries operating under paragraph 1 of Article 5 of the Protocol, and that the said studies should include a regional analysis relating to the management, transport and destruction of chlorofluorocarbons;
3. also to request the Technology and Economic Assessment Panel to review possible synergies with other conventions such as the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade and the Stockholm Convention on Persistent Organic Pollutants;
4. to request the Technology and Economic Assessment Panel to adopt the recovery and destruction efficiency parameter proposed in the Panel's report to the Open-ended Working Group at its twenty-fifth meeting as the parameter to be applied in developing the proposed study referred to above;
5. that said terms of reference shall be submitted to the Parties at the twenty-sixth meeting of the Open-ended Working Group, and that provision will be made for resources for this purpose in the 2006–2008 replenishment of the Multilateral Fund.

*(UNEP/OzL.Pro.17/11, Decision XVII/17).*

### **Meeting of experts on requirements for the collection and disposition of non-reusable and unwanted ODS**

The Forty-seventh Meeting of the Executive Committee decided:

- (a) to request the Secretariat:
  - (i) to organize a meeting of experts in Montreal, Canada, from 22 to 24 February 2006 to assess the extent of current and future requirements for the collection and disposition (emissions, export, reclamation and destruction) of non-reusable and unwanted ODS in Article 5 countries;
  - (ii) to recruit consultants to collect and elaborate as many data as possible on unwanted, recoverable, reclaimable, non-reusable and virgin ODS in Article 5 countries for dissemination to participants in the meeting of experts;
  - (iii) to develop, in cooperation with the consultants, a standard format for reporting data on unwanted, recoverable, reclaimable, non-reusable and virgin stockpiled ODS;

- (b) to request implementing agencies, Executive Committee members (on a voluntary basis for existing data) and National Ozone Units (on a voluntary basis for existing or additional new data) to provide data and related information to the Secretariat, by 15 February 2006, to constitute an initial sample reflecting situations in both Article 5 and non-Article 5 countries;
- (c) to request the Chair of the Executive Committee, through the Meeting of the Parties, to seek the assistance of the Technology and Economic Assessment Panel (TEAP) and its technical options committees in providing the data mentioned above;
- (d) to note, with appreciation, the offer of UNEP to provide data from the regional networks and ODS recovery and disposal workshops conducted by Japan, as well as information on Article 5 experts;
- (e) to agree to consider further, at its 48th Meeting, the proposed terms of reference requested in decision 46/36 contained in document UNEP/OzL.Pro/ExCom/47/56 in light of the outcome of the meeting of experts and any written comments submitted; and
- (f) to allocate a separate budget line of US \$50,000 for the meeting, to cover the costs of experts' fees, travel and daily subsistence allowance, the travel and daily subsistence allowances of participating Article 5 countries and miscellaneous expenses, noting that costs of the consultant would be covered under the Secretariat's budget, with the understanding that there would be a balance between Article 5 and non-Article 5 Executive Committee members attending the meeting.

*(UNEP/OzL.Pro/ExCom/47/61, Decision 47/52, para. 199).*

The Seventeenth Meeting of the Parties decided to request the Technology and Economic Assessment Panel and its technical options committees to submit to the Multilateral Fund secretariat available data to enable the Multilateral Fund secretariat to assess the extent of current and future requirements for the collection and disposition (emissions, export, reclamation and destruction) of non reusable and unwanted ozone-depleting substances in Article 5 Parties in pursuance of decision 47/52.

*(UNEP/OzL.Pro.17/11, Decision XVII/18).*

The Forty-eighth Meeting of the Executive Committee decided:

- (a) to note, with appreciation the report of the meeting of experts, and to thank all experts as well as consultants and the Secretariat for their work leading to that report; and
- (b) to request the Secretariat to forward the report to the Technology and Economic Assessment Panel (TEAP), through the Ozone Secretariat, as an input for consideration by TEAP when complying with decision XVII/17 of the Seventeenth Meeting of the Parties, which requested TEAP to prepare terms of reference for the conduct of case studies in Article 5 countries on the technology and costs associated with a process for the replacement of CFC containing refrigeration and air conditioning equipment.

*(UNEP/OzL.Pro/ExCom/48/45, Decision 48/37, para. 161).*

*(Supporting document: UNEP/OzL.Pro/ExCom/48/42).*

The Forty-ninth Meeting of the Executive Committee decided:

- (a) to take note with appreciation of document UNEP/OzL.Pro/ExCom/49/42, which included the proposed terms of reference for a study regarding collection, recovery, recycling, reclamation, transportation and destruction of unwanted ozone-depleting substances;
- (b) to inform the Parties, through a letter from the Chair of the Executive Committee to the Ozone Secretariat, that:
  - (i) the Executive Committee was discussing the above-mentioned terms of reference and was of the view that there were substantial commonalities between those terms of reference and those being considered by the Parties in relation to decision XVII/17 of the Seventeenth Meeting of the Parties;
  - (ii) the issues raised by both sets of the above-mentioned terms of reference could be considered by the Executive Committee of the Multilateral Fund, given that it had already held substantial discussions and initiated some work with respect to studying the issue of collection, recovery, recycling, reclamation, transportation and destruction of unwanted ozone-depleting substances;
  - (iii) a request could be addressed to the Executive Committee to develop consolidated terms of reference and if agreed by the Executive Committee to initiate a study based on the consolidated terms of reference, and to report to the Nineteenth Meeting of the Parties on the progress made in that respect; and

(c) to consider the issue at the 50th Meeting of the Executive Committee, in light of any guidance provided by the Eighteenth Meeting of the Parties.

*(UNEP/OzL.Pro/ExCom/49/43, Decision 49/36, para. 153).*

*(Supporting document: UNEP/OzL.Pro/ExCom/49/42).*

**Terms of reference for case studies on environmentally sound destruction of ODSs**

The Eighteenth Meeting of the Parties decided:

1. to request the Executive Committee to develop consolidated terms of reference taking into account the elements referred to in both the draft terms of reference submitted to the Eighteenth Meeting of the Parties pursuant to decision XVII/17 and the terms of reference developed by the Multilateral Fund secretariat on the collection, recovery, recycling, reclamation, transportation, and destruction of unwanted ozone-depleting substances;
2. to request the Executive Committee to conduct, as soon as possible, a study based on the resulting terms of reference and to provide a progress report to the Nineteenth Meeting of Parties, with a final report for consideration at the twenty-eighth meeting of the Open-ended Working Group.

*(UNEP/OzL.Pro.18/10, Decision XVIII/9).*

The Fiftieth Meeting of the Executive Committee decided:

(a) to request the Multilateral Fund Secretariat to develop specific terms of reference for a study on the treatment of unwanted ozone-depleting substances, identifying a contractor and commissioning the study described below by the end of March 2007, if possible. The study would be completed by 1 February 2008.

