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Item 7 of the provisional agenda**
Proposed adjustments to the Montreal Protocol

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Note by the Secretariat

Pursuant to paragraph 9 of Article 2 of the Montreal Protocol the Secretariat is circulating in the annex to the present note a joint proposal for adjustment of the Montreal Protocol submitted by the Federated States of Micronesia and Mauritius.

The text of the proposal is circulated as received and has not been formally edited by the Secretariat. The proposal is also posted on the Secretariat website (<http://ozone.unep.org>) as document UNEP/OzL.Pro.WG.1/28/3/Add.1.

* Reissued for technical reasons

** UNEP/OzL.Pro.WG.1/28/1.

Annex

Proposal by the Federated States of Micronesia and Mauritius

Proposal for decisions, adjustments, and amendment by the 2008 MOP to promote destruction of ODS

Submitted by Federated States of Micronesia and Mauritius 14 May 2008

Preamble

Action now can avoid significant emissions of ozone depleting substances (ODSs), including CFCs and HCFCs, which also are greenhouse gases, that otherwise will be released from “ODS banks.” These “banks” are contained mostly in refrigerators,¹ stationary and mobile air conditioners (AC), thermal insulating foam, and stockpiles of new or recovered ODSs. Destruction of all banks in refrigeration and AC equipment at the end-of-life as of 2008 could accelerate the estimated return of the Effective Equivalent Stratospheric Chlorine (EESC) to 1980 values by two years, thus advancing the recovery of the ozone layer.² Without action, most of these banks will be released into the atmosphere by 2015, by which time emissions from CFC banks alone could equal approximately 6.0 to 7.4 billion tons of carbon dioxide equivalent (GtCO₂-eq.) between 2002 and 2015 — significantly more than the emissions reductions initially sought by the Kyoto Protocol.³ Conservative calculations of the portion that can be recovered with low cost equal 25% or more of the reduction during the first commitment period of the Kyoto Protocol. According to TEAP, “End-of-life measures [across all sectors] are consistent and significant contributors to savings in terms of both ozone and climate, with cumulative savings of around 300,000 ODP tonnes and about 6 billion tonnes CO₂-eq.” from 2011 to 2050.⁴ Cost effective technology exists to prevent most of these emissions that otherwise will “perish” by leakage.⁵

Fast action to address these banks will produce a double dividend for climate and ozone protection. Additionally, the actions necessary to prevent these CFC and HCFC emissions from banks can also reduce emissions of HFCs – further protecting the climate.

ODS banks associated with refrigeration and air-conditioning in developed countries⁶ are set forth below in tonnes.⁷ If the Parties address these banks, emissions of 194,038 tonnes of CFCs (roughly 2 GtCO₂-eq.) and 454,887 tonnes of HCFCs (roughly 0.77 GtCO₂-eq.) can be mitigated by 2015; this is roughly 90% of CFCs and 50% of HCFCs banked in accessible refrigeration, SAC, and MAC equipment in developed countries.⁸

Sector	Sub-Sector	CFC Bank 2002	CFC Bank 2015 (BAU)	HCFC Bank 2002 ⁹	HCFC Bank 2015 (BAU)
Refrigeration	Domestic	38,103	356	0	0
	Commercial	2,885	64	100,948	32,961
	Transport	376	1	2,113	5
	Industrial	19,518	9,938	79,595	46,412
AC	Stationary	49,923	13,871	751,126	405,148
	Mobile	107,513	50 ¹⁰	9,196	3,565
Total		218,318	24,280	942,978	488,091

The TEAP has identified technically and economically feasible end-of-life measures and concluded that “the main mitigation strategies likely to have effect on ODS emissions in the mid-term (e.g., as of 2008) are those associated with end-of-life measures in refrigeration and mobile and stationary air-conditioning.”¹¹ “End-of-life measures [across all sectors] are consistent and significant contributors to savings in terms of both ozone and climate, with cumulative savings of around 300,000 ODP tonnes and about 6 billion tonnes CO₂-eq.” from 2011 to 2050.¹²

Several countries have successfully employed regulatory and/or voluntary measures to improve recovery and recycling/destruction of ODS banks at the end of equipment’s useful life. Among these are Australia, Japan, the United States, Canada, and several EU member states. The following measures have proving successful for recovering and recycling/destroying ODSs in developed countries:

