Open-ended Working Group of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer
Twenty-seventh meeting
Nairobi, 4–7 June 2007
Item 13 of the provisional agenda*

Discussion of any proposed adjustments to the Montreal Protocol

Proposed adjustments to the Montreal Protocol

Note by the Secretariat

Pursuant to paragraph 9 of Article 2 of the Montreal Protocol, the Secretariat is circulating in the annexes to the present note six proposals for adjustment of the Montreal Protocol submitted by the Federated States of Micronesia; Mauritania; Mauritius; the United States of America; Argentina and Brazil, jointly; and Iceland, Norway and Switzerland, jointly.

The text of each proposal is circulated as received and has not been formally edited by the Secretariat. The proposal of the Federated States of Micronesia is a revised version of the proposal previously posted on the Secretariat website in document UNEP/OzL.Pro.WG.1/27/8. The proposal of Mauritania is unchanged from the version posted on the Secretariat website in document UNEP/OzL.Pro.WG.1/27/8/Rev.1 except that in the present document it is presented as a translation of the original, which was submitted in French. The proposals of the Federated States of Micronesia, the United States of America and the joint proposal of Iceland, Norway and Switzerland are unchanged from the versions that appear in document UNEP/OzL.Pro.WG.1/27/8/Rev.1. The proposal of Mauritius and the joint proposal of Argentina and Brazil are appearing for the first time in the present document.

The present document thus includes in its annexes all proposals for adjustment of the Protocol received by the Secretariat to date and supersedes documents UNEP/OzL.Pro.WG.1/27/8 and UNEP/OzL.Pro.WG.1/27/8/Rev.1.

* UNEP/OzL.Pro.WG.1/27/1.
Annex I

Proposal by the Federated States of Micronesia

PROPOSAL TO ADJUST THE MONTREAL PROTOCOL

1. The Federated States of Micronesia propose to adjust the Montreal Protocol to accelerate the phase-out schedule of HCFCs in Article 5 Parties and non-Article 5 Parties and to allow for continued use of HCFCs that provide superior environmental benefits, as well as essential uses.

ACCELERATED HCFC PHASE-OUT FOR ARTICLE 5 PARTIES

2. For Article 5 Parties, the control measures for HCFCs will be adjusted to:
   - Freeze production and consumption of HCFCs in [2016] at a base level of either consumption levels in [2015] or [100% + X%] of consumption levels in [2006], whichever is less.
   - Implement a step-wise reduction schedule:
     - Reduce production and consumption by [65%] of base level by [2020].
     - Reduce production and consumption by [90%] of base level by [2025]
     - Reduce production and consumption by [99.5%] of base level by [2030], allowing production and consumption of [0.5%] of base level for servicing existing equipment.
     - Reduce production and consumption by [100%] of base level by [2040].

3. Permit additional production and consumption of [15%] of base level at each stage of the reduction schedule to meet basic domestic needs of Article 5 Parties.

4. Allow continued use of HCFCs where there are superior environmental benefits and provide essential use exemptions where appropriate, with the possibility of destruction offsets.

CONDITIONS FOR ACCELERATED HCFC PHASE-OUT FOR ARTICLE 5 PARTIES

5. The control measures of this Adjustment for Article 5 Parties are subject to the following conditions:

   (a) The Multilateral Fund shall meet, on a grant basis, all the incremental costs of Article 5 Parties to enable their compliance with the control measures of this Adjustment.

   (b) Future replenishment of the Multilateral Fund shall take into account the needs of Article 5 Parties in accordance with paragraph (a).
(c) The alternatives, substitutes, and related technologies necessary to enable compliance with the control measures of this Adjustment must be expeditiously provided to the Article 5 Parties.

(d) Adequate supplies of the required HCFCs to meet basic domestic needs of Article 5 Parties shall be assured until [2040].

(e) Compliance of the Article 5 Parties with the control measures of this Adjustment will depend on effective implementation of the above conditions, which can be further enhanced by strengthening compliance and enforcement capacity.

(f) Paragraphs 4, 5, 6, and 7 of Article 5 of the Montreal Protocol at present shall be extended to include the control measures of this Adjustment.

6. The current guidelines of the Multilateral Fund regarding not providing funding to any ODS facility established after July 1995 or to any facility or enterprise that received assistance from the Multilateral Fund to transition to HCFCs must be modified to be consistent with the control measures of this Adjustment regarding an accelerated phase-out of HCFCs.

ACCELERATED PHASE-OUT FOR NON-ARTICLE 5 PARTIES

7. For non-Article 5 Parties, the control measures for HCFCs will be adjusted to:
   - Accelerate the step-wise reduction schedule:
     - Reduce production and consumption by [90%] of base level by [2010].
     - Reduce production and consumption by [99.5%] of base level by [2015], allowing production and consumption of [0.5%] of base level for servicing existing equipment.
     - Reduce production and consumption by [100%] of base level by [2030].

8. Allow continued use of HCFCs where there are superior environmental benefits and provide essential use exemptions where appropriate, with the possibility of destruction offsets.
BACKGROUND NOTE FOR PROPOSED ADJUSTMENT
FEDERATED STATES OF MICRONESIA

Summary

1. The Proposed Adjustment to the Montreal Protocol submitted by the Federated States of Micronesia will accelerate the phase-out of HCFCs, promote use of ozone- and climate-friendly substitutes, and drive innovation to develop more energy efficient equipment, processes, and chemicals. This will ensure a quicker recovery of the ozone layer and provide further reductions of climate emissions, which in turn will help delay global temperatures from rising past the tipping point for abrupt non-linear climate change.

2. The Montreal Protocol has successfully phased-out production of most ozone-depleting substances (ODSs), and may be the world’s most effective international environmental treaty. Because ODSs are also powerful greenhouse gases, the Montreal Protocol also has made a substantial contribution to mitigating climate change.

3. By 2010, the Montreal Protocol will reduce greenhouse gas emissions by about 11 GtCO₂-eq./yr⁻¹, which is 5-6 times greater than the Kyoto Protocol’s emissions reductions targeted for 2012. As a result, the Montreal Protocol has delayed climate change by an estimated 10 years—meaning that without it, the impacts of climate change would be up to 10 years further along, according to a new study by Guus J. M. Velders, et. al., The Importance of the Montreal Protocol in Protecting Climate, Proceedings of the U. S. National Academy of Sciences (March 2007).

4. This delay has bought the countries most threatened by climate change, including low-lying island and coastal states, temporary insurance against rising sea levels and other climate impacts, by delaying global temperatures from rising past the “tipping point” for abrupt non-linear changes to the climate—such as the rapid melting of the Greenland Ice Sheet, which ultimately can raise sea levels up to 7 meters. There is growing concern that without immediate action, this tipping point may be as near as 10 years away.