(b) to define the two distinct objectives of the study as follows:

- (i) to compile information on management approaches in five non-Article 5(1) countries for the collection, transportation and disposal of CFC-containing refrigeration and air-conditioning equipment, to provide guidance and to describe the applicability of these management approaches to Article 5(1) countries; and
- (ii) to compile information on management approaches and markets in five non-Article 5(1) countries for the recovery, collection, recycling and reclamation of ozone-depleting substances that result in those ODS being locally unusable, and the possible options for the disposition (e.g., reuse in other markets, transformation, destruction) of this locally unusable ODS and describe the applicability of these options for Article 5(1) countries.

(c) to request that the detailed activities under the objective in paragraph (b)(i) consist of:

- (i) selecting five non-Article 5(1) countries that represent a wide spectrum of existing management approaches for the collection, transport and disposal of CFC-containing refrigeration and air-conditioning equipment;
- (ii) compiling information from the five non-Article 5(1) countries and describing:
  - a. the institutions, technologies and processes involved in all steps of collection, transport and disposal of the equipment;
  - b. the costs of the various steps in collecting, transporting and processing the equipment;
  - c. the legal and regulatory requirements and the voluntary administrative procedures for dealing with the CFCs in the equipment; and
  - d. the volume of equipment collected historically and currently;
- (iii) using the information compiled from the five non-Article 5(1) countries to describe the economic and financial arrangements among the various individuals and entities in the system for disposing of CFC-containing refrigeration and air-conditioning equipment; and
- (iv) collecting information on experiences regarding management approaches for the collection, transportation and disposal of CFC-containing refrigeration and air-conditioning equipment in eight Article 5(1) countries, to be collected by contacting national and local government officials who will recommend additional contacts in industry and institutions in order to describe challenges that may be posed in translating the non-Article 5(1) countries' experiences to the situation in Article 5(1) countries given domestic, social and economic factors. The selection of the countries should represent a wide spectrum of countries that have already identified challenges and should have regional representation;

- (d) to request that the detailed activities under the objective in paragraph (b)(ii) consist of:
- (i) using the data from the Meeting of Experts to Assess the Extent of Current and Future Requirements for the collection and disposition of non-reusable and unwanted ODS in Article 5 countries held in March 2006, data already published in reports from the Technology and Economic Assessment Panel and its subsidiary bodies, and other relevant existing data to describe possible economic incentives and their cost-effectiveness, whether inherent or external to the institutions under the Montreal Protocol, that would encourage disposition (e.g., reuse in other markets, transformation, destruction) of ODS that is locally unusable;
  - (ii) describing the capacity and location of all global existing facilities with destruction technologies approved by the Parties to the Montreal Protocol, comparing this capacity to the estimated volume of ODS predicted to be recovered and locally unusable in the March 2006 Experts' Meeting report, the viability and potential costs of using these existing destruction technologies, and the regulatory requirements for transporting the locally unusable ODS; and
  - (iii) describing opportunities other than existing destruction technologies for the disposition of locally unusable ODS, and the viability and potential costs of using these other approaches;
- (e) to request the Secretariat to report to the 51st Meeting of the Executive Committee on the status of the process for contracting a consultant for carrying out the study;
- (f) to consider at the 52nd Meeting of the Executive Committee the content of a progress report to be submitted to the Nineteenth Meeting of the Parties; and
- (g) to approve a budget for carrying out the study.  
*(UNEP/OzL.Pro/ExCom/50/62, Decision 50/42 para. 170).*

The Fifty-second Meeting of the Executive Committee decided:

- (a) to note the draft progress report on the study on the treatment of unwanted ozone-depleting substances contained in document UNEP/OzL.Pro/ExCom/52/51;
- (b) to request the Fund Secretariat to take into consideration the discussion at the 52nd Meeting of the Executive Committee when updating the report; and
- (c) to request the Fund Secretariat to forward the revised progress report, after approval by the Chair of the Executive Committee, for consideration at the Nineteenth Meeting of the Parties.  
*(UNEP/OzL.Pro/ExCom/52/55, Decision 52/43, para. 182).*  
*(Supporting document: UNEP/OzL.Pro/ExCom/52/51).*

The Fifty-fourth Meeting of the Executive Committee decided in accordance with decision XVIII/9, to request the Secretariat to forward the final study of the consultant on the collection and treatment of unwanted ozone-depleting substances in Article 5 and non-Article 5 countries, which would take into account any comments of a technical nature that Members had submitted to the Fund Secretariat by the end of April 2008, to the Ozone Secretariat for consideration by the Open ended Working Group at its twenty-eighth meeting.  
*(UNEP/OzL.Pro/ExCom/54/59, Decision 54/45, para. 195).*

The Fifty-fifth Meeting of the Executive Committee decided:

- (a) To approve the revised terms of reference for the study on how to develop a strategy to obtain funding through voluntary carbon markets for the destruction of unwanted ozone depleting substances, contained in Annex XI to the present report; and
- (b) To approve the request for funding at a level of US \$250,000 plus agency support costs of US \$22,500 for the World Bank.  
*(UNEP/OzL.Pro/ExCom/55/53, Decision 55/34 para 153)*

The Fifty-sixth Meeting of the Executive Committee took note of the status of the study on financing the destruction of unwanted ODS and the timetable for its completion, as presented by the World Bank.  
*(UNEP/OzL.Pro/ExCom/56/64 para 250)*  
*(Supporting document: UNEP/OzL.Pro/ExCom/56/62).*

### **Environmentally sound management of banks of ozone-depleting substances**

The Twentieth Meeting of the Parties decided:

1. to invite Parties, international funding agencies, including the Multilateral Fund and the Global Environment Facility, and other interested agents to enable practical solutions for the purpose of gaining better knowledge

on mitigating ozone-depleting substance emissions and destroying ozone-depleting substance banks, and on costs related to the collection, transportation, storage and destruction of ozone depleting substances, notably in Parties operating under paragraph 1 of Article 5 of the Montreal Protocol;