- Require service practices that maximize recycling or destruction of ODSs and/or provide a rebate for returned ODSs (e.g. Australia, U.S., certain Canadian provinces, Japan, EU members);
- Set certification requirements for recycling and recovery equipment for technicians and reclaimers (e.g. U.S., Japan, EU members);
- Restrict the sale or importing of refrigerant to certified importers, wholesalers, technicians, etc. (e.g. U.S., Australia);
- Require sellers to take-back used ODSs and equipment (e.g. Australia, Japan);
- Restrict the amount of new ODSs that can be placed on the market or place an escalating tax on new material to encourage appropriate market behavior (e.g. U.S.);
- Establish safe disposal requirements to ensure removal of refrigerants from goods that enter the waste stream with the charge intact such as motor vehicle air conditioners, home refrigerators, and room air conditioners and/or make voluntary emissions of refrigerants an offense (e.g. U.S., Japan, EU members, Australia);
- Establish voluntary initiatives with government that permit participants to advertise their eco-friendly practices (e.g. U.S., Canada);
- Establish industry-led voluntary initiatives to promote recovery and recycling/destruction which impose levies, require certification, require sellers take-back used ODSs and equipment, provide rebates for returned ODSs, and utilize industry infrastructure to reduce costs (e.g. Canada, Australia); and/or
- Expand ODS voluntary measures to include other GHGs that are used as substitutes for ODSs or can be destroyed at the same facilities as ODSs (e.g. Australia).

In addition to regulations and voluntary initiatives, enforcement and compliance are important. EU Regulation EC 2037/2000 mandates the destruction of CFCs following their recovery from equipment and foams.¹³

We propose that the 2008 MOP adopt the following measures to promote the destruction of ODS by all Parties. Some of these can be adopted as new decisions or as modification of earlier decision. Others can be adopted as adjustments or amendments. These options are indicated in each measure. However, the MOP can decide the appropriate choice, based on advice from the legal drafting group. No specific legal language has been proposed at this stage in order to promote a full debate in the forthcoming OEWG meeting.

A. Finance ODS Bank Destruction in Article 5 Parties

Destruction of ODS banks in developing countries would benefit from financing through the MLF and, if necessary, supplementary sources committed to climate reductions. The history of decisions resulting from the Meetings of the Parties (MOPs) demonstrates that promoting destruction of ODS banks and assisting the destruction of ODS banks in Article 5 countries has long been considered not just within the purview of the Montreal Protocol, and in particular Article 10, but a concern warranting significant resources.¹⁴ MLF financing could begin immediately with pilot projects. This can be achieved by adding at the end of the indicative list of incremental costs (Annex VIII of the report of Fourth MOP) as “(d) cost of destruction of surplus, contaminated and unneeded ODS.”

B. Provide Incentives to All Parties for ODS Bank Destruction

Destruction of appropriate quantity of ODSs could be made a condition for essential/critical use exemption through a change in Decision IV/25 of the 4th MOP on essential uses.¹⁵ Noting that those Parties with destroyable ODS may not need essential use exemptions vice versa and the year(s) of availability of destroyable ODS may differ from the year(s), this change in the Decision IV/25 should be coupled with a decision that the destruction credits be carried forward for more than one year, enabled to be exchanged across the Groups of Controlled ODS and that Parties could trade in destruction credits. The other parts of Decision IV/25, such as scrutiny by the TEAP and approval of MOP for essential use exemptions would remain unchanged. A5 Parties would require appropriate treatment under the principle of common but differentiated responsibility.

C. Mandate Destruction of Surplus ODS Once Need for Essential Use Exemption Ceases for All Parties.

This can be achieved by changing Articles 2, 2A to 2H and Article 5.

¹ See UNEP, IPCC/TEAP, *Special Report: Safeguarding the Ozone Layer and the Global Climate System: Issues Related to Hydrofluorocarbons and Perfluorocarbons*, Technical Summary (2005), at 53 (“With a typical 20-year lifespan, refrigerator end-of-life retirement and disposal occurs at a frequency of about 5% of the installed base each year. This means approximately 75 million refrigerators containing 100 g per unit, or a total of 7500 tonnes of refrigerant, are disposed of annually.”)

² See *Supplement to the IPCC/TEAP Report* (Nov. 2005), at x [hereinafter TEAP Supplement].