5. Velders et al. note further benefits to climate protection from additional adjustments to the Montreal Protocol, including those in the Proposed Adjustment accelerating the phase-out of HCFCs through a step-wise reduction schedule that will ensure immediate, continuous, and measurable progress.

6. The Proposed Adjustment allows, until 2015, for the possibility of controlled growth in HCFCs that may be economically essential, and it is conditioned on non-Article 5 Parties providing financial assistance to Article 5 Parties through the Multilateral Fund for all incremental costs of the accelerated phase-out.

7. The Proposed Adjustment also accelerates the phase-out of HCFCs for non-Article 5 Parties in a similar step-wise manner.
8. The Proposed Adjustment allows for the continued use of HCFCs that provide superior environmental benefits, and for essential uses as well. Superior environmental benefits, such as greater energy efficiency, can be identified by a Life-Cycle Climate Performance analysis. This will drive innovation, including in energy efficiency, which can significantly lower costs and reduce greenhouse gas emissions.

9. The climate benefits from the Proposed Adjustment could be as much or greater than the Kyoto Protocol’s initial targeted emissions reductions, making the adjustment one of the most cost-effective strategies for mitigating climate change and avoiding catastrophic sea level rise and other climate-related impacts, while also protecting the ozone layer.

Benefits to the Ozone Layer from Accelerating the Phase-Out of HCFCs

10. Destruction of the ozone layer causes cataracts and skin cancer, suppresses the human immune system, degrades ecosystems, and damages agricultural productivity, among other impacts. The 2006 UNEP/WMO Scientific Assessment Report found that an accelerated phase-out of HCFCs would reduce the risk of future ozone depletion.

Benefits to the Climate from Accelerating the Phase-Out of HCFCs

11. Velders, et al. show that, in addition to reducing the risk of future ozone depletion, strengthening the Montreal Protocol will reduce climate emissions and further delay climate impacts including sea-level rise. The study estimates that an accelerated HCFC phase-out and other measures could avoid emissions of 1.2 GtCO₂-eq. yr⁻¹ by 2015.

12. The overall climate benefits will depend on the extent of the technological innovation promoted by the measures, including using low GWP substitutes, promoting and improving energy efficiency, reducing the size of the refrigerant charge needed, and reducing the leak rate of equipment. According to Velders, et al., in past phase-outs, about 80% of ODSs were replaced by non-fluorocarbon chemicals, which do not deplete the ozone layer, including not-in-kind chemical substitutes and product alternatives (e.g. a roll-on deodorant vs. spray can), changes in manufacturing processes, and conservation.

13. Accelerating the phase-out of HCFCs will reduce the adverse impacts on the climate from HCFCs, as well as from CTC emissions and from emissions of HFC-23, a “super greenhouse gas” that is a by-product of HCFC-22 production.

Benefits to Climate from Allowing Continued Use of HCFCs that Provide Superior Environmental Benefits; Essential Uses

14. To ensure that further reductions in ODSs mitigate rather than exacerbate climate change, the Proposed Adjustment allows for the continued use of HCFCs in applications with near-zero emissions that provide a demonstrated superior environmental benefit. This will help coordinate ozone and climate protection and ensure that efforts to address one global environmental problem do not exacerbate another global problem, and that opportunities of one treaty to help solve the problem of the other are realized. It also will
drive technological innovation and encourage competition to develop environmentally
superior substitutes and technologies.

15. Superior benefits can be determined by a Life Cycle Climate Performance analysis,
which measures the direct impacts from a chemical’s (or other substitute’s) GWP and
ODP, as well as indirect impacts from by-product emissions, including emissions of
greenhouse gases associated with power generation.

16. Continued use of HCFCs under this provision can be subject to periodic review by the
Montreal Protocol’s Technology and Economic Assessment Panel (TEAP), so that any
HCFC use will continue only until the development of superior substitutes, assuming
continued use of existing equipment through its life-span.

17. Further ozone and climate protection may be achieved by requiring the recovery and
destruction of ODSs contained in banks that would otherwise be emitted into the
atmosphere, by an ODP-weighted amount equal to or greater than the amount of HCFC
allowed.

18. Phase-outs under the Montreal Protocol also traditionally have allowed for exemptions
for essential or critical uses of ODSs to meet economic, health, safety, and environmental
needs, as provided in the Proposed Adjustment.

Ensuring Technical and Economic Feasibility

19. An accelerated phase-out of HCFCs is technically and economically feasible. Substitutes
exist for all but highly specialized HCFC applications. Further analysis could be provided
by the TEAP as appropriate before the September meeting.

Conditioning Accelerated Phase-Out on Full Funding for All Incremental Costs

20. The Proposed Adjustment is conditioned on replenishment of the Multilateral Fund at
appropriate levels to provide financial assistance to meet, on a grant basis, the full
incremental costs of an accelerated HCFC phase-out for Article 5 Parties.

21. Without the accelerated phase-out in the Proposed Adjustment, there is no obligation to
fund any control measures; however, a combination of adjustments and decisions can
ensure funding is available at the next replenishment for an accelerated HCFC phase-out.

Conclusion

22. Consideration of the Proposed Adjustment at the 20th Anniversary Meeting of the
Montreal Protocol in September 2007 will ensure full and complete discussion of one of
the most important challenges confronting the ozone layer and the climate today and
allow the Parties to request the TEAP to further assess the technological and economic
implications of the accelerated phase-out as part of the study for the upcoming
Multilateral Fund replenishment.
Annex II

Proposal by Mauritania

Proposal to adjust the Montreal Protocol

1. The Islamic Republic of Mauritania proposes to adjust the Montreal Protocol to accelerate the phase-out schedule of HCFCs in Article 5 Parties and non-Article 5 Parties and also to allow for the continued use of HCFCs that provide superior environmental benefits and that are essential uses.

Accelerated HCFC phase-out for Article 5 Parties

2. For Article 5 Parties, the control measures for HCFC will be adjusted to the following level:

- Freeze production and consumption of HCFCs in [2016] at a base level either of consumption levels in [2015] or [100% + X%] of consumption levels in [2006], whichever is less.

- Implement an “unintelligent” step-wise reduction schedule:
  
  - Reduce production and consumption by (65%) of base level by [2020];
  - Reduce production and consumption by (90%) of base level by [2025];
  - Reduce production and consumption by (99.5%) of base level by [2030], allowing production and consumption of [0.5%] of base level for servicing existing equipment;
  - Reduce production and consumption by (100%) of base level by [2040].

3. Permit additional production and consumption of (15%) of base level for Article 5 Parties at each stage of the reduction schedule so that Article 5 Parties can meet domestic needs.

