

行政院所屬各機關因公出國人員出國報告書
(出國類別：出席國際會議)

維也納第八次締約國大會暨
蒙特婁議定書第二十次締約國會議
與會情形報告

服務機關： 行政院環境保護署

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派赴國家： 卡達多哈 (Doha, Qatar)

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維也納第八次締約國大會暨 蒙特婁議定書第二十次締約國會議 與會情形報告

壹、前言

1980 年代初臭氧洞首度被觀察到，破洞面積逐年增加而引起全球的關注。鑑於臭氧層遭到破壞攸關全球生態環境，在聯合國環境規劃署(United Nations Environment Programme, UNEP)的召集下各國共同攜手研商對策，共有 28 個國家於 1985 年 3 月在奧地利維也納簽訂保護臭氧層「維也納公約(Vienna Convention for the Protection of the Ozone Layer)」，要求各國共同致力於觀測、研究、資料交流，但並未加諸減少破壞臭氧層物質(Ozone Depleting Substances, ODS)使用之具體責任。至今已有 193 個締約國批准公約。

1987 年 9 月 16 日公約締約國於加拿大蒙特婁市再次召開會議，進一步採納管制臭氧層破壞物質的「蒙特婁議定書(Montreal Protocol on Substances that Deplete the Ozone Layer)」。議定書將 5 種氟氯碳化物(CFCs)及 3 種海龍(Halons)列為管制物質，賦予各締約國實質的減量責任，要求已開發國家(non-Article 5 國家)自 1989 年起分階段削減 CFCs 與 Halons 之生產與消費量，開發中國家(Article 5 國家)則自 1996 年起才進入其削減時程。至今有 193 個締約國批准蒙特婁議定書。

其後，締約國在議定書的架構下持續針對各種 ODS 協商管制時程與方案，新增的物質與管制規定則陸續補充於「修正案(Amendment)」與「調整案(Adjustment)」中。其中，「修正案」是用來增加新的管制方案或物質，需要一定數目的締約國批准才具有效力；「調整案」則用來調整現有管制方案內容，協商決議一旦採用及自動生效，無需再經過締約國批准程序。

一、倫敦修正案：1990 年於英國倫敦舉行的第 2 次締約國會議(MOP2)，新增 10

種 CFCs、四氯化碳 (CTC) 與三氯乙烷 (Methyl Chloroform) 於 ODS 管制清單中，並設立多邊基金 (Multilateral Fund) 促進議定書的推廣執行。多邊基金係用來資助開發中國家執行議定書減量方案時可能需承擔的成本與舉辦資訊擴散活動，包括：技術援助、教育訓練以及秘書處行政工作等。基金每三年重新審核編列。至今已有 189 個締約國批准此修正案。

二、哥本哈根修正案：1992 年於丹麥哥本哈根舉行的第 4 次締約國會議 (MOP4)，新增溴化甲烷、氟溴烴 (HBFC) 及氟氯烴 (HCFC) 等管制物質，並啟動「未遵約程序」(non-compliance procedure)，成立推展委員會 (Implementation Committee)，藉以審查締約國未遵守約定之情形。至今有 184 個締約國批准此修正案。

三、蒙特婁修正案：1997 年第 9 次締約國會議 (MOP9) 於加拿大蒙特婁舉行，除加嚴管制方案，亦通過各國應採用 ODS 的進出口許可制度 (licensing system)，決議對未批准哥本哈根修正案的締約國進行溴化甲烷貿易禁止。至今計有 167 個締約國批准此修正案。

四、北京修正案：1999 年第 11 次締約國會議 (MOP11) 於中國北京舉行，同意納入管制一溴一氯甲烷 (Bromochloromethane) 與增加 HCFC 生產管制之條文，並要求締約國提報使用於檢疫與裝運前處理的溴化甲烷用量。至今有 144 個締約國批准此修正案。

維也納公約、蒙特婁議定書及各項修正案自蒙特婁議定書第 19 次締約國會議 (MOP19) 至本次締約國會議之新增批准情形如下：

	新增批准國家數	批准之締約國總數
維也納公約	2	193
蒙特婁議定書	2	193
倫敦修正案	3	189
哥本哈根修正案	6	184
蒙特婁修正案	10	167
北京修正案	12	144

2000 年第 12 次締約國會議 (MOP12) 於西非布基那法索召開，締約國開始重視 ODS 非法貿易的問題，呼籲國家對非法生產、消費及買賣 ODS 的行為應予以防制。隔年第 13 次締約國會議 (MOP13) 於斯里蘭卡召開，締約國採納「可倫坡宣言」，希望締約國承諾謹慎使用具破壞臭氧潛勢 (Ozone Depletion Potential, ODP) 之物質，ODS 排放管理之議題開始被提出來討論。