2. to request the Executive Committee of the Multilateral Fund to consider as a matter of urgency commencing pilot projects that may cover the collection, transport, storage and destruction of ozone-depleting substances. As an initial priority, the Executive Committee might consider projects with a focus on assembled stocks of ozone-depleting substances with high net global warming potential, in a representative sample of regionally diverse Parties operating under paragraph 1 of Article 5. It is understood that this initial priority would not preclude the initiation of other types of pilot projects, including on halons and carbon tetrachloride, should these have an important demonstration value. In addition to protecting the ozone layer, these projects will seek to generate practical data and experience on management and financing modalities, achieve climate benefits, and would explore opportunities to leverage co-financing;
3. to encourage Parties to develop or consider further improvements in the implementation of national and/or regional legislative strategies and other measures that prevent the venting, leakage or emission of ozone-depleting substances by ensuring:
  - (a) proper recovery of ozone-depleting substances from equipment containing ozone depleting substances, during servicing, use and at end of life, where possible in applications such as refrigeration, air conditioning, heat pumps, fire protection, solvents and process agents;
  - (b) the use of best practices and performance standards to prevent ozone-depleting substance emissions at the end of the product life cycle, whether by recovery, recycling, reclamation, reuse as feedstock or destruction;
4. to encourage all Parties to develop or consider improvements in national or regional strategies for the management of banks, including provisions to combat illegal trade by applying measures listed in decision XIX/12;
5. to invite Parties to submit their strategies and subsequent updates to the Ozone Secretariat as soon as possible for the purpose of sharing information and experiences, including with interested stakeholders of other multilateral environmental agreements, such as the United Nations Framework Convention on Climate Change and its Kyoto Protocol and the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal. The strategies will be placed on the Ozone Secretariat website, which will be updated regularly;
6. to note that any project implemented pursuant to the present decision when applicable should be done in conformity with national, regional, and/or international requirements, such as those mandated by the Basel Convention and Rotterdam Convention;
7. to request the Technology and Economic Assessment Panel to conduct a comprehensive cost-benefit analysis of destroying banks of ozone-depleting substances taking into consideration the relative economic costs and environmental benefits, to the ozone layer and the climate, of destruction versus recycling, reclaiming and reusing such substances. In particular, the report should cover the following elements:
  - (a) consolidation of all available data on ozone-depleting substance banks and summary of this information identifying the sectors where recovery of ozone-depleting substances is technically and economically feasible;
  - (b) respective levels of likely mitigation amounts, based on the categorization of reachable banks at low, medium, and high effort according to substances, sectors, regions, and where possible, subregions;
  - (c) assessment of associated benefits and costs of respective classes of banks in terms of ozone depleting potential and global warming potential;
  - (d) exploration of the potential “perverse incentives” or other adverse environmental effects that may be associated with certain mitigation strategies, in particular related to recovery and recycling for reuse;
  - (e) consideration of the positive and negative impacts of recovery and destruction of ozone-depleting substances, including direct and indirect climate effects;
  - (f) consideration of the technical, economic and environmental implications of incentive mechanisms to promote the destruction of surplus ozone-depleting substances;

8. to request the Technology and Economic Assessment Panel to provide an interim report in time for dissemination one month before the twenty-ninth meeting of the Open ended Working Group and to provide the final report one month before the Twenty First Meeting of the Parties to the Montreal Protocol;
9. to request the Ozone Secretariat, with the assistance of the Multilateral Fund Secretariat, to consult with experts from the United Nations Framework Convention on Climate Change, the Global Environment Facility, the Executive Board of the Clean Development Mechanism, the World Bank and other relevant funding experts to develop a report on possible funding opportunities for the management and destruction of ozone-depleting substance banks, to present the report to the Parties for review and comments one month prior to the twenty ninth meeting of the Open-Ended Working Group and, if possible, to convene a single meeting among experts from the funding institutions;
10. that the report referred to in paragraph 9 of the present decision would focus on describing possible institutional arrangements, potential financial structures, likely logistical steps and the necessary legal framework for each of the following, if relevant:
  - (a) recovery;
  - (b) collection;
  - (c) storage;
  - (d) transport;
  - (e) destruction;
  - (f) supporting activities;
11. to request the Ozone Secretariat to convene a workshop among Parties that will include the participation of the Montreal Protocol assessment panels, the secretariat of the Multilateral Fund and the Fund's implementing agencies, and seek the participation of the secretariats of other relevant multilateral environmental agreements, non governmental organizations and experts from funding institutions for the discussion of technical, financial and policy issues related to the management and destruction of ozone-depleting substance banks and their implications for climate change;
12. that the above workshop will be held preceding the twenty-ninth meeting of the Open ended Working Group and that interpretation will be provided in the six official languages of the United Nations;
13. further to consider, at the twenty-ninth meeting of the Open-ended Working Group, possible actions regarding the management and destruction of banks of ozone-depleting substances in the light of the report to be provided by the Technology and Economic Assessment Panel under paragraph 7 above, the working group report to be provided by the Secretariat under paragraph 9 above and the discussions emanating from the workshop under paragraph 11 above;
14. to request the Ozone Secretariat to communicate the present decision to the Secretariat of the United Nations Framework Convention on Climate Change and its Kyoto Protocol in time for possible consideration at the fourteenth meeting of the Conference of the Parties to the Convention and fourth meeting of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol on the understanding that the decision is without prejudice to any discussions that may be held on ozone-depleting substance banks within their forum.

*(UNEP/OzL.Pro.20/9, Decision XX/7).*

The Executive Committee at its Fifty-seventh Meeting decided to give the Secretariat the mandate to provide the Ozone Secretariat with a section on the Multilateral Fund's funding modalities for the report on possible funding opportunities for the management and destruction of ozone depleting substance banks to be transmitted to the Parties at the 29<sup>th</sup> meeting of the Open-ended Working Group.

*(UNEP/OzL.Pro/ExCom/57/69, Decision 57/42).*

The Twenty-first Meeting of the Parties decided:

1. To request the Ozone Secretariat to host a one-day seminar on the margins of the 30th meeting of the Open-ended Working Group of the Parties to the Montreal Protocol on the topic of how to identify and mobilize funds, including funds additional to those being provided under the Multilateral Fund, for ozone-depleting substance destruction, and further requests the Ozone Secretariat to invite the Multilateral Fund and the Global Environment Facility to consider co-coordinating this effort, and to invite other relevant institutions to attend the seminar;
2. To request the Executive Committee to continue its consideration of further pilot projects in Article 5 Parties pursuant to decision XX/7, and in that context, to consider the costs of a one-time window within its current

destruction activities to address the export and environmentally sound disposal of assembled banks of ozone-depleting substances in low-volume-consuming countries that are not usable in the Party of origin;

3. To request the Technology and Economic Assessment Panel to review those destruction technologies identified in its 2002 report as having a high potential, and any other technologies, and to report back to the 30th meeting of the Open-ended Working Group on these technologies and their commercial and technical availability;

4. To agree that the Executive Committee of the Multilateral Fund should develop and implement, as expeditiously as possible, a methodology to verify the climate benefits and costs associated with Multilateral Fund projects to destroy banks of ozone-depleting substances, and should make such information publicly available on a project-level basis;

5. To request the Executive Committee to continue its deliberations on a special facility and to report on these deliberations, including possible options for such a facility as appropriate, to the 30th meeting of the Open-ended Working Group as an agenda item.