4. Allow the continued use of HCFCs when they have significant environmental benefits such as energy efficiency and when the substances are used instead of HCFCS controlled by the Kyoto Protocol on condition of the destruction of the equivalent (or Xo/o) to the base level quantity of ozone-depleting substances.

5. Provision of essential-use exemptions where appropriate.

Conditions for accelerated HCFC phase-out for Article 5 Parties

6. The control measures for this reform for Article 5 Parties are subject to the following conditions:

   (a) The Multilateral Fund shall respond, on a grant basis, to any other increase of the Fund for Article 5 Parties to enable their compliance with the control measures of this Adjustment;

   (b) All future replenishment of the Multilateral Fund shall take into account the needs of Article 5 Parties, in accordance with paragraph (a);

   (c) The alternatives, substitutes and all the related technologies necessary to enable compliance with the control measures of this adjustment shall be provided expeditiously to the Article 5 Parties;
(d) Adequate supplies of the HCFCs required for the basic domestic needs of Article 5 Parties shall be assured until [2040];

(e) Compliance of the Article 5 Parties with the control measures of this adjustment will depend on effective implementation of the above-mentioned conditions, which will be further enhanced by the strengthening of compliance and enforcement capacities;

(f) Paragraphs 4, 5, 6, and 7 of Article 5 of the Montreal Protocol shall be understood to include the control measures of this adjustment.

7. The current guidelines of the Multilateral Fund regarding not providing funding to any ozone-depleting substance facility established after July 1995 or to any facility or company that has received assistance from the Multilateral Fund to transition to HCFC must be modified to be consistent with the control measures of this adjustment regarding the accelerated phase-out of HCFCs.

Accelerated phase-out for non-Article 5 Parties

8. For non-Article 5 Parties, the control measures for HCFCs will be adjusted as follows:

- Accelerate the step-wise reduction schedule:
  - Reduce production and consumption by (90%) of base level by [2010];
  - Reduce production and consumption by (99.5%) of base level by [2015] allowing production and consumption of (0.5%) of base level for servicing existing equipment;
  - Reduce production and consumption by (100%) of base level by [2030].

9. Allow continued use of HCFCs where they provide significant environmental benefits such as energy efficiency and when the substances are used instead of HCFCS controlled by the Kyoto Protocol on condition of the destruction of the equivalent (or Xo/o) to the base level quantity of ozone-depleting substances.

10. Allow essential-use exemptions where appropriate.
Annex III

Proposal by Mauritius

Montreal Protocol: Proposed Adjustment Decision

Recalling the global spirit of cooperation in protecting the fragile stratospheric ozone layer,

Recognizing that measures to safeguard the ozone layer also provide significant reductions in climate emissions,

Noting the conclusion of the 2006 Scientific Assessment Report that significant gains in mitigating depletion of the ozone layer can be achieved by accelerating the reduction and phase-out of HCFCs,

Aware that Article 5 Parties have continued to increase HCFC consumption, that further increases in HCFC consumption may delay the recovery of the ozone layer, that HCFC-based equipment have life-spans of up to 40 years, and that emissions of HCFC-22 and its HFC-23 byproduct are contributing to climate change,

Recognizing that increasing the number of facilities for recovery, recycling, and destruction of HCFCs would allow for significant reclamation of HCFCs,

Noting the challenges and constraints for the sustained and cost-effective availability of environmentally-friendly alternatives for HCFCs and for access to technology and financial assistance to facilitate the transition by Article 5 Parties,

Acknowledging the solemn commitment of non-Article 5 Parties to finance the incremental costs of the phase-out of ozone-depleting substances,

Mindful that there are currently no provisions regarding financial assistance for Article 5 Parties for accelerating the phase-out of HCFCs, and considering the preliminary findings of the survey on the challenges to providing technical and financial assistance to Article 5 Parties for transitioning out of HCFCs,

Aware that the Special Report on Safeguarding the Ozone and Global Climate System, issued jointly by the Technology and Economic Assessment Panel and the Intergovernmental Panel on Climate Change, cautioned that the Montreal Protocol’s controls of ozone-depleting substances is one of the causes of increased use of HFCs, which are very potent greenhouse gases,

Desiring to ensure that measures taken to protect the ozone layer do not exacerbate global climate change,

Noting that both the ozone layer and the climate will benefit from prompt action by the Parties, and that this proposal will ensure a complete and thorough discussion of challenges facing the Montreal Protocol and create the opportunity for action at the 19th Meeting of the Parties in September 2007,

The 19th Meeting of the Parties decides:

1. To adjust the Montreal Protocol, as provided for in paragraph 9 of Article 2, to accelerate the phase-out of HCFCs in Article 5 Parties and non-Article 5 Parties and to allow for continued use of HCFCs that provide significant environmental benefits, and essential uses.

2. For Article 5 Parties, the control measures for HCFCs will be adjusted to freeze production and consumption of HCFCs in 2016 at a base level of the [average of the three years 2010 to 2012], and implement a step-wise reduction schedule by adjusting controlled substances in Group I of Annex C, as follows:
(a) Each Party operating under paragraph 1 of this Article shall ensure that for the twelve month period commencing on 1st January 2020, and in each twelve month period thereafter, its calculated levels of consumption and production of the controlled substances in Group I of Annex C do not exceed, annually, [thirty five] percent of the respective base levels.

(b) Each Party operating under paragraph 1 of this Article shall ensure that for the twelve month period commencing on 1st January 2025, and in each twelve month period thereafter, its calculated levels of consumption and production of the controlled substances in Group I of Annex C do not exceed, annually, [ten] percent of the respective base levels.

(c) Each Party operating under paragraph 1 of this Article shall ensure that for the twelve month period commencing on 1st January 2030, and in each twelve month period thereafter, its calculated levels of consumption and production of the controlled substances in Group I of Annex C do not exceed, annually, [one half] percent of the respective base levels. The production and consumption levels permitted by this subparagraph shall be restricted to servicing of refrigeration and air conditioning equipment existing on 1 January 2030.

3. Allow [15%] of base level for additional production and consumption at each stage of the reduction schedule until the phase out date to meet basic domestic needs of Article 5 Parties.

4. Allow continued use of HCFCs for certain uses where there are significant environmental benefits, conditioned on the destruction of existing ozone-depleting substances, where:

(a) such uses would yield a significant environmental benefit, based on factors to include climate benefits, improved energy efficiency, decreased demand for substances controlled under the Kyoto Protocol, and reduced emissions of ozone-depleting substances, and

(b) an amount of ozone-depleting substances is destroyed that is [200] percent greater, on an ozone-depleting-potential-weighted basis, than the amount exempted.

5. Allow essential use exemptions for HCFCs as appropriate.

6. The control measures of this Adjustment for Article 5 Parties are subject to the following conditions:

(a) The Multilateral Fund shall meet, on a grant basis, all the phase-out related or incremental costs of Article 5 Parties to enable their compliance with the control measures of this Adjustment.