2003 年第 15 次締約國會議 (MOP15) 於肯亞召開，non-Article 5 國家即將於 2005 年完全廢除溴化甲烷消費量，締約國對於幾個廢除後的關鍵用途豁免 (Critical-use Exemption; CUE) 有異議，首開先例於隔年初 (3 月 24 至 26 日) 召開第一屆特別締約國會議 (Extraordinary MOP)。主要的爭議來自豁免用途的供應源，分成新生產與庫存。最後締約國妥協於該豁免申請僅適用於 2005 年，後續則須提出更多佐證資料來取得豁免資格。同時限定國家溴化甲烷生產上限於 1991 年基準量的 30% 以內，倘不足供應國家需求則應優先使用庫存。

2004 年第 16 次締約國會議 (MOP16) 於捷克舉行，多邊基金重新編列，同時對於數據提報、遵約判定、國際貿易與非法走私等議題提出討論，但決議內容均屬非強制性。而 2006 年溴化甲烷 CUE 審核又再度成爲未完成的項目，使 2005 年 7 月又召開第二屆特別締約國會議。

2005 年第 17 次締約國會議 (MOP17) 於塞內加爾舉行，除審議 CFC /MDI 2006 年必要用途、2006 年與 2007 年溴化甲烷 CUE 外，也指示技術與經濟評估小組 (Technology and Economics Assessment Panel, TEAP) 探討實驗與分析用途的溴化甲烷是否符合爲關鍵用途豁免，並彙整使用清單送交第 18 次締約國會議 (MOP18) 討論。本次會議亦確定 2006 - 2008 年的多邊基金預算爲 4 億 40 萬美金，並要求 TEAP 摘錄其與政府間氣候變化專門委員會 (Intergovernmental Panel on Climate Change, IPCC) 的特別評估報告 (IPCC/TEAP Special Report) 內容，著重在保護臭氧層關連的行動策略上。我國因代表團無法取得簽證致無法參加該次締約國會議。

2006 年第 18 次締約國會議 (MOP18) 於印度首都新德里市 (New Delhi) 召開，

重要議題包括必要用途豁免之探討、Article 5 國家製造 CFC 計量吸入器(MDI)會面臨的困難、ODS 庫存與處置、ODS 跨境運輸之監控方式、並討論未來十年間可能遇到的挑戰。

2007 年 9 月 16 日適逢蒙特婁議定書簽署 20 週年，故締約國大會提前於國際臭氧層保護日 9 月 16 日舉辦蒙特婁議定書 20 週年研討會。該次會議決議加速氟氯烴 (HCFC) 淘汰時程：已開發國家之消費量及生產量應於 2010 年削減 75% (原為 65%)、2015 年削減 90%、2020 年削減至零，2020-2030 年僅 0.5%作為維修用途。開發中國家則以 2009-2010 兩年消費量/生產量的平均值作為管制基準量，2013 年起凍結、分別於 2015、2020、2025 年削減 10%、35%、67.5%，至 2030 年削減至零，2030-2040 年僅 2.5%作為維修用途。

聯合國環境規劃署臭氧秘書處於 2008 年 11 月 16-20 日在卡達首都多哈(Doha, Qatar)舉行維也納公約第 8 次締約國大會 (COP8) 與蒙特婁議定書第 20 次締約國會議 (MOP20) (公約締約國大會每三年舉行一次)，約計超過 900 人與會，包括各締約國政府機關代表、聯合國周邊組織、非政府組織 (non-governmental Organisation, NGO) 及相關產業團體共襄盛舉。



圖 1、COP8 & MOP20 會議地點 Sheraton Doha Resort & Convention Hotel



圖 2、COP8 & MOP20 大會會場

貳、我國代表團

本案循往例以財團法人工業技術研究院名義，非政府組織身分參加，由本署環境檢驗所吳副所長盛忠率團，空保處鄧雅諠技佐參與，並有工研院代表同行，共計 5 人與會。

單位	職稱	姓名
行政院環境保護署 環境檢驗所	副所長	吳盛忠
行政院環境保護署 空氣品質保護及噪音管制處	技佐	鄧雅諠
工業技術研究院 能源與環境研究所	主任	王壬
	副研究員	王茹涵
	副研究員	張富傑

參、出國行程

2008 年 11 月 15 日	啓程
2008 年 11 月 16 日至 11 月 20 日	報到、出席會議/活動
2008 年 11 月 21 日	返程

肆、與會目的

本次參加維也納公約第 8 次締約國大會（8th meeting of the Conference of the Parties to the Vienna Convention for the Protection of the Ozone Layer, COP 8）暨蒙特婁議定書第 20 次締約國會議（20th Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer, MOP 20），目的在掌握議定書管制破壞臭氧層物質之趨勢及蒐集最新替代品與替代技術發展資訊，以提供國內擬定相關管制措施與法規建置之依據。

本次會議討論重點議題包括維也納公約締約國臭氧研究管理人員報告(Report

of the seventh meeting of the ozone research managers, ORM)、對環境友善之 ODS 庫存妥善管理與銷毀、減少溴化甲烷 (Methyl Bromide) 檢疫與裝運前處理用途 (Quarantine and Preshipment, QPS) 用量與排放、針對高溫暖化潛勢 (GWP) 之 HCFC 替代品進行對話與討論、必要用途 (Essential Uses) 相關議題等。