6. To call upon Parties, and institutions not traditionally contributing to the financial mechanism, to consider making additional support available to the Multilateral Fund for destruction of ozone-depleting substances, if they are in a position to do so;

7. To request the Executive Committee to report annually on the results of destruction projects to the Meeting of the Parties, and to request the Technology and Economic Assessment Panel, based on this, and other available information, to suggest to the thirty-first meeting of the Open-ended Working Group components designed to help Parties of diverse size and with diverse wastes to develop national and/or regional strategic approaches to address the environmentally sound disposal of the banks of ozone-depleting substances that are present in their countries and/or regions. In addition, this information should be available to the Technology and Economic Assessment Panel and the Parties to inform the consideration of the financial implications for the Multilateral Fund and other funding sources of addressing the destruction of ozone-depleting-substance banks;

*(UNEP/OzL.Pro.21/8, Decision XXI/2).*

The Twenty-second Meeting of the Parties decided:

1. To request the Panel and the relevant technical options committees, in consultation with other relevant experts, for consideration at the thirty-first meeting of the Open-ended Working Group and with a view to possible inclusion in the Montreal Protocol handbook:

(a) To evaluate and recommend the appropriate destruction and removal efficiency for methyl bromide and to update the destruction and removal efficiency for any other substance already listed in annex II to the report of the Fifteenth Meeting of the Parties;

(b) To review the list of destruction technologies adopted by parties, taking into account emerging technologies identified in its 2010 progress report and any other developments in this sector, and to provide an evaluation of their performance and commercial and technical availability;

(c) To develop criteria that should be used to verify the destruction of ozone-depleting substances at facilities that use approved ozone-depleting-substance destruction technologies, taking into account the recommended destruction and removal efficiencies for the relevant substance;

2. To invite submissions to the Ozone Secretariat by 1 February 2011 of data relevant to the tasks set out in paragraph 1 above;

*(UNEP/OzL.Pro.22/9, Decision XXII/10).*

The Twenty-third Meeting of the Parties decided:

1. To approve the highlighted destruction processes in the annex to the present decision for the purposes of paragraph 5 of Article 1 of the Montreal Protocol, as additions to the technologies listed in annex VI to the report of the Fourth Meeting of the Parties and modified by decisions V/26, VII/35 and XIV/6;

2. To request the Technology and Economic Assessment Panel to continue to assess the plasma destruction technology for methyl bromide in the light of any additional information that may become available and to report to the parties when appropriate;

3. Also to request the Technology and Economic Assessment Panel to continue to investigate the issues raised in its 2011 progress report regarding performance criteria for destruction and removal efficiency compared to destruction efficiency, and regarding verification criteria for the destruction of ozone-depleting substances at



## **VII. CONTROLLED SUBSTANCES**

*Policies, procedures, guidelines, criteria (As at November 2017).*

facilities that use approved destruction technologies, and to submit a final report to the Open-ended Working Group at its thirty-second meeting;

## VII. CONTROLLED SUBSTANCES

*Policies, procedures, guidelines, criteria (As at November 2017).*

<i>Technology</i>	<i>Applicability</i>							
	<i>Concentrated Sources</i>							<i>Dilute Sources</i>
	<i>Annex A</i>		<i>Annex B</i>			<i>Annex C</i>	<i>Annex E</i>	
	<i>Group 1</i>	<i>Group 2</i>	<i>Group 1</i>	<i>Group 2</i>	<i>Group 3</i>	<i>Group 1</i>	<i>Group 1</i>	
	<i>Primary CFCs</i>	<i>Halons</i>	<i>Other CFCs</i>	<i>Carbon Tetrachloride</i>	<i>Methyl Chloroform</i>	<i>HCFCs</i>	<i>Methyl Bromide</i>	
<b><i>Destruction &amp; Removal Efficiency (DRE)</i></b>	<b><i>99.99%</i></b>	<b><i>99.99%</i></b>	<b><i>99.99%</i></b>	<b><i>99.99%</i></b>	<b><i>99.99%</i></b>	<b><i>99.99%</i></b>	<b><i>99.99%</i></b>	<b><i>95%</i></b>
Argon Plasma Arc	Approved	Approved	Approved	Approved	Approved	Approved	<i>Not Determined</i>	
Cement Kilns	Approved	<i>Not Approved</i>	Approved	Approved	Approved	Approved	<i>Not Determined</i>	
<b>Chemical Reaction with H<sub>2</sub> and CO<sub>2</sub></b>	Approved	Approved	Approved	Approved	Approved	Approved	<i>Not Determined</i>	
Gas Phase Catalytic De-halogenation	Approved	<i>Not Determined</i>	Approved	Approved	Approved	Approved	<i>Not Determined</i>	
Gaseous/Fume Oxidation	Approved	<i>Not Determined</i>	Approved	Approved	Approved	Approved	<i>Not Determined</i>	
Inductively coupled radio frequency plasma	Approved	Approved	Approved	Approved	Approved	Approved	<i>Not Determined</i>	
Liquid Injection Incineration	Approved	Approved	Approved	Approved	Approved	Approved	<i>Not Determined</i>	
Microwave Plasma	Approved	<i>Not Determined</i>	Approved	Approved	Approved	Approved	<i>Not Determined</i>	
Municipal Solid Waste Incineration								Approved
Nitrogen Plasma Arc	Approved	<i>Not Determined</i>	Approved	Approved	Approved	Approved	<i>Not Determined</i>	
<b>Porous Thermal Reactor</b>	Approved	<i>Not Determined</i>	Approved	Approved	Approved	Approved	<i>Not Determined</i>	
<b>Portable Plasma Arc</b>	Approved	<i>Not Determined</i>	Approved	Approved	Approved	Approved	<i>Not Determined</i>	
Reactor Cracking	Approved	<i>Not Approved</i>	Approved	Approved	Approved	Approved	<i>Not Determined</i>	
Rotary Kiln Incineration	Approved	Approved	Approved	Approved	Approved	Approved	<i>Not Determined</i>	Approved
Superheated steam reactor	Approved	<i>Not Determined</i>	Approved	Approved	Approved	Approved	<i>Not Determined</i>	
<b>Thermal Reaction with Methane</b>	Approved	Approved	Approved	Approved	Approved	Approved	<i>Not Determined</i>	

*(UNEP/OzL.Pro.23/11, Decision XXIII/12).*

**Interim guidelines for funding of demonstration projects for the disposal of ODS**

The Fifty-eight Meeting of the Executive Committee decided:

- (a) to approve the following interim guidelines for the funding of demonstration projects for the disposal of ODS in accordance with paragraph 2 of decision XX/7 of the Meeting of the Parties:
  - (i) for each separate category of activities for ODS disposal, namely collection, transport, storage and destruction, the definitions are as set out in Annex VIII to the present report;
  - (ii) the Multilateral Fund will fund a limited number of demonstration projects under the following conditions:
    - a. no funding would be available for the collection of ODS, except as a contribution to the monitoring of the sources of the ODS for an already existing, separately funded, collection effort for CFCs;
    - b. a limited number of demonstration projects for ODS disposal related to paragraph 2 of decision XX/7, covering aspects not yet covered by other demonstration projects, will be considered only at the 59th Meeting for project preparation funding;
    - c. the funding would be limited to a maximum level of up to US \$13.2/kg of ODS to be destroyed for non-low-volume-consuming countries, on the understanding that this would be based on expectation of high start-up costs for these new activities, and would not constitute a precedent. Should the project not foresee activities related to all of the following areas (transport, storage and destruction), this threshold would be adjusted accordingly;
    - d. for the disposal of halon and for the disposal of carbon tetrachloride (CTC), funding would be provided for a maximum of one demonstration project each, provided the respective projects have an important demonstration value;
  - (iii) bilateral and implementing agencies are requested to report annually to the first meeting of the Executive Committee on progress and experiences gained in demonstration projects on disposal, commencing in the first year after project approval. These reports should cover the amounts of the different ODS collected or identified, transported, stored and destroyed, as well as financial, managerial and co-funding arrangements, and any other relevant issues;
  - (iv) bilateral and implementing agencies are requested, when submitting activities for funding that are related to the disposal of ODS, to provide:
    - a. in the case of requests for project preparation funding:
      - i. an indication of the category or categories of activities for the disposal of ODS (collection, transport, storage, destruction), which will be included in the project proposal;
      - ii. an indication whether disposal programmes for chemicals related to other multilateral environmental agreements are presently ongoing in the country or planned for the near future, and whether synergies would be possible;
      - iii. an estimate of the amount of each ODS that is meant to be handled within the project;
      - iv. the basis for the estimate of the amount of ODS; this estimate should be based on known existing stocks already collected, or collection efforts already at a very advanced and well-documented stage of being set up;
      - v. for collection activities, information regarding existing or near-future, credible collection efforts and programmes that are at an advanced stage of being set up and to which activities under this project would relate;
      - vi. for activities that focus at least partially on CTC or halon, an explanation of how this project might have an important demonstration value;
    - b. in the case of project submissions:
      - i. updated and more detailed information for all issues mentioned under project preparation funding contained in all sub-paragraphs of (iv) a. mentioned above;
      - ii. a detailed description of the foreseen management and financial set up; this should include details such as the total cost of the disposal activity including costs not covered by the Multilateral Fund,