(b) Future replenishment of the Multilateral Fund shall take into account the specific needs of Article 5 Parties, in particular LVCs, in accordance with paragraph (a).

(c) The alternatives, substitutes, and related technologies necessary to enable compliance with the control measures of this Adjustment shall be expeditiously provided to the Article 5 Parties.

(d) Adequate supplies of the required HCFCs to meet basic domestic needs of Article 5 Parties shall be available until [2040].

(e) Compliance of the Article 5 Parties with the control measures of this Adjustment will depend on effective implementation of the above conditions.

(f) Paragraphs 4, 5, 6, and 7 of Article 5 of the Montreal Protocol at present shall be extended to include the control measures of this Adjustment.

7. The current guidelines of the Multilateral Fund, to the extent that they do not provide funding to any ODS facility established after July 1995 or to any facility or enterprise that received assistance from the Multilateral Fund to transition to HCFCs, must be modified to be consistent with the control measures of this Adjustment regarding an accelerated phase-out of HCFCs.
8. For non-Article 5 Parties, the HCFC control measures in Article 2F will be adjusted to accelerate the step-wise reduction schedule, as follows:

(a) Reduce production and consumption by [90%] of base level by [2010]; and

(b) Reduce production and consumption by [99.5%] of base level by [2015], allowing production and consumption of [0.5%] of base level for servicing existing equipment.

9. Allow continued use of HCFCs for certain uses where there are significant environmental benefits, conditioned on the destruction of existing ozone-depleting substances, where:

(a) such uses would yield a significant environmental benefit, based on factors to include climate benefits, improved energy efficiency, decreased demand for substances controlled under the Kyoto Protocol, and reduced emissions of ozone-depleting substances, and

(b) an amount of ozone-depleting substances is destroyed that is [200] percent greater, on an ozone-depleting-potential-weighted basis, than the amount exempted.

10. Allow essential use exemptions for HCFCs as appropriate.
Annex IV

Proposal by the United States of America

Adjustment Proposal from the United States of America to Accelerate the HCFC Phaseout Goal

To speed recovery of the ozone layer by accelerating the phaseout of HCFCs.

Background

The Montreal Protocol has already made tremendous strides in ending consumption of ozone depleting substances (ODS). The United States consumed more than 2 million pounds per year of ODS when the Montreal Protocol was signed in 1987. To date, we have ended the production and import of over 1.8 million pounds per year of ozone depleting chemicals—a 90% reduction.

An acceleration of the phase-out of hydrochlorofluorocarbons (HCFCs) offers opportunities to speed ozone layer recovery as well as potential climate benefits. Under the Protocol, the Parties have agreed to limit consumption of HCFCs and to phase out consumption, culminating in a complete phase-out for non-Article 5(1) Parties in 2030 and for Article 5(1) Parties in 2040. For non-Article 5(1) Parties the phase-out happens with reduction steps leading to the final date (see Graph 1 for current HCFC consumption reduction schedule).

HCFCs are mainly used in air-conditioning and refrigeration equipment. The Technology Economic Assessment Panel (TEAP) estimates that approximately 75% of global HCFC use is in air-conditioning and refrigeration sectors and is predominantly HCFC-22. HCFCs are also used as foam blowing agents, as solvents and as fire suppressants. There are technically feasible and now commercially available alternatives for most HCFCs applications.

Graph 1—Existing Montreal Protocol Consumption Reduction Schedule (UNEP Handbook for the Montreal Protocol on Substances that Deplete the Ozone Layer, 2006)
Proposed HCFC Acceleration Adjustment

An acceleration of the existing HCFC phase-out schedule represents an opportunity for hastening recovery of the ozone layer and lowering risks to human health. It is important also to take into account the positive and negative implications of this proposal with respect to climate change. As Parties consider the elements in this proposal, we should analyze and consider not only the benefits to the stratospheric ozone layer, but the possible impacts on the climate system as well.

The proposed elements of an adjustment to the HCFC phase-out listed below are not mutually exclusive. The Parties might choose multiple ways of accelerating the phase-out of HCFCs, and can implement all elements simultaneously. The estimated emission reductions from the current schedule are compared below in Table 1 for the various proposed elements. Each option will contribute to faster recovery of the ozone layer, and also may benefit the climate system once energy gains are calculated.

Table 1 – Proposed HCFC Accelerated Phaseout Elements

<table>
<thead>
<tr>
<th>Element</th>
<th>Proposal</th>
<th>% Emission Reduction from “Business As Usual”</th>
<th>Tonnage Reduction (ODP tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Adding Interim Reduction Steps for Article 5(1) Parties&lt;br&gt; - 2020 = 65 % reduction&lt;br&gt; - 2025 = 90 % reduction</td>
<td>41%</td>
<td>472,000</td>
</tr>
<tr>
<td>2</td>
<td>Setting an Earlier Baseline Date for Developing Countries&lt;br&gt; - 2010 instead of 2015</td>
<td>28%</td>
<td>319,000</td>
</tr>
<tr>
<td>3</td>
<td>Setting an Earlier Phaseout Date for Developed and Developing Countries (10 years earlier for both)&lt;br&gt; - 2020 instead of 2030 for non A5(1) Parties&lt;br&gt; - 2030 instead of 2040 for A5(1) Parties</td>
<td>25%</td>
<td>290,000</td>
</tr>
<tr>
<td>4</td>
<td>Phasing Out HCFCs on a “Worst First” Basis – split into two groups with advanced reductions for worst*</td>
<td>25%</td>
<td>290,000</td>
</tr>
</tbody>
</table>

*Adopting an approach that more quickly reduces the use of the HCFCs that are most damaging to the ozone layer and most commonly used, is referred to as a “worst first” approach, and is a cost-effective way to achieve near-term ozone layer benefits. The estimated emission reductions from the “worst first” approach is a very preliminary calculation that assumes that HCFC-141b, HCFC-22, and HCFC-142b are grouped together and made subject to advanced reductions in their phase-out.
Legal Text - Adjustments

Article 2F: Hydrochlorofluorocarbons

(1) To the end of Paragraph 3, the following sentence shall be added:

Each Party shall also ensure that its calculated level of consumption of HCFC-141b, HCFC-22, or HCFC-142b for the same periods does not exceed, annually, twenty-five per cent of the sum referred to in paragraph 1 of this Article [on a pro-rated ODP basis];

(2) To the end of Paragraph 4, the following sentence shall be added:

Each Party shall also ensure that its calculated level of consumption of HCFC-141b, HCFC-22, or HCFC-142b for the same periods does not exceed, annually, five per cent of the sum referred to in paragraph 1 of this Article [on a pro-rated ODP basis];

(3) Paragraph 5 shall be replaced with the following text:

Each Party shall ensure that for the twelve-month period commencing on 1 January 2020, and in each twelve-month period thereafter, its calculated level of consumption of the controlled substances in Group I of Annex C does not exceed zero;

(4) Paragraph 6 shall be deleted. Accordingly, the current paragraph 7 shall be re-numbered “6”, and the current paragraph 8 shall be re-numbered “7”.