伍、 會議議程

本年度適逢維也納公約締約國大會與蒙特婁議定書締約國會議於卡達首都杜哈 (Doha, Qatar) 共同召開，2008 年 11 月 16-20 日為期 5 天的會議，分為 2008 年 11 月 16-18 日 3 天的預備會議及 11 月 19-20 日 2 天的高層會議，約計超過 900 人與會。會議議程如下：

預備會議 (2008 年 11 月 16-18 日)	
1. 預備會議開幕	地主國卡達政府代表及聯合國環境規劃署代表致詞。
2. 組織事務	(a) 採納預備會議議程。 (b) 組織工作報告。
3. 審議《維也納公約》、《維也納公約》與《蒙特婁議定書》之綜合問題	(a) 發表及討論《維也納公約》締約國臭氧研究管理人員第 7 次會議報告。 (b) 《維也納公約》相關研究與系統性觀測活動之普通信託基金狀況。 (c) 《維也納公約》與《蒙特婁議定書》信託基金之財務報告及預算。 (d) 《維也納公約》、《蒙特婁議定書》及其各項修正案之批准狀況。
4. 討論《蒙特婁議定書》相關議題	(a) 執行《蒙特婁議定書》多邊基金充資之情況。 (一) 發表及審議技術和經濟評估小組特別工作小組充資之補充報告。 (二) 延長採用固定匯率機製之提案。

4. 討論《蒙特婁議定書》相關議題

- (b) 破壞臭氧層物質之環境無害處置模式（阿根廷、歐洲共同體、密克羅西尼亞及模里西斯提案）。
- (c) 必要用途（essential uses）相關議題
 - （一）俄羅斯聯邦航空工業中氟氯碳化物 CFC-113 之用途。
 - （二）2009 及 2010 年必要用途豁免提名。
 - （三）氟氯碳化物之必要用途及用於定量噴霧吸入器之策略性生產（campaign production）。
- (d) 審議溴化甲烷相關議題
 - （一）2009 及 2010 年關鍵用途豁免（critical-use exemptions）提名。
 - （二）為滿足符合《蒙特婁議定書》第 5 條第 1 項締約國之國內溴化甲烷基本需求，調整議定書溴化甲烷允許生產量（肯亞及模里西斯提案）。
 - （三）溴化甲烷之檢疫及裝運前處理用途（Quarantine and pre-shipment uses）（澳洲提案）。
- (e) 對氟氯烴實施貿易條款（澳洲提案）。
- (f) 加工劑用途。
- (g) 技術和經濟評估小組更新報告：
 - （一）四氯化碳排放和減排機會（最終報告）。
 - （二）海龍區域性不平衡問題。
 - （三）採礦及高溫條件下氟氯烴替代品質之範圍界定研究。
- (h) 技術和經濟評估小組行政問題。
- (i) 履行委員會審議遵約問題，包含符合《蒙特婁議定書》第 5 條第 1 項之締約國因使用氟氯碳化物生產定量噴霧吸入器（metered dose inhalers）而造成未遵守議定書之情況。
- (j) 審議 2009 年《蒙特婁議定書》各機構成員情況：
 - （一）履行委員會成員。
 - （二）多邊基金執行委員會成員。
 - （三）不限成員工作小組之聯席主席。

5. 其他事項	
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高層會議（2008 年 11 月 19-20 日）	
1. 高層會議開幕	(a) 卡達政府致辭歡迎。 (b) 聯合國環境規劃署代表致詞。 (c) 世界氣象組織代表致詞。 (d) 第 7 次《維也納公約》締約國大會主席致詞。 (e) 第 19 次《蒙特婁議定書》締約國會議主席致詞。
2. 組織事務	(a) 選舉第 8 次《維也納公約》締約國大會主席團成員。 (b) 選舉第 20 次《蒙特婁議定書》締約國會議主席團成員。 (c) 通過第 8 次《維也納公約》締約國大會及第 20 次《蒙特婁議定書》締約國會議議程。 (d) 組織工作報告。 (e) 與會代表呈遞國家委任書。
3. 各評估小組關於包括最新發展情況工作狀況之發言	
4. 《蒙特婁議定書》多邊基金執行委員會主席關於執行委員會工作情況之發言	
5. 各代表團團長發言	
6. 預備會議聯席主席報告，以及審議建議在第 8 次《維也納公約》締約國大會和第 20 次《蒙特婁議定書》締約國會議上通過之各項決議。	

7. 第 9 次《維也納公約》締約國大會和第 21 次《蒙特婁議定書》締約國會議之日期和地點	
8. 其他事項	
9. 通過第 8 次《維也納公約》締約國大會各項決議	
10. 通過《蒙特婁議定書》締約國第 20 次會議各項決議	
11. 通過第 8 次《維也納公約》締約國大會和第 20 次《蒙特婁議定書》締約國會議報告	
12. 會議閉幕	

本次會議首度辦理無紙化作業（paperless meetings），卡達政府提供所有與會者每人一台已完成無紙化系統軟體安裝之筆記型電腦，以及與會者個人電腦無紙化軟體之安裝協助，並由技術專業人員隨時協助所有與會者解決系統使用與故障檢修之問題。卡達政府提出「Together we make the difference」之口號，本次會議涉及 193 個締約國及各政府與非政府組織代表的參與，無紙化作業確實為一項突破性工作。