the sources of funding for covering these costs, description of the sustainability of the underlying business model, and an identification of time-critical elements of the implementation, which subsequently might be used to monitor progress;

- iii. a clear indication how the project will secure other sources of funding; these other sources of funding should be available, at least partially, before the end of 2011. In case of activities of the collection type, any other sources of funding necessary in line with sub-paragraph (iv) a. iv. above related to collection would need to be secured before the project is submitted to the Executive Committee;
  - iv. a concept for monitoring the origin of recovered ODS for future destruction, with the objective of discouraging the declaration of virgin ODS as used ODS for destruction. This concept should include or at least allow for external verification of the amounts destroyed, and the costs for its operation should be covered sustainably;
  - v. the project proposal should include valid assurances that the amount of ODS mentioned in the proposal will actually be destroyed, and the agencies should submit proof of destruction with the financial closure of the project;
  - vi. an exploration of other disposal options for the used ODS such as recycling and reuse opportunities;
- (b) to consider at its 60th Meeting any decision taken by the Parties at their Twenty-first Meeting that might relate to these interim guidelines and definitions;
  - (c) to request the Fund Secretariat to provide, to the second Meeting of the Executive Committee in 2011, a report on the experience gained in the implementation of the disposal projects, using reports from bilateral and implementing agencies and other relevant sources of information; and
  - (d) to consider whether to review the interim guidelines and related definitions at the 64th Meeting in light of the experience gained and any additional information and guidance available at that time.

*(UNEP/OzL.Pro/ExCom/58/53, Decision 58/19, para. 95).*

*(Supporting document: UNEP/OzL.Pro/ExCom/58/19).*

The Fifty-ninth Meeting of the Executive Committee decided to request UNIDO to submit two additional project preparation requests for ODS disposal pilot projects, one for Africa and one for West Asia, in line with decision 58/19, as part of their business plan for 2010.

*(UNEP/OzL.Pro/ExCom/59/59, Decision 59/10, para. 63).*

*(Supporting document: UNEP/OzL.Pro/ExCom/59/11).*

The Sixty-fourth Meeting of the Executive Committee decided:

- (a) To note the report on the use of the interim guidelines for the funding of demonstration projects for the disposal of unwanted ODS, while mindful that there was as yet very little experience in the implementation of the full pilot projects;
- (b) To request implementing agencies to provide an update to the Secretariat on how those guidelines were used in carrying out the approved ODS disposal pilot projects as their implementation progresses, no later than the 69th meeting;
- (c) To reiterate that, in line with decision 58/19(a)(iii), bilateral and implementing agencies were requested to report annually to the first meeting of the Executive Committee on progress and experiences gained in demonstration projects on disposal, commencing in the first year after project approval, and to include in those reports information on: the amounts of the different ODS collected or identified, transported, stored and destroyed, as well as on financial, managerial and co-funding arrangements, and any other relevant issues, starting at the 66th meeting;
- (d) To request the Secretariat to prepare a report for the consideration of the Executive Committee at the 70th meeting based on subparagraph (b) above, summarizing the experience gained and making recommendations for future action; and
- (e) To request the Secretariat to continue using the interim guidelines and applying them also to pilot projects for low-volume-consuming countries until the Committee had considered the report requested in subparagraph (d) above.

## **VII. CONTROLLED SUBSTANCES**

*Policies, procedures, guidelines, criteria (As at November 2017).*

*(UNEP/OzL.Pro/ExCom/64/53, Decision 64/50, para.174).*

*(Supporting document: UNEP/OzL.Pro/ExCom/64/49).*

The Seventieth Meeting of the Executive Committee decided:

- (a) To note the report on the use of the interim guidelines for the funding of demonstration projects for the disposal of unwanted ODS, as approved by decision 58/19, as contained in documents UNEP/OzL.Pro/ExCom/70/54 and Corr.1; and
- (b) To request the Secretariat to continue using the interim guidelines and applying them to the remaining demonstration projects for the disposal of unwanted ODS due for submission no later than the 72nd meeting.

*(UNEP/OzL.Pro/ExCom/70/59, Decision 70/22, para.125).*

*(Supporting documents: UNEP/OzL.Pro/ExCom/70/54 and Corr.1).*



**ANNEX VII.1: CATEGORIES AND EXAMPLES OF LABORATORY USES**

**(this list is not exhaustive).**

1. Research and development (e.g. pharmaceutical, pesticide, CFC and HCFC substitutes).
  - 1.1 Reaction solvent or reaction feedstock (e.g. Diels-Alder and Friedel-Craft Reactions, RuO<sub>3</sub> oxidation, allelic side bromination, etc.).
2. Analytical uses and regulated applications (including quality control).
  - 2.1 Reference
    - Chemical (ODS monitoring, volatile organic compound (VOC) Detection, Equipment Calibration).
    - Toxicant
    - Product (adhesive bond strength, breathing filter test).
  - 2.2 Extraction
    - Pesticide and heavy metal detection (e.g. in food).
    - Oil mist analysis
    - Colour and food additive detection
    - Oil detection in water and soil (\*).
  - 2.3 Diluent
    - Zinc, copper, cadmium detection in plants and food
    - Microchemical methods to determine molecular weight or oxygen
    - Measuring drug purity and residual determination
    - Sterilization of lab equipment
  - 2.4 Carrier (Inert).
    - Forensic methods (e.g. fingerprinting) (\*).
    - Titration (cholesterol in eggs, drug chemical characteristics, "Iodine value", e.g. in oils and chemical products).
    - Analytical equipment (spectroscopy (infra-red, ultra-violet, nuclear magnetic resonance, fluorescence), chromatography (high-pressure liquid chromatography, gas chromatography, thin-layer chromatography)).
  - 2.5 Tracer
    - Sanitary engineering
  - 2.6 Miscellaneous (including testing).
    - Ingredient in material for testing (e.g. asphalt, metal fatigue and fracturing) (\*).
    - Separation media (separation of extraneous materials such as filth and insect excreta from stored food products).
3. Miscellaneous (including biochemical).
  - 3.1 Laboratory method development
  - 3.2 Sample preparation using solvent
  - 3.3 Heat transfer medium

(\*). Eliminated from the global exemption for laboratory and analytical uses for controlled substances as per decision XI/15.