Article 5 (8 ter): Special Situation of Developing Countries, Hydrochlorofluorocarbons

(1) In paragraph 8 ter (a), for the word “2016” in both sentences, there shall be substituted the word “2011”, and for the word “2015” in both sentences, there shall be substituted the word “2010”.

(2) The following subparagraphs shall be inserted in paragraph 8 ter between the current subparagraphs (a) and (b):

(b) Each Party operating under paragraph 1 of this Article shall ensure that for the twelve-month period commencing on 1 January 2020, and in each twelve-month period thereafter, its calculated level of consumption of the controlled substances in Group I of Annex C does not exceed, annually, thirty-five per cent of its calculated level of consumption of these substances in 2010. Each Party shall also ensure that its calculated level of consumption of HCFC-141b, HCFC-22, or HCFC-142b for the same periods does not exceed, annually, twenty-five per cent of its calculated level of consumption of these substances in 2010;

(c) Each Party operating under paragraph 1 of this Article shall ensure that for the twelve-month period commencing on 1 January 2025, and in each twelve-month period thereafter, its calculated level of consumption of the controlled substances in Group I of
Annex C does not exceed, annually, ten per cent of its calculated level of consumption of these substances in 2010. Each Party shall also ensure that its calculated level of consumption of HCFC-141b, HCFC-22, or HCFC-142b for the same periods does not exceed, annually, five per cent of its calculated level of consumption of these substances in 2010;

Accordingly, the current subparagraph (b) shall be re-lettered “(d)”, the current subparagraph (c) shall be re-lettered “(e)”, and the current subparagraph (d) shall be re-lettered “(f)”.

(3) In current subparagraph 8 ter (b), for the word “2040”, there shall be substituted the word “2030”.
Annex V

Proposal by Argentina and Brazil

BACKGROUND

Hydrochlorofluorocarbons (HCFCs) are both ozone-depleting substances (ODS) and greenhouse gases. They are classified as controlled substances under Annex-C Group-I of the Montreal Protocol. Their use, therefore, must be controlled and eventually phased-out. In accordance with the control schedule of the Montreal Protocol for Article-5 countries, production and consumption of HCFCs will be subject to a freeze at 2015 levels from 01 January 2016 and are required to be completely eliminated by 2040.

The Montreal Protocol has made significant progress phasing out ODS, while also contributing significantly in addressing climate change. In addition to their ozone depleting potential (ODP), HCFCs also have significant global warming impact due to their relatively high global warming potentials (GWP).

Argentina and Brazil recognize that bending the current significant growth rates to zero-growth in 2016, followed by phased reduction, cannot be achieved without addressing use patterns early on. This implies that actions to control/reduce consumption of HCFCs to ensure compliance with the 2016 freeze would need to be initiated well in advance of that date. Challenges and constraints for such actions include sustained and cost-effective availability of environment-friendly substitutes for HCFCs and access to technology and funding to facilitate transition without undue burden on the economic health of the country and on consumers and industry.

The adjustment proposed by Argentina and Brazil aims at ensuring that the Montreal Protocol is able to continue to provide support for reducing emissions of ODS to protect the ozone layer and, as an additional benefit, further contribute in avoiding dangerous climate change.

The proposed adjustment will contribute to reduce the risk of future ozone depletion, which causes cataracts and skin cancer, suppresses the human immune system, degrades ecosystems, and damages agricultural productivity. People living in countries in the southern hemisphere are particularly vulnerable to the harmful effects of ozone depletion since a hole in the ozone layer was detected above Antarctica in the mid-1980s. The ozone hole has expanded since then, and scientists announced last August that ozone recovery would be delayed until late in the 21st century, in part due to projected increases in emissions of HCFCs.

The proposed adjustment could also make a significant contribution to efforts under the UNFCCC and the Kyoto Protocol to reduce greenhouse gas emissions. This will depend on how the phase-out is structured, and how it drives innovation in new products, processes, and substitutes, including not-in-kind substitutes and conservation.

Management of HCFCs is a crucial activity to be undertaken at the earliest stage, supported, in Article 5 Parties, by adequate technical and financial assistance from the Multilateral Fund for the Implementation of the Montreal Protocol.

To move forward, Argentina and Brazil propose an adjustment of HCFC control measures of the Montreal Protocol to accelerate the phase-out schedule of HCFCs in non-Article 5 Parties and Article 5 Parties. In the case of the latter, this is conditioned to the approval of sufficient funding by the Executive Committee of the Multilateral Fund. Thus, a change in the funding criteria to allow funding of incremental costs associated with the “double transition” to HCFC-free technology is also proposed.
DECISION PROPOSAL

Noting that action under the Montreal Protocol has contributed to avoiding dangerous climate change by phasing out potent ozone-depleting substances which are also greenhouse gases,

Noting with concern that some alternatives to ozone-depleting substances are also significant greenhouse gases,

Taking into account that the Intergovernmental Panel on Climate Change and the Technology and Economic Assessment Panel highlighted hydrochlorofluorocarbons (HCFCs) as potent global warming substances,

Considering that the Scientific Assessment Panel has identified HCFCs as one of the best target groups to promote ozone layer recovery,

The Nineteenth Meeting of the Parties decides:

1. To adopt, in accordance with the procedure in paragraph 9 of Article 2 of the Montreal Protocol, the following adjustments and reductions of production and consumption of the controlled substances listed in Group I Annex C to the Protocol:

Accelerated HCFC Phase-Out for Article 5 Parties

2. For Article 5 Parties, the control measures for HCFCs will be adjusted to:
   o Freeze production and consumption of HCFCs in [2012] at a base level of consumption levels in [2010].
   o Implement a step-wise reduction schedule for each HCFC as follows:
     - By [2015] reduce production and consumption of:
       - HCFC-22, HCFC-141b and 142b by [20%] of base level
       - HCFC-123 and 124 by [10%] of base level
     - By [2020] reduce production and consumption of:
       - HCFC-22, HCFC-141b and 142b by [40%] of base level
       - HCFC-21, HCFC-123, HCFC-124 and HCFC-225 by [20%] of base level
     - By [2025] reduce production and consumption of:
       - HCFC-22, HCFC-141b and 142b by [65%] of base level
       - HCFC-21, HCFC-123, HCFC 124 and HCFC-225 by [30%] of base level
     - By [2030] reduce production and consumption of:
       - HCFC-22, HCFC-141b and 142b by [100%] of base level
       - HCFC-21, HCFC-123, HCFC 124 and HCFC-225 by [40%] of base level
     - By [2035] reduce production and consumption of:
       - HCFC-21, HCFC-123, HCFC 124 and HCFC-225 by [95%] of base level
     - By [2040] reduce production and consumption of:
       - HCFC-21, HCFC-123, HCFC 124 and HCFC-225 by [100%] of base level
     - By [2009] reduce production and consumption of all other HCFCs by [100%]

3. Permit additional production and consumption of [15%] of base level at each stage of the reduction schedule to meet Basic Domestic Needs of Article 5 Parties.