圖 3、落實無紙化 與會代表使用卡達政府提供之筆記型電腦

陸、 會議過程

一、組織事務

由丹麥 Mikkel Sorensen 先生和南非 Judy Francis Beaumont 女士共同主持預備會議。以全體會議形式展開，並完成本次議程之工作時間表。

二、審議《維也納公約》與《蒙特婁議定書》之綜合問題

會議審議項目包括發表及討論《維也納公約》締約國臭氧研究管理人員第 7 次會議報告，《維也納公約》相關研究與系統性觀測活動之普通信託基金狀況，《維也納公約》與《蒙特婁議定書》信託基金之財務報告及預算及其各項修正案之批准狀況。

(一) 發表及討論《維也納公約》締約國臭氧研究管理人員第 7 次會議報告

會議審查《維也納公約》締約國臭氧研究管理人員第 7 次會議之工作情況及其提出之建議。內容包括探討第 6 次 ORM 之建議事項、臭氧層與天氣變化的影響關係、國際監測計畫最新進展、衛星探究與監測計畫現況與未來發展、區域性臭氧研究及四項重點建議（研究需求、系統觀測、數據建立、能力建立）。

(二) 《維也納公約》相關研究與系統性觀測活動之普通信託基金狀況

會議審查開發中國家和經濟轉型國¹展開《維也納公約》所涉有關資助研究和系統性觀測活動，其接受自願捐款預算的資金狀況。

(三) 《維也納公約》與《蒙特婁議定書》信託基金之財務報告及預算

會議決議設立預算事項委員會，負責討論並就秘書處有關《維也納公約》和《蒙特婁議定書》之預算提出建議，相關資料載於 UNEP/OzL.Conv.8/4 和 UNEP/OzL.Pro.20/4 號文件。依往例，秘書處一般會將兩個協議預算分開，僅某些預算項目為共用。依據議事規則，《蒙特婁議定書》每年的預算是在議定書締約國會議

¹ 即第五條國家

的年度常會上進行審議。而《維也納公約》的預算是在《維也納公約》締約國大會的常會上每三年進行一次審議。大會決議文件為「COP Decision VIII/3」，如附件一。

(四) 《維也納公約》與《蒙特婁議定書》及其各項修正案之批准狀況

會議審查《公約》、《議定書》及其各項修正案批准現況。秘書處已草擬本次會議期間批准成果之暫定草案：VIII/AA 和 XX/AA，列入 UNEP/OzL. Conv.8/3- UNEP/OzL.Pro.20/3 號文件第二章，其草案已被採用。大會決議文件為「COP/MOP Decision VIII/1 and XX/1」，如附件一。

三、2008 年評估委員會報告

A.R. Ravishankara 代表科學評估小組提出並討論 ODS 排放趨勢，其中尤其強調 HCFC 的重要性，並報告科學評估小組 2010 年概略方向及 2011 年之工作時程，最後討論目前大氣中臭氧的水平及相關趨勢。

Jan van der Leun 代表環境影響評估小組討論破壞臭氧層物質與天氣變化是互相影響的，並討論紫外線與皮膚癌是臭氧層破洞的後遺症，他指出已經有許多這方面的研究有這結論，其小組在不久後會有相關的進度報告。

TEAP 共同主席 Lambert Kuijpers 向大會報告小組最新工作進度時程，包括海龍與溴化甲烷 QPS 用途之議題、至 2010 年 TEAP 之時間規劃，以及討論 CFCs 計量吸入器 (MDIs) 廢除後所需要面臨的挑戰。

四、各代表團長致詞

首先埃及表示蒙特婁議定書第 21 次締約國會議 (MOP 21) 將在埃及 Sharm el-Sheikh 舉辦。許多締約國代表在大會發言中談論到廢除 HCFC 所做的努力。印度表示開發中國家在 2013 年時 HCFC 消費量即將凍結，但是高溫暖化潛勢 (GWP) 的 HCFC 替代品仍無法避免。斯里蘭卡表示下一個挑戰即為 HCFC 的廢除，尤其是在消費量仍持續增加的情況下。伊拉克描述了該國 HCFC 廢除計畫，並成立一個國家臭氧委員會推展相關業務。吉布地提出需要可使用的 HCFC 替代品，並應有多邊基

金的援助。美國強調銷毀 ODS 庫存的必要，並應尋求 GWP 較低或零 GWP 的 HCFC 替代品。中國表示目前尚缺乏成熟及可行的 HCFC 替代品，要將 HCFC 廢除將需要很長的時間。

柒、重要決議案

本次會議重要決議包括 ODS 庫存 (Banks) 之環境無害處置、HCFC 替代品之高溫暖化潛勢 (GWP) 問題、減少溴化甲烷 (Methyl Bromide, MB) 使用於檢疫及裝運前之關鍵用途、多邊基金、MDI / CFCs 必要用途豁免提名審查、2009 年和 2010 年 MB 關鍵用途豁免。會議於 11 月 20 日晚間 7 時 37 分方結束，維也納公約下共計通過 5 項決議、蒙特婁議定書則通過 26 項決議，經整理較具爭議性議題與我國較有關係之主要議案說明如下：