*(UNEP/OzL.Pro.7/12 Annex IV).*

*(UNEP/OzL.Pro.11/10 Decision XI/15).*





**ANNEX VII.2: DESTRUCTION TECHNOLOGIES**

The following destruction processes have been approved:

Thermal oxidation category:

- (i) Liquid injection incineration;
- (ii) Reactor cracking;
- (iii) Gaseous/fume oxidation;
- (iv) Rotary kiln incinerators;
- (v) Cement kilns;
- (vi) Municipal solid waste incinerators, for foams containing ozone-depleting substances (approved at the Fifth Meeting of the Parties);
- (viii) Radio frequency plasma (approved at the Seventh Meeting of the Parties).

The following are the suggested regulatory standards for destruction facilities:

<u>Pollutant</u>	<u>Stack concentration</u>
PCDD/PDCF	<1.0 ng/m <sup>3</sup> (toxic equivalence using international method. Emission limits are expressed as mass per dry cubic metre of flue gas at 0°C and 101.3 kPa corrected to 11% O <sub>2</sub> ).
HCl	<100 mg/m <sup>3</sup>
HF	5 mg/m <sup>3</sup>
HBr/Br <sub>2</sub>	<5 mg/m <sup>3</sup>
Particulates	<50 mg/m <sup>3</sup>
Comments:	Frequency, method of sampling, and limit for the ODS that is being destroyed as recommended by national regulatory agencies.
CO	<100 mg/m <sup>3</sup>
Comments:	Continuous emission monitoring with one hour rolling average.
Comments:	Atmospheric releases of ODS shall be monitored at all facilities with air emission discharges (where applicable) to ensure compliance with the recommendations of the report of the ad hoc Technical Advisory Committee on Destruction Technologies.

*(UNEP/OzL.Pro/4/15 Decision IV/11, para. 2).*

*(UNEP/OzL.Pro/5/12 Decision V/26).*

*(UNEP/OzL.Pro/4/15 Annexes VI and VII to Decision IV/11).*

*(UNEP/OzL.Pro/7/12 Decision VII/15, para. 2).*

The Fourteenth Meeting of the Parties decided to approve the following destruction technologies for the purposes of paragraph 5 of Article 1 of the Protocol, in addition to the technologies listed in annex VI to the report of the Fourth Meeting and modified by decisions V/26 and VII/35:

- (a) for CFC, HCFC and halons: argon plasma arc;
- (b) for CFC and HCFC: nitrogen plasma arc, microwave plasma, gas phase catalytic dehalogenation and super-heated steam reactor;
- (c) for foam containing ODS: rotary kiln incinerator;

*(UNEP/OzL.Pro/14/9 Decision XIV/6 para. 3).*

The Fifteenth Meeting of the Parties decided to approve, for the purposes of paragraph 5 of Article 1 of the Montreal Protocol, the destruction technologies listed as “approved” in the table below, which were found by the Task Force on Destruction Technologies to meet the destruction and removal efficiencies set out therein.

Technology	Applicability		
	Concentrated sources		Dilute sources
	Annex A, Gp. I; Annex B, Annex C, Gp. I	Halon (Annex A, Gp. II)	Foam
Destruction and removal efficiency (DRE)	99.99%	99.99%	95%
Cement kilns	Approved	Not Approved	

Liquid injection incineration	Approved	Approved	
Gaseous/fume oxidation	Approved	Approved	
Municipal solid waste incineration			Approved
Reactor cracking	Approved	Not Approved	
Rotary kiln incineration	Approved	Approved	Approved
Argon plasma arc	Approved	Approved	
Inductively coupled radio frequency plasma	Approved	Approved	
Microwave plasma	Approved		
Nitrogen plasma arc	Approved		
Gas phase catalytic dehalogenation	Approved		
Superheated steam reactor	Approved		

Suggested substances for monitoring and declaration when using destruction technologies

Substances	Units
PCDDs/PCDFs	ng-ITEQ*/Nm3**
HCl/Cl <sub>2</sub>	mg/Nm3
HF	mg/Nm3
HBr/Br <sub>2</sub>	mg/Nm3
Particulates (TSP***)	mg/Nm3
CO	mg/Nm3

\* □ ITEQ – international toxic equivalency.

\*\* Normal cubic metre.

\*\*\* TSP – total suspended particles.

(UNEP/OzL.Pro.15/9, Decision XV/9).

**ANNEX VII.3: CODE OF GOOD HOUSEKEEPING**

To provide additional guidance to facility operators, in May 1992 the Technical Advisory Committee prepared a “Code of Good Housekeeping” as a brief outline of measures that should be considered to ensure that environmental releases of ozone depleting substances (ODS) through all media are minimized. This Code, updated by the Task Force on Destruction Technologies and amended by the Parties at their Fifteenth Meeting, in 2003, is also intended to provide a framework of practices and measures that should normally be adopted at facilities undertaking the destruction of ODS.

Not all measures will be appropriate to all situations and circumstances and, as with any code, nothing specified should be regarded as a barrier to the adoption of better or more effective measures if these can be identified. .

Pre-delivery

This refers to measures that may be appropriate prior to any delivery of ODS to a facility.

The facility operator should generate written guidelines on ODS packaging and containment criteria, together with labeling and transportation requirements. These guidelines should be provided to all suppliers and senders of ODS prior to agreement to accept such substances.

The facility operator should seek to visit and inspect the proposed sender’s stocks and arrangements prior to movement of the first consignment. This is to ensure awareness on the part of the sender of proper practices and compliance with standards.

Arrival at the facility

This refers to measures that should be taken at the time ODS are received at the facility gate.

These include an immediate check of documentation prior to admittance to the facility site, coupled with a preliminary inspection of the general condition of the consignment.

Where necessary, special or “fast-track” processing and repackaging facilities may be needed to mitigate risk of leakage or loss of ODS. Arrangements should exist to measure the gross weight of the consignment at the time of delivery.

Unloading from delivery vehicle

This refers to measures to be taken at the facility in connection with the unloading of ODS.

It is generally assumed that ODS will normally be delivered in some form of container, drum or other vessel that is removed from the delivery vehicle in total. Such containers may be returnable.

All unloading activities should be carried out in properly designated areas, to which restricted access of personnel applies.

Areas should be free of extraneous activities likely to lead to, or increase the risk of, collision, accidental dropping, spillage, etc.

Materials should be placed in designated quarantine areas for subsequent detailed checking and evaluation.

Testing and verification

This refers to the arrangements made for detailed checking of the ODS consignments prior to destruction.