³ TEAP Supplement, *id.* at Annex.

⁴ TEAP, *Response to Decision XVIII/12, Report of the Task Force on HCFC Issues (with Particular Focus on the Impact of the Clean Development Mechanism) and Emissions Reductions Benefits Arising from Earlier HCFC Phase-Out and Other Practical Measures*, (August 2007), at 12, available at http://ozone.unep.org/Assessment_Panels/TEAP/Reports/TEAP_Reports/TEAP-TaskForce-HCFC-Aug2007.pdf [hereinafter TEAP Response]. The tables here only reference CFCs and HCFCs. Banks of CFCs, HCFCs, HFCs, and PFCs were estimated at about 21 GtCO₂-eq. in 2002. IPCC/TEAP, *Special Report: Safeguarding the Ozone Layer and the Global Climate System: Issues Related to Hydrofluorocarbons and Perfluorocarbons*, Summary for Policymakers (2005), at 9 (“In 2002, CFC, HCFC, and HFC banks were about 16, 4, and 1 GtCO₂-eq. (direct GWP weighted) respectively. In 2015, the banks are about 8, 5, and 5 GtCO₂-eq. respectively, in the BAU scenario.”) [hereinafter IPCC/TEAP Summary for Policymakers]. TEAP Supplement, *supra* note 2, at 15 (“The large scale destruction of banks is not included in the BAU scenario.”)

⁵ After 2015, ODS banks in foams will surpass all other banked sources combined in ODS emissions in terms of both ODP and GWP.

⁶ See Ecosphere, *Review of the implementation of Regulation (EC) No 2037/2000 on substances that deplete the ozone layer* (December 2007) (“Review of EC 2037/2000”) at 103, available at http://ec.europa.eu/environment/ozone/pdf/regulatory_options_report.pdf (providing specific ODS bank estimates across all sectors in the EU in 2007 and 2010).

⁷ TEAP Response, *supra* note 4, at 27. The tables here only reference CFCs and HCFCs. However, banks of CFCs, HCFCs, HFCs, and PFCs were estimated at about 21 GtCO₂-eq. in 2002. IPCC/TEAP Summary for Policymakers, *supra* note 4, at 9 (“In 2002, CFC, HCFC, and HFC banks were about 16, 4, and 1 GtCO₂-eq. (direct GWP weighted) respectively. In 2015, the banks are about 8, 5, and 5 GtCO₂-eq. respectively, in the BAU scenario.”); TEAP Supplement, *supra* note 2, at 15 (“The large scale destruction of banks is not included in the BAU scenario.”)

⁸ Estimates of CO₂-eq. have been calculated based on the GWP of CFC-12 and HCFC-22, the most common refrigerants found in these applications.

⁹ In 2006, HCFCs formed the dominant refrigerant bank, estimated at more than 1,500,000 tonnes, representing 60% of the total amount of refrigerants in use. Two thirds of this bank can be found in non-Article 5 countries. See UNEP, *2006 Report of the Refrigeration, Air Conditioning and Heat Pump Technical Options Committee 2006 Assessment*, (2006) (“RTOC 2006 Assessment Report”) at 2, available at http://ozone.unep.org/teap/Reports/RTOC/rtoc_assessment_report06.pdf.

¹⁰ See *id.* The ODS-refrigerant bank was estimated at 60,000 tonnes of CFC-12 in 2006 with a 10% annual emissions rate, meaning very few ODS-containing systems will remain in service after 2012.

¹¹ See TEAP Supplement, *supra* note 2, at ix.

¹² TEAP Response, *supra* note 4, at 12.

¹³ See TEAP Supplement, *supra* note 2, at 36.

¹⁴ Examples of Decisions addressing ODS bank destruction include: Decision IV/11 at ¶7; Decision IV/12 at ¶2; Decision IV/24 at ¶4; Decision VII/31; Decision XVII/17; Decision XVII/18 at ¶1.

¹⁵ See Sarma, K. Madhava, *Strengthening the Montreal Protocol: The Step-by-step Approach of the Montreal Protocol*, in THE MONTREAL PROTOCOL: CELEBRATING 20 YEARS OF ENVIRONMENTAL PROGRESS (ed. Kaniaru, Donald) 203-13, at 209 (Cameron May 2007).