一、ODS 庫存 (Banks) 之環境無害處置

(一) 背景說明

1. ODS 庫存係指廢棄產品和設備 (包括空調和發泡材) 中含有之 ODS。這些庫存包含了各種化學品、發泡材及其他已生產、使用、儲存，但尚未釋放至大氣中的產品。
2. ODS 多具有高溫暖化潛勢 (GWP)，因此 ODS 庫存的釋放將同時為臭氧層及氣候系統帶來極大威脅。2008 年之前妥善銷毀冷凍空調設備中所有“可獲得 (reachable)”的 ODS 庫存將可使臭氧層提前兩年恢復，同時避免高達 60 億噸 CO₂ 當量的釋放。

(二) 決議內容

此議題首先聽取 OEWG-28 ODS 廢棄接洽小組(Contact Group)的報告，報告中提出漸進式 ODS 物質庫銷毀(A step by step approach for destruction of ODS Bank)的提議，歐盟表示支持該項提議，第一個目標將是建立推展機構，或讓多邊基金發展 ODS 物質庫管理的相關經驗。此議題共有 4 項相關提案，並彙整

為 MOP Decision XX/7 決議文 (如附件一)。該項決議中包括以下重點：

1. 邀請各締約國、國際基金機構，包括多邊基金、全球環境基金(Global Environment Facility)和其他相關機構共同了解 ODS 排放量的削減和物質庫的銷毀情況，並且了解 Article 5 國家對於破壞臭氧層物質收集、運輸、儲存的相關費用。
2. 要求多邊基金執行委員會執行示範計畫，包括破壞臭氧層物質收集、運輸、儲存和銷毀等測試項目。執行委員會可以考慮在具有代表性和區域多樣性的 Article 5 國家展開這些項目，同時考量高 GWP 之 ODS 收集與庫存狀況。
3. 鼓勵締約國推動國家和區域立法以防止破壞臭氧層物質釋放、洩漏或排放，且使用合適的設備儲存及回收 ODS，並採用最佳方式與標準 (The use of best practices and performance standards)。
4. 鼓勵締約國制定或改善物質庫管理措施，加設國家和區域相關條款以防止非法貿易。
5. 邀請締約國儘快向臭氧秘書處提交相關管理策略，並將資訊放置臭氧秘書處官方網頁供各締約國參考。
6. 請 TEAP 對銷毀 ODS 物質庫展開全面的成本效益分析，同時考慮銷毀對於再回收、再生和再利用 ODS 對臭氧層與氣候的相對經濟成本和環境效益，並在不限成員工作小組第 29 次會議前一個月提交臨時報告，以及在蒙特婁議定書之締約國會議第 21 次會議之前一個月提交最終報告。
7. 請臭氧秘書處在多邊基金秘書處協助下，與聯合國氣候變化公約、全球環境基金、清潔發展機制執行理事會(CDM)、世界銀行的專家及其他相關金融專家商議，編制一份關於 ODS 物質庫管理與銷毀的資金報告，並於不限成員工作小組第 29 次會議中報告。

二、HCFC 替代品之高溫暖化潛勢 (GWP) 問題

(一) 背景說明

1. ODS 之替代與淘汰涉及氣候系統的保護，因此蒙特婁議定書和氣候變化綱要公約、京都議定書應協調如何降低 ODS 替代品—HFCs 對環境的影響。
2. 應取得更多以非高 GWP 化學品 (尤其是 HFCs) 替代 ODS 對環境影響之相關資料。

(二) 決議內容

美國針對高 GWP 之 ODS 替代品提出一提案，要求 TEAP 更新 2005 臭氧層與氣候特別報告之附錄 (2005 Supplement to the Special Report on the Ozone Layer and Climate)，並在第 29 次不限成員工作小組時召開半天的對話會議。針對高 GWP 之 HCFC 替代品進行對話與討論之決議文編列於 XX/8 (如附件一)，其內容如下：

1. 要求 TEAP 更新 2005 臭氧層與氣候特別報告中 HCFC 替代品之現況，包括高 GWP 替代品之用途與潛在市場滲透狀況調查。
2. 要求臭氧秘書處準備關於氣候變遷國際協議中討論之 ODS 替代品管控措施、限制與申報資訊要求之報告。
3. 在不限成員工作小組第 29 次會議前，針對高 GWP 之 ODS 替代品召開半天的不限成員對話，討論相關技術及政策問題，並要求秘書處於不限成員工作小組第 29 次會議之前就此提出報告。
4. 在不限成員工作小組第 29 次會議之前舉行高 GWP 之 ODS 替代品的對話。
5. 要求秘書處與工作小組的共同主席準備對話過程的報告，並在不限成員工作小組第 29 次會議報告。