4. Allow continued use of HCFCs that are recommended by the Technology and Economic Assessment Panel, under criteria it establishes and recommends for approval by the Parties, where there are significant environmental benefits such as advantages in energy efficiency and where the substance is used in lieu of HFCs controlled under the Kyoto Protocol.

5. Allow essential use exemptions for HCFCs as appropriate.
Conditions for Accelerated HCFC Phase-Out for Article 5 Parties

6. That, in the fulfillment of the control schedule set out in paragraph 2 of this Decision, the following conditions shall be met:

(a) The Multilateral Fund shall meet, on a grant basis, all incremental costs of Parties operating under paragraph 1 of Article 5 to enable their compliance with the adjusted control measures on HCFCs. All HCFCs projects will be eligible for funding irrespective of their relative cost effectiveness;

(b) The Executive Committee of the Multilateral Fund should develop and apply specific criteria for HCFCs projects in order to decide which projects to fund first and to ensure that all Parties operating under paragraph 1 of Article 5 are able to meet their obligations regarding HCFCs adjusted control measures;

(c) Future replenishment of the Multilateral Fund should take into account the requirement to provide new and additional adequate financial and technical assistance to enable Parties operating under paragraph 1 of Article 5 to comply with the agreed adjusted control measures on HCFCs;

(d) The alternatives, substitutes and related technologies necessary to enable compliance with the agreed adjusted control measures on HCFCs must be expeditiously provided to Parties operating under paragraph 1 of Article 5 under fair and most favorable conditions in line with Article 10A of the Protocol;

(e) The Executive Committee should consider ways to enable and promote information exchange on HCFCs alternatives among Parties operating under paragraph 1 of Article 5 and from Parties not operating under paragraph 1 of Article 5 to Parties operating under that paragraph;

(f) The current decisions of the Multilateral Fund regarding funding eligibility are to be reviewed as to enable any HCFC conversion projects for manufacturing plants established after July 1995 to be eligible. Second funding eligibility rules for any enterprise that used the Fund assistance to shift to HCFCs in the past shall also be reviewed;

(g) The extent to which Article 5 Parties will effectively implement the schedule set out in paragraph 2 of this Decision will depend on the effective availability of the resources from the Multilateral Fund.

Accelerated Phase-Out for Non-Article 5 Parties

7. For non-Article 5 Parties, the control measures for HCFCs shall be adjusted to advance the phase-out of HCFC consumption and production to [2020], with appropriate intermediate stages.

8. Allow continued use of HCFCs that are recommended by the Technology and Economic Assessment Panel, under criteria it establishes and recommends for approval by the Parties, where there are significant environmental benefits such as advantages in energy efficiency and where the substance is used in lieu of HFCs controlled under the Kyoto Protocol.

9. Allow essential use exemptions for HCFCs as appropriate.
Annex VI

Proposal by Iceland, Norway and Switzerland

PROPOSAL FOR
ADJUSTMENT TO THE MONTREAL PROTOCOL ON SUBSTANCES THAT DEPLETE THE
OZONE LAYER RELATING TO CONTROLLED SUBSTANCES IN GROUP 1 OF ANNEX C

Acknowledging the significant challenges still facing the Montreal Protocol to ensure the recovery of the ozone layer to pre-1980 levels,

Noting the conclusion of the Scientific Assessment Panel that significant gains in mitigating depletion of the ozone layer can be achieved by accelerating the reduction and phase-out of hydrochlorofluorocarbons;

Recalling the global spirit of cooperation in protecting the stratospheric ozone layer and the commitment of developed countries to finance the incremental costs of the phase out of ozone-depleting substances,

The Nineteenth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer decides to adopt, in accordance with the procedure laid down in paragraph 9 of Article 2 of the Protocol and, on the basis of the assessments made pursuant to Article 6 of the Protocol, the adjustments and reductions of production and consumption of the controlled substances listed in group 1 of Annex C to the Protocol as set out in annex (…) to the report of the Nineteenth Meeting of the Parties;

Annex (…)

ADJUSTMENTS AGREED AT THE NINETEENTH MEETING OF THE PARTIES RELATING TO THE CONTROLLED SUBSTANCES IN GROUP 1 OF ANNEX C

Article 2F: Hydrochlorofluorocarbons

The following paragraph shall be added after paragraph 8 of Article 2F of the Protocol:

9. Each Party producing one or more of these substances shall ensure that:

   (a) For the twelve month period commencing on 1 January 2010, and in each twelve-month period thereafter, its calculated level of production of the controlled substances in Group I of Annex C does not exceed, annually, thirty-five per cent of the calculated level referred to in paragraph 8 of this Article. However, in order to satisfy the basic domestic
needs of the Parties operating under paragraph 1 of Article 5, its calculated level of production may exceed that limit by up to ten per cent of its calculated level referred to in paragraph 8 of this Article.

(b) For the twelve month period commencing on 1 January 2015, and in each twelve-month period thereafter, its calculated level of production of the controlled substances in Group I of Annex C does not exceed, annually, ten per cent of the calculated level referred to in paragraph 8 of this Article. However, in order to satisfy the basic domestic needs of the Parties operating under paragraph 1 of Article 5, its calculated level of production may exceed that limit by up to ten per cent of its calculated level referred to in paragraph 8 of this Article.

(c) For the twelve month period commencing on 1 January 2020, and in each twelve-month period thereafter, its calculated level of production of the controlled substances in Group I of Annex C does not exceed, annually, zero point five per cent of the quantity referred to in paragraph 8 of this Article. However, in order to satisfy the basic domestic needs of the Parties operating under paragraph 1 of Article 5, its calculated level of production may exceed that limit by up to one per cent of its calculated level referred to in paragraph 8 of this Article.

(d) For the twelve month period commencing on 1 January 2030, and in each twelve-month period thereafter, its calculated level of production of the controlled substances in Group I of Annex C does not exceed zero. This paragraph will apply save to the extent that the Parties decide to permit the level of production that is necessary to satisfy uses agreed by the Meeting of the Parties to be essential.