Detailed checking of delivery documentation should be carried out, along with a complete inventory, to establish that delivery is as advised and appears to comply with expectations.

Detailed checks of containers should be made both in respect of accuracy of identification labels, etc, and of physical condition and integrity. Arrangements must be in place to permit repackaging or “fast track” processing of any items identified as defective.

Sampling and analysis of representative quantities of ODS consignments should be carried out to verify material type and characteristics. All sampling and analysis should be conducted using approved procedures and techniques.

Storage and stock control

This refers to matters concerning the storage and stock control of ODS.

ODS materials should be stored in specially designated areas, subject to the regulations of the relevant local authorities. Arrangements should be put in place as soon as possible to minimize, to the extent practicable, stock

emissions prior to destruction.

Locations of stock items should be identified through a system of control that should also provide a continuous update of quantities and locations as stock is destroyed and new stock delivered.

In regard to storage vessels for concentrated sources of ODS, these arrangements should include a system for regular monitoring and leak detection, as well as arrangements to permit repackaging of leaking stock as soon as possible.

#### Measuring quantities destroyed

It is important to be aware of the quantities of ODS processed through the destruction equipment. Where possible, flow meters or continuously recording weighing equipment for individual containers should be employed. As a minimum, containers should be weighed “full” and “empty” to establish quantities by difference.

Residual quantities of ODS in containers that can be sealed and are intended to be returned for further use, may be allowed. Otherwise, containers should be purged of residues or destroyed as part of the process.

#### Facility design

This refers to basic features and requirements of plant, equipment and services deployed in the facility.

In general, any destruction facility should be properly designed and constructed in accordance with the best standards of engineering and technology and with particular regard to the need to minimize, if not eliminate, fugitive losses.

Particular care should be taken when designing plants to deal with dilute sources such as foams. These may be contained in refrigeration cabinets or may be part of more general demolition waste. The area in which foam is first separated from other substrates should be fully enclosed wherever possible and any significant emissions captured at that stage.

**Pumps:** Magnetic drive, sealers or double mechanical seal pumps should be installed to eliminate environmental releases resulting from seal leakage.

**Valves:** Valves with reduced leakage potential should be used. These include quarter-turn valves or valves with extended packing glands.

**Tank vents (including loading vents):** Filling and breathing discharges from tanks and vessels should be recovered or vented to a destruction process.

**Piping joints:** Screwed connections should not be used and the number of flanged joints should be kept to the minimum that is consistent with safety and the ability to dismantle for maintenance and repair.

**Drainage systems:** Areas of the facility where ODS are stored or handled should be provided with sloped concrete paving and a properly designed collection system. Water that is collected should, if contaminated, be treated prior to authorized discharge.

#### Maintenance

In general, all maintenance work should be performed according to properly planned programmes and should be executed within the framework of a permit system to ensure proper consideration of all aspects of the work.

ODS should be purged from all vessels, mechanical units and pipework prior to the opening of these items to the atmosphere. The contaminated purge should be routed to the destruction process or treated to recover the ODS.

All flanges, seals, gaskets and other sources of minor losses should be checked routinely to identify developing problems before containment is lost. Leaks should be repaired as soon as possible.

Consumable or short-life items, such as flexible hoses and couplings, must be monitored closely and replaced at a frequency that renders the risk of rupture negligible.

#### Quality control and quality assurance

All sampling and analytical work connected with ODS, the process and the monitoring of its overall performance should be subject to quality assessment and quality control measures in line with current recognized practices. This should include at least occasional independent verification and confirmation of data produced by the facility operators.

Consideration should also be given to the adoption of quality management systems and environment quality practices covering the entire facility.

#### Training

All personnel concerned with the operation of the facility (with “operation” being interpreted in its widest sense) should have training appropriate to their task.

Of particular relevance to the ODS destruction objectives is training in the consequences of unnecessary losses and in the use, handling and maintenance of all equipment in the facility.

All training should be carried out by suitably qualified and experienced personnel and the details of such training should be maintained in written records. Refresher training should be conducted at appropriate intervals.

#### Code of transportation

In the interest of protecting the stratospheric ozone layer, it is essential that used ODS and products containing ODS are collected and moved efficiently to facilities practicing approved destruction technologies. For transportation purposes, used ODS should receive the same hazard classification as the original substances or products. In practice, this may introduce restrictions on hazardous waste shipment under the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal and this should be consulted separately. In the absence of such specific restrictions, the following proposed code of transportation for ODS from customer to destruction facilities is provided as a guide to help minimize damage caused to the ozone layer as a result of ODS transfers. Additional guidance is contained in the United Nations Transport of Dangerous Goods Model Regulations.

It is important to supervise and control all shipments of used ODS and products containing ODS according to national and international requirements to protect the environment and human health. To ensure that ODS and products containing ODS do not constitute an unnecessary risk, they must be properly packaged and labeled. Instructions to be followed in the event of danger or accident must accompany each shipment to protect human beings and the environment from any danger that might arise during the operation.

Notification of the following information should be provided at any intermediate stage of the shipment from the place of dispatch until its final destination. When making notification, the notifier should supply the information requested on the consignment note, with particular regard to:

- (a) the source and composition of the ODS and products containing ODS, including the customer’s identity;
- (b) arrangements for routing and for insurance against damage to third parties;
- (c) measures to be taken to ensure safe transport and, in particular, compliance by the carrier with the conditions laid down for transport by the States concerned;
- (d) the identity of the consignee, who should possess an authorized centre with adequate technical capacity for the destruction;
- (e) the existence of a contractual agreement with the consignee concerning the destruction of ODS and products containing ODS.

This code of transportation does not necessarily apply to the disposal of ODS-containing rigid insulation foams. The most appropriate way to dispose of such products may be by direct incineration in municipal waste incinerators or rotary kiln incinerators.

#### Monitoring

The objectives of monitoring should be to provide assurance that input materials are being destroyed with an acceptable efficiency generally consistent with the destruction and removal efficiency (DRE) recommendations listed in Annex VII.4 to the present report and that the substances resulting from destruction yield environmentally acceptable emission levels consistent with, or better than, those required under national standards or other international protocols or treaties.

As there are as yet no International Organization for Standardization (ISO) standards applicable for the sampling and analysis of ODS or the majority of the other pollutants listed in annex VII.4 to the present report, where national standards exist they should be employed. Further, where national standards exist they may be used in lieu of ISO standards provided that they have been the subject of a verification or validation process addressing their accuracy and representativeness.

As ISO develops international standards for pollutants listed in annex IV to the present report, the technical bodies charged with developing such standards should take note of the existing national standards including those identified in appendix F to the report of the Technology and Economic Assessment Panel (TEAP) of April 2002 (volume 3, report of the Task Force on Destruction Technologies) and strive to ensure consistency between any new ISO standards and the existing standard test methods, provided that there is no finding that those existing methods are inaccurate or unrepresentative.

Where national standards do not exist, the Technical Advisory Committee recommends adoption of the following guidelines for monitoring of destruction processes operating using an approved technology.