三、減少溴化甲烷 (Methyl Bromide, MB) 使用於檢疫及裝運前處理 (QPS) 之關鍵用途

(一) 背景說明

1. 呼籲締約國減少檢疫及裝運前用途之溴化甲烷使用量及相關排放，以保護臭氧層和工作人員安全。
2. 應確認目前 MB 數據不足與改善資料提報之需求，以利分析 QPS 用途趨勢，並進一步減少 MB 豁免於 QPS 之數量的機會。

(二) 決議內容

降低檢疫與裝運前溴化甲烷的使用及相關排放量提案是由歐盟、墨西哥、瑞士共同提出，該議題最初係針對裝運前處理(Pre-shipment)的定義作討論，之後要求推展委員會(Implementation Committee)考慮報告溴化甲烷應用在 QPS 的相關用途。各締約國經過幾天的討論，最後提出多階段的研究方式(Multi-stage approach)，首先請 TEAP 整理現有的溴化甲烷資料，其決議文編列於 XX/6 (如附件一)，決議文內容如下：

1. 催促締約國提交檢疫與裝運前溴化甲烷的使用報告，最終提交時間為 2009 年 4 月，其後提交時間為每年 4 月。
2. 依照蒙特婁議定書未遵約程序，要求推展委員會(Implementation Committee)提交檢疫與裝運前溴化甲烷的使用報告。
3. 要求 TEAP 與國際植物保護公約 (International Plant Protection Convention, IPPC) 一起檢視溴化甲烷裝運前的處理及排放之相關資訊，做為評估溴化甲烷主要用途的趨勢、替代品與其他減緩排放，以及採用替代技術後會遭遇的障礙之參考依據。
4. 要求 TEAP 在不限成員工作小組第 29 次會議前提出報告及分析相關的資訊，指出資訊較不足的區域，並提出如何加強資訊蒐集的方式。

5. 要求 TEAP 在不限成員工作小組第 29 次會議前，將檢疫與裝運前的相關資料歸類在蒙特婁議定書第 21 次締約國會議（MOP21）年終報告以供各締約國參考。
6. 鼓勵符合「國際植物防疫檢疫措施標準（International Standards for Phytosanitary Measures, ISPMs）第十五號文件「國際貿易之木質包裝材料管制準則」（Guidelines for Regulating Wood Packaging Material in International Trade）之締約國制定國家策略以減少溴化甲烷之用量與排放，並盡可能將該資訊傳達給其他締約國。

四、維也納公約締約國臭氧研究管理人員報告【Report of the seventh meeting of the ozone research managers(ORM) of the parties to the Vienna Convention】

第 7 次 ORM 會議主席 Michael Kurylo，在報告之前就特別強調 ODS 與氣候變化是有密切關係的，ORM 需要更多新的量測活動來收集資料。歐盟表示支持相關的研究及活動，並要求新增的資料項目需被列入決議文。美國對於量測數據的不完整表示驚訝，並迫切要求注意這問題。技術與經濟評估小組回覆：相關問題已經有在進行討論。

此議題於本次會議討論後彙整為 COP Decision VIII/2 決議文（如附件一）。該項決議包括以下重點：

- （一）報告中提到有關臭氧觀測上的不確定性因素和新問題，包括化學和動態過程 (Dynamical Process) 方面會造成臭氧在產生、消失、遷移和散布上會有多大的影響。
- （二）為了確保破壞臭氧層物質、替代品質和溫室氣體觀測的維持和完善，並且保持和擴大臭氧和氣候相關物種的海拔分布訊息，所以報告中建議應維持並擴大地球表面觀察網絡，因為地理上覆蓋不到的位置會導致數據不完全。
- （三）報告中指出因該確保由觀測獲得的數據，具有最好的品質和水準並提供更細

部的數據。

(四) 報告中提到應加強第五條國家收集訊息的能力，保持現有的設備技術和聯絡網絡(Networks)，進而讓第五條國家建置新的觀測設備與能力，並提高第五條國家對科學研究的評估與參與機會。

五、蒙特婁議定書第 21 次締約國會議(MOP21)暫訂於 2009 年 11 月 23 至 27 日在埃及沙姆沙伊赫(Sharm el Sheikh)召開。

捌、公約發展趨勢分析

一、妥善管理 ODS 物質庫

決議文 XX/7 內容其中一項要求臭氧秘書處在多邊基金秘書處的協助下與聯合國氣候公約 (UNFCCC)、全球環境基金 (Global Environment Facility)、清潔發展機制 (CDM) 執行委員會、世界銀行，以及相關機構專家共同商討成立有關破壞臭氧層物質庫 (ODS bank) 管理與銷毀的基金，商討結果須於不限成員工作小組第 29 次會議開會前一個月交給締約國審查。

決議文的另一項要求是請技術與經濟評估小組對銷毀破壞臭氧層物質庫展開全面的成本效益分析，同時考慮到銷毀對於再回收、再生和再利用破壞臭氧層物質對臭氧層和氣候的相對經濟成本和環境效益，並在 OEWG 會議前一個月提交一份臨時報告，以及在蒙特婁議定書之 MOP21 會議之前一個月提交最終報告。