**Article 5, paragraph 1 bis: Special situation of developing countries**

In paragraph 1 bis of Article 5 of the Protocol, for the phrase:

\[\text{decide by 1 January 1996.}\]

there shall be substituted:

\[\text{decide for the first time by 1 January 1996 and whenever appropriate thereafter}\]

In subparagraph (a) of paragraph 1 bis of Article 5 of the Protocol, for the word:

\[\text{consumption}\]

there shall be substituted:

\[\text{production and consumption}\]

**Article 5, paragraph 8 ter (a): Special situation of developing countries**
Pursuant to paragraph 1 *bis* above, subparagraph (a) of paragraph 8 *ter* of Article 5 of the Protocol shall be replaced by the following paragraph:

(a) Each Party operating under paragraph 1 of this Article shall ensure that for the twelve-month period commencing on 1 January 2015, and in each twelve-month period thereafter, its calculated levels of consumption of the controlled substances in Group I of Annex C does not exceed, annually, the lesser of:

i. its calculated level of consumption in 2014, or

ii. 152 percent of its calculated level of consumption in 2005;

Article 5, paragraph 8 *ter* subparagraphs (b) (c) (d): Special situation of developing countries

In paragraph 8 *ter* of Article 5 of the Protocol the following subparagraphs (b) (c) (d) shall be inserted after the subparagraph (a) above:

(b) As of 1 January 2010 each Party operating under paragraph 1 of this Article shall comply with the conditions set out in paragraph 7 of Article 2F.

(c) Each Party operating under paragraph 1 of this Article shall ensure that:

i. for the twelve month period commencing on 1 January 2020, and in each twelve-month period thereafter, its calculated level of consumption of the controlled substances in Group I of Annex C does not exceed, annually, sixty-five per cent of its calculated level of consumption referred to in subparagraph (a) of this Article.

ii. for the twelve month period commencing on 1 January 2025, and in each twelve-month period thereafter, its calculated level of consumption of the controlled substances in Group I of Annex C does not exceed, annually, thirty-five per cent of its calculated level of consumption referred to in subparagraph (a) of this Article.

iii. for the twelve month period commencing on 1 January 2030, and in each twelve-month period thereafter, its calculated level of consumption of the controlled substances in Group I of Annex C does not exceed, annually, zero point five per cent of its calculated level of consumption referred to in subparagraph (a) of this Article.

(d) Each Party operating under paragraph 1 of this Article shall ensure that for the twelve-month period commencing on 1 January 2040, and in each twelve-month period thereafter, its calculated level of consumption of the controlled substances in Group I of Annex C does not exceed zero. This paragraph will apply save to the extent that the Parties decide to permit the level of consumption that is necessary to satisfy uses agreed by the Meeting of the Parties to be essential.

Article 5, paragraph 8 *ter* (e), (f) and (g): Special situation of developing countries
Subparagraph (b) of paragraph 8 ter of Article 5 of the Protocol shall be replaced by the following subparagraphs (e), (f) and (g):

(e) Each Party operating under paragraph 1 of this Article producing one or more of the controlled substances in Group I of Annex C shall ensure that for the twelve-month period commencing on 1 January 2015, and in each twelve-month period thereafter, its calculated levels of production of the controlled substances in Group I of Annex C does not exceed, annually, the lesser of:

i. the average of its calculated levels of production and consumption in 2014, or

ii. 152 percent of the average of its calculated levels of production and consumption in 2005;

(f) Each Party operating under paragraph 1 of this Article producing one or more of the controlled substances in Group I of Annex C shall ensure that:

i. for the twelve month period commencing on 1 January 2020, and in each twelve-month period thereafter, its calculated level of production of the controlled substances in Group I of Annex C does not exceed, annually, sixty-five per cent of its calculated level of production referred to in subparagraph (e) of this Article. However, in order to satisfy the basic domestic needs of the Parties operating under paragraph 1 of Article 5, its calculated level of production may exceed the limits set above by up to ten per cent of its calculated level of production referred to in subparagraph (e) of this Article.

ii. for the twelve month period commencing on 1 January 2025, and in each twelve-month period thereafter, its calculated level of production of the controlled substances in Group I of Annex C does not exceed, annually, thirty-five per cent of its calculated level of production referred to in subparagraph (e) of this Article. However, in order to satisfy the basic domestic needs of the Parties operating under paragraph 1 of Article 5, its calculated level of production may exceed the limits set above by up to ten per cent of its calculated level of production referred to in subparagraph (e) of this Article.

iii. for the twelve month period commencing on 1 January 2030, and in each twelve-month period thereafter, its calculated level of consumption of the controlled substances in Group I of Annex C does not exceed, annually, zero point five per cent of its calculated level of production referred to in subparagraph (e) of this Article. However, in order to satisfy the basic domestic needs of the Parties operating under paragraph 1 of Article 5, its calculated level of production may exceed the limits set above by up to one per cent of its calculated level of production referred to in subparagraph (e) of this Article.

(g) Each Party operating under paragraph 1 of this Article producing one or more of the controlled substances in Group I of Annex C shall ensure that for the twelve month period commencing on 1 January 2040, and in each twelve-month period thereafter, its calculated
level of production of the controlled substances in Group I of Annex C does not exceed zero. This paragraph will apply save to the extent that the Parties decide to permit the level of production that is necessary to satisfy uses agreed by the Meeting of the Parties to be essential.

**Article 5, paragraph 8 ter (h) and (i): Special situation of developing countries**

Subparagraphs (c) and (d) of paragraph 8 ter of Article 5 of the Protocol shall be denoted as subparagraphs (h) and (i), respectively.

**Explanatory note**

This note explains briefly the rationale for the proposed adjustment to the Montreal Protocol and outlines the major elements of the proposal. It is intended to facilitate the consideration of the issues addressed in the proposal. The note is not part of the proposal.

Phasing-out of HCFCs has been highlighted by the 2006 Science Assessment as an important action to reduce the risk of future ozone depletion. Global levels of HCFC production and consumption are anticipated to increase in an uncontrolled manner in future years. According to the Technical and Economic Assessment Panel (TEAP) HCFC production and consumption will continue to grow uncontrolled in the period 2005-2015 in Article 5 (developing) Parties. In fact, the global production of HCFCs has greatly exceeded TEAP’s 1998 prediction of 163,000 tonnes by 2015. Without further action by the Parties, and assuming the current rate of increase, controlled HCFC production in Article 5 countries is likely to exceed 700,000 tonnes in 2015.