Recognizing that the United States of America Environmental Protection Agency (EPA) methods have been the subject of verification procedures to ensure that they are reasonably accurate and representative, that they cover all of the pollutants of interest (although not all ODS compounds have been the specific subject of verification activities), that they provide a comprehensive level of detail that should lead to replicability of the methods by trained personnel in other jurisdictions and that they are readily available for reference and downloading from the Internet without the payment of a fee, applicable EPA methods as described in appendix F to the 2002 report of TEAP may be employed.

In the interest of ensuring a common international basis of comparison for those pollutants or parameters where ISO standards exist (currently particulates, carbon monoxide, carbon dioxide and oxygen), use of those standards is encouraged and jurisdictions are encouraged to adopt them as national standards or acceptable alternatives to existing national standards.

The use of EPA or other national standards described in appendix F is also considered acceptable, however. The precedence given to the EPA methods in the present code is based on the relative comprehensiveness of the methods available (both in scope and content), and the relative ease of access to those methods.

#### Measurement of ODS

Operators of destruction facilities should take all necessary precautions concerning the storage and inventory control of ODS-containing material received for destruction. Prior to feeding the ODS to the approved destruction process, the following procedures are recommended:

- (a) the mass of the ODS-containing material should be determined, where practicable;
- (b) representative samples should be taken, where appropriate, to verify that the concentration of ODS matches the description given on the delivery documentation;
- (c) samples should be analyzed by an approved method. If no approved methods are available, the adoption of United States EPA methods 5030 and 8240 is recommended;
- (d) all records from these mass and ODS-concentration measurements should be documented and kept in accordance with ISO 9000 or equivalent.

#### Control systems

Operators should ensure that destruction processes are operated efficiently to ensure complete destruction of ODS to the extent that it is technically feasible for the approved process. This will normally include the use of appropriate measurement devices and sampling techniques to monitor the operating parameters, burn conditions and mass concentrations of the pollutants that are generated by the process.

Gaseous emissions from the process need to be monitored and analyzed using appropriate instrumentation. This should be supplemented by regular spot checks using manual stack-sampling methods. Other environmental releases, such as liquid effluents and solid residues, require laboratory analysis on a regular basis.

The continuous monitoring recommended for ongoing process control, including off-gas cleaning systems, is as follows:

- (a) measurement of appropriate reaction and process temperatures;
- (b) measurement of flue gas temperatures before and after the gas cleaning system;
- (c) measurement of flue gas concentrations for oxygen and carbon monoxide.

Any additional continuous monitoring requirements are subject to the national regulatory authority that has jurisdiction. The performance of online monitors and instrumentation systems must be periodically checked and validated. When measuring detection limits, error values at the 95 per cent confidence level should not exceed

20 per cent.

Approved processes must be equipped with automatic cut-off control systems on the ODS feed system, or be able to go into standby mode whenever:

- (a) the temperature in the reaction chamber falls below the minimum temperature required to achieve destruction;
- (b) other minimum destruction conditions stated in the performance specifications cannot be maintained.

#### Performance measurements

The approval of technologies recommended by TEAP is based on the destruction capability of the technology in question. It is recognized that the parameters may fluctuate during day-to-day operation from this generic capability. In practice, however, it is not possible to measure against performance criteria on a daily basis. This is particularly the case for situations where ODS only represents a small fraction of the substances being destroyed, thereby requiring specialist equipment to achieve detection of the very low concentrations present in the stack gas. It is therefore not uncommon for validation processes to take place annually at a given facility.

With this in mind, TEAP is aware that the measured performance of a facility may not always meet the criteria established for the technology. Nonetheless, TEAP sees no justification for reducing the minimum recommendations for a given technology. Regulators, however, may need to take these practical variations into account when setting minimum standards.

The ODS destruction and removal efficiency for a facility operating an approved technology should be validated at least once every three years. The validation process should also include an assessment of other relevant stack gas concentrations identified in annex II to decision XV/[...] and a comparison with maximum levels stipulated in relevant national standards or international protocols/treaties.

Determination of the ODS destruction and removal efficiency and other relevant substances identified in annex IV to the present report should also be followed when commissioning a new or rebuilt facility or when any other significant change is made to the destruction procedures in a facility to ensure that all facility characteristics are completely documented and assessed against the approved technology criteria.

Tests shall be done with known feed rates of a given ODS compound or with well-known ODS mixtures. In cases where a destruction process incinerates halogen-containing wastes together with ODS, the total halogen load should be calculated and controlled. The number and duration of test runs should be carefully selected to reflect the characteristics of the technology.

In summary, the destruction and removal efficiency recommended for concentrated sources means that less than 0.1 gram of total ODS should normally enter the environment from stack-gas emissions when 1,000 grams of ODS are fed into the process. A detailed analysis of stack test results should be made available to verify emissions of halogen acids and polychlorinated dibenzodioxin and dibenzofuran (PCDD/PCDF). In addition, a site-specific test protocol should be prepared and made available for inspection by the appropriate regulatory authorities. The sampling protocol shall report the following data from each test:

- (a) ODS feed rate;
- (b) Total halogen load in the waste stream;
- (c) Residence time for ODS in the reaction zone;
- (d) Oxygen content in flue gas;
- (e) Gas temperature in the reaction zone;
- (f) Flue gas and effluent flow rate;
- (g) Carbon monoxide in flue gas;
- (h) ODS content in flue gas;
- (i) Effluent volumes and quantities of solid residues discharged;
- (j) ODS concentrations in the effluent and solid residues;
- (k) Concentration of PCDD/PCDF, particulates, HCl, HF and HBr in the flue gases;
- (l) Concentration of PCDD/PCDF in effluent and solids.

(UNEP/OzL.Pro.15/9, Decision XV/9).





**ANNEX VII.4: PROPOSAL OF THE GOVERNMENTS OF AUSTRIA AND JAPAN ON COLLECTION, RECOVERY, RECYCLING, TRANSPORTATION AND DESTRUCTION OF OZONE-DEPLETING SUBSTANCES**

The Governments of Austria and Japan recommended that the Executive Committee request the Secretariat to undertake a study with the aim of providing information and recommendations on collection and disposal/destruction of redundant ozone-depleting substances (ODS) with special attention to the following aspects:

- (a) actual current need of collection and disposal of unwanted and/or non-reusable ODS taking into account existing reclamation capacity and possibility to reuse ODS in other countries with remaining demand;
- (b) possible synergies with global need to handle and dispose persistent organic pollutants and hazardous wastes, as covered by the Stockholm and Basel Conventions;
- (c) possible options and related costs associated with measures against unwanted and/or non-reusable ODS, both from diluted and concentrated sources, including construction and operations of such hazardous waste destruction facility and use of existing facility and establishment of regional management capacity;
- (d) options on how to ensure that destruction does not result in additional production or imports of ODS;
- (e) existing global capacity for disposal of waste ODS taking into account acceptance of ODS import for the purpose of destruction;
- (f) key measures that would be needed to ensure sustainability of initiatives/investments to handle ODS based upon normal market business models.

*(UNEP/OzL.Pro/ExCom/46/47, Decision 46/36, para. 156).*