ODS 物質庫管理與銷毀以及與天氣變化的關聯性研討會，將於 2009 年 07 月 14 日假瑞士日內瓦舉行一天的討論會。

綜上，蒙特婁議定書針對 ODS 採消費量削減之源頭管制模式以達成有效減量，然隨著既有設備逐步汰換，應同時採取避免 ODS 庫存釋放至大氣中之措施。議定書逐漸重視 ODS 生命週期與末端管理之議題，我國應掌握公約 ODS 庫存妥善處置之制度、技術及經濟可行性之評估結果以為因應。

二、高 GWP 之 HCFC 替代品管制趨勢

決議文 XIX/6 內容中提到鼓勵締約國推展替代 HCFC 物質，進而減少 ODS 對環境的衝擊。決議文 XX/8 內容中也提到蒙特婁議定書與京都議定書可合作減少 HFCs 對環境的衝擊。

綜合前述兩項決議文內容，本次大會其中一個重要的議題就是由美國所提出的高溫暖化潛勢 (GWP) 之 HCFC 替代品對話與討論，此議題主要是要考慮到 GWP 較高的物質雖然可替代被管制的 ODS 物質，但是 GWP 較高的 HFC 是不利氣候變化的，有關此議題的發展將於 2009 年 07 月 13 日假瑞士日內瓦舉行一天的討論會。2010 年 HCFC 削減目標在即，預期替代品 HFCs 將大量進入市場，此成爲未來冷媒管制之重要議題。

三、2010 年科學評估報告 (2010 Science Assessment)

決議文 XIX/20 中列出科學評估小組 (Scientific Assessment Panel)、環境衝擊評估小組 (Environmental Effects Assessment Panel)、技術與經濟評估小組 (Technology and Economics Assessment Panel) 2010 評估報告所需包含的相關內容，並要求在 2010 年 12 月 31 日前完成與繳交給秘書處，供 2011 年不限成員工作小組會議與 MOP23 會議參考。

2010 年科學評估報告將納入臭氧層恢復與氣候變化之相互影響之新興議題。

(一) 科學評估小組 (Scientific Assessment Panel)

在 COP-8/ MOP-20, A.R. Ravishankara 代表科學評估小組報告 2010 評估報告的內容規劃，重要的內容爲：討論 ODS 排放趨勢，其中尤其強調 HCFC 的重要性、探討臭氧層變化與大氣之間的關係、天氣變化對於臭氧層的影響及衝擊、要求各締約國提名相關專家參加 2010 評估報告，最後他預告評估報告將於 2010 年底完成，2011 年三月公告。2010 科學評估小組評估報告需包括：

1. 臭氧層現況與未來變化評估；
2. 評估南極臭氧破洞與北極臭氧層的變化；
3. 評估 ODS 在大氣層中的濃度與提報的 ODS 生產量及消費量是否有一致性；

4. 評估天氣變化與臭氧層變化的相互關係；
5. 評估對流層與平流層的相互關係；
6. 形容觀測到的兩極臭氧層變化以及紫外線的情形；
7. 評估會影響臭氧層且生命較短的物質（Short-lived substances）；
8. 提出或指出有可能會威脅到臭氧層的事物。

(二) 環境衝擊評估小組 (Environmental Effects Assessment Panel)

Jan van der Leun 代表環境影響評估小組在 COP-8/MOP-20 大會中討論 ODS 與天氣變化的關聯性，並舉例說強度較高的紫外線與高溫度會讓植物釋放出甲烷，但是它對天氣變化的影響程度卻還是未知，他也提到每升高一度的氣溫將增加 2% 的皮膚癌發生率，其小組在不久後將會提出更詳盡的進度報告。2010 環境衝擊評估小組評估報告包括：

1. 繼續探討論 ODS 與天氣變化的關聯性以及對環境的衝擊；
2. 評估破壞平流層的臭氧會對人體健康有何影響；
3. 評估 UV-B 輻射提高後對陸地與水中的生物圈的衝擊；
4. 破壞平流層的臭氧對於對流層會有何衝擊；
5. 評估 UV-B 輻射對物質的影響。

(三) 技術與經濟評估小組 (Technology and Economics Assessment Panel)

Lambert Kuijpers 代表技術與經濟評估小組向 COP-8/MOP-20 大會報告六個技術委員會在年度與特別報告中投入的工作時間，並且提出 2010 評估報告的時間規劃及將在 2010 年終提交報告。2010 技術與經濟評估小組評估報告需包括：

1. 第五款國家 ODS 禁用後對永續發展的衝擊；

2. 各部門技術上的進展；
3. 為減少及淘汰 ODS 而使用之替代品的技術與經濟選擇，並評估他們對天氣變化及環境的影響；
4. 收集 ODS 復原、再利用、與銷毀的技術過程；
5. 整理 ODS 在生產與使用上的應用，ODS 在清冊的計算，ODS 在產品、生產製造中以及生命較短物質(Short-lived substances)的不同應用；
6. 整理與 ODS 有相關的排放量，並且評估 ODS 在大氣層中的濃度和排放量是否與科學評估小組一致。