Article 5 Parties that commit to control measures such as stepwise reduction schedules become immediately eligible for receiving financial assistance from the Multilateral Fund (MLF) of the Protocol. As the terms of reference (ToR) of the MLF for the next triennium (2009-2011) are to be finalised in 2007, it is important that concrete control schedules on HCFC production and consumption in Article 5 Parties be timely adopted in order to enable deliberations on allocation of funds that will assist these Parties to comply with their commitments.

This proposal aims at accelerating the phasing-out of HCFCs and thus preventing the adverse consequences of a business as usual (BAU) scenario. To achieve this, the proposal introduces control measures which target:

1) The production of HCFCs in non-Article 5(1) and Article 5(1) Parties and
2) The consumption of HCFCs in Article 5(1) Parties.

The current control measures on HCFCs under the Montreal Protocol, as well as the major elements of the proposal are outlined in the following:

**Current control measures under the Montreal Protocol**

**Production of HCFCs**

Non-Article 5(1) Parties: Production freeze in 2004 at the base level of 1989 -
Indefinite production at the level of freeze from 2004 onwards

*Production levels can be exceeded by up to 15% of the base level in order to satisfy the Basic Domestic Needs (BDN) of the Parties.*
Article 5(1) Parties: Production freeze in 2016 at the base level of 2015 - Indefinite production at the level of freeze from 2016 onwards

Consumption of HCFCs


Proposal outline

The proposal calls for accelerated HCFC phase-out schedules which incorporate the following elements:

♦ Introduction of stepwise reduction plans in the HCFC production sectors for both non-Article 5 and Article 5 Parties, with phasing-out in 2030 and 2040, respectively.

♦ Introduction of a stepwise reduction plan in HCFC consumption for Article 5 Parties, with phasing-out in 2040.

♦ Matching production phase-out schedule with consumption phase out schedule in each group of Parties.

♦ Establishing the freeze for HCFC production and consumption in Article 5 countries in 2015.

♦ Establishing the baseline production and consumption levels for Article 5 Parties at either:
  - their calculated respective levels in 2014, or
  - 152% of their calculated respective levels in 2005, whichever is less.

The rationale for using 2005 production and consumption levels as the baselines for production and consumption phase out in Article 5 Parties, is that such an approach allows analysis of proposed control measures and their consequences in the light of known figures and, thus, more representative extrapolations than those based on figures for future years. It is also expected that with such provisions stimulation of future consumption and production could be avoided.

The figure 152% represents the factor between the 2005 HCFC consumption in the Article 5 Parties as reported to the Ozone Secretariat (19.8 ODP ktonnes) and their expected HCFC consumption in 2015 according to TEAP's mitigation scenario, estimated to be 30.1 ODP ktonnes. This figure is an update of the mitigation scenario value of 21 ODP ktonnes indicated in the November 2005 TEAP's supplemental report to the IPCC/TEAP special report. The revised value is obtained by multiplying the old value by a factor identical to that reflecting the increase between the 2015 BAU consumption figure of 489 ktonnes indicated in the above mentioned report and the latest updated corresponding value of 700 ktonnes reported by TEAP.

Freezing production and consumption levels in 2015 at the new baseline level (152% of 2005 levels), gives A5 Parties eight years to curb their production and consumption in order to reach the freeze level in 2015. Importantly, committing to such a control measure renders Article 5 Parties immediately eligible to receiving financial assistance from the MLF.

♦ Allowing a small percentage of production to satisfy basic domestic needs in Article 5 Parties.
Allowing essential use exemptions according to agreed criteria.

Requiring that in using HCFCs Article 5 Parties comply, by 2010, with the same conditions as applied to non-Article 5 Parties, namely, endeavouring to ensure that:
- HCFC use is limited to those applications where other more environmentally suitable alternative substances or technologies are not available.
- HCFC use outside the usual application areas occurs only in the rare cases where human life or human health is to be protected, and
- HCFCs are selected for use in a manner that not only minimises ozone depletion, but meets, additionally, other environmental, safety and economic considerations.

The current and proposed control measures on HCFC production and consumption are listed, respectively, in Tables 1 and 2 below.

### Table 1: Current and proposed phase-out schedule for HCFC production

*Proposed control measures in bold*

<table>
<thead>
<tr>
<th>Control measure</th>
<th>CURRENT Non-article 5 (1)</th>
<th>CURRENT Article 5 (1)</th>
<th>PROPOSED Non-article 5 (1)</th>
<th>PROPOSED Article 5 (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freeze</td>
<td>2004 (on 1989 HCFC production + 2.8% of 1989 CFC production and 1989 HCFC consumption + 2.8% of 1989 CFC consumption)</td>
<td>2016 (on 2015 average of production and consumption)</td>
<td>[current]</td>
<td>2015 (on the lesser of 2014 or 125% of 2005 average of production and consumption)</td>
</tr>
<tr>
<td>-35 %</td>
<td></td>
<td></td>
<td></td>
<td>2020</td>
</tr>
<tr>
<td>-65%</td>
<td></td>
<td>2010</td>
<td></td>
<td>2025</td>
</tr>
<tr>
<td>-90%</td>
<td></td>
<td>2015</td>
<td></td>
<td>--</td>
</tr>
<tr>
<td>-99.5%</td>
<td></td>
<td>2020</td>
<td></td>
<td>2030</td>
</tr>
<tr>
<td>Phase-out</td>
<td></td>
<td>2030</td>
<td></td>
<td>2040</td>
</tr>
<tr>
<td>BDN</td>
<td>2004 - 15% of base</td>
<td>2016- 15% of base</td>
<td>10% of base, after 2020: 1% of base</td>
<td>10% of base, after 2030: 1% of base</td>
</tr>
</tbody>
</table>

BDN = Basic Domestic Needs
Table 2: Current and proposed phase-out schedule for HCFC consumption  
(proposed control measures in bold)

<table>
<thead>
<tr>
<th>Control measure</th>
<th>CURRENT Non-article 5 (1)</th>
<th>CURRENT Article 5 (1)</th>
<th>PROPOSED Article 5 (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freeze</td>
<td>1996 (on 1989 HCFC consumption + 2.8% of 1989 CFC consumption)</td>
<td>2016 (on 2015 HCFC consumption)</td>
<td>2015 (on the lesser of 2014 or 125% of 2005 HCFC consumption)</td>
</tr>
<tr>
<td>-35 %</td>
<td>2004</td>
<td></td>
<td>2020</td>
</tr>
<tr>
<td>-65%</td>
<td>2010</td>
<td></td>
<td>2025</td>
</tr>
<tr>
<td>-90%</td>
<td>2015</td>
<td></td>
<td>--</td>
</tr>
<tr>
<td>-99.5%</td>
<td>2020</td>
<td></td>
<td>2030</td>
</tr>
<tr>
<td>Phase-out</td>
<td>2030</td>
<td>2040</td>
<td>2040</td>
</tr>
</tbody>
</table>