玖、心得與建議

一、我國未來面臨之挑戰

(一) ODS 末端管理

蒙特婁議定書採取「源頭管制」方式削減 ODS 消費量（生產、進口、出口），至 2005 年全球 ODS 生產量已較 1987 年減少 95%，此為蒙特婁議定書執行之重大成果。就已開發國家而言，大多數 ODS 均已廢除（消費量為零），在 HCFC 完成階段性替式任務後，目前亦在嚴格管制削減中。在 ODS 穩定削減的情況下，各國注意到已生產、已使用或儲存、報廢之 ODS 既有設備和庫存的數量龐大。不當釋放將同時威脅臭氧層及氣候系統，唯有妥善銷毀冷凍空調設備中所有“可獲得”的 ODS，可使臭氧層提前兩年恢復，亦可避免高達 60 億噸 CO₂ 當量之溫室氣體排放。

因此，我國應掌握本次會議後續相關工作報告結果，瞭解各國管理制度與經驗，積極評估並建立適合國內之 ODS 末端管理制度。有關 ODS 作為冷媒用途，建議透過消費量管制與 HCFC 核配作業，設計誘因，引導產業針對大型冷凍空調設備建立完善回收機制。對於中小型冷凍空調設備，建議透過四機一腦回收系統，落實回收作業，儘量減少不當洩漏之機會。有關 ODS 作為發泡用途，由於 PU 發

泡之產品其內部細孔含有 ODS，並不易作回收，建議留意其他先進國家之發展情形，再據以設計並制定適合國情之回收策略。

(二) 溴化甲烷之檢疫及裝運前處理

「溴化甲烷之檢疫及裝運前處理」雖為蒙特婁議定書列為關鍵用途豁免，毋須計入消費量，然而基於臭氧層保護與工作人員安全之考量，本次大會仍期望未來能有效降低其使用量。我國農委會動植物防疫檢疫局大力推動熱處理技術以替代溴化甲烷蒸燻，同時本署亦採核配量管控及用途限制，雙軌並行，國內熱處理業者已達 374 家，溴化甲烷蒸燻業者已減少至 10 家，本署亦積極訪視相關蒸燻業者，除稽核其使用用途，亦傳達溴化甲烷之未來管制趨勢。

未來建議與農委會動植物防疫檢疫局密切合作，以在滿足國家基本檢疫需求下，亦有效降低溴化甲烷使用，避免可採用熱處理技術進行裝運前處理之貨品繼續使用溴化甲烷燻蒸。

(三) 高 GWP 之 HCFC 替代品管制趨勢

過去，高 ODP 之 CFCs 成功替代成 ODP 較低的 HCFC 後，國際間接著致力於 HCFC 替代技術的研發，至今已普遍可以 HFC 或其他物質替代。去年蒙特婁議定書第 19 次締約國會議認為環境友善的替代品及合適技術愈趨成熟，為維持正面向前的管制力量，決議加速了 HCFC 的削減時程。因此，面對 2010 年 75% HCFC 消費量的削減目標，各國勢必將大量引進 HFC 等替代品。然而，HFC 為京都議定書所列溫室氣體。

本次大會可以觀察到的是：愈來愈多人重視臭氧層與氣候變化之間的關聯。本次大會維也納公約締約國第 7 次臭氧研究管理人員報告中提到，鑑於臭氧層破壞與氣候變化間之高度相關性及複雜度，須仰賴新的研究與觀測以建立具體科學證據，也因此從事平流層中臭氧與 ODS 變化對於地表氣候的影響之研究。另，2010 年科學評估報告也將納入臭氧層恢復與氣候變化之相互影響之議題。國際製冷研究所於會中發言表示開發中國家應減少 HCFC 新設備生產，已開發國家則應發展非 HFC 替代技術。歐盟、日本等國家已致力於自然冷媒技術開發，然而，這些技

術尚無法應用於大型空調設備，部分亦有安全虞慮。因此，建議我國在冷媒開發上應密切觀察自然冷媒與新冷媒發展，並協商經濟部工業局推動冷媒替代技術與設備之開發或引進，辦理產業輔導，以與本署 HCFC 冷媒管制相輔相成，順利達成議定書削減目標。

二、積極參與公約及議定書活動/會議，掌握最新國際資訊

我國長期參與維也納公約及蒙特婁議定書相關會議/活動，每年按時申報國家 ODS 消費量，與公約秘書處保持暢通之資訊交流管道，掌握國際間已開發國家之管制動態及經驗。有利於我國國內。本次大會所提之三項重要議案，其相關資訊有助於本署作為 ODS 管制之政策擬定及策略推動參考依據，國內法規亦得據此作滾動式檢討與修正。

三、本次代表團參與維也納公約及蒙特婁議定書締約國會議，並未受到任何阻撓，仍與公約秘書處保持良好關係與溝通管道。

四、本次無紙化會議會場並無任何紙本會議文件，紙本文宣亦屬少數，聯合國環境規劃署將該署製作之走私查緝、中小學教材、漫畫與遊戲等教育宣導品儲存於隨身碟發送各與會代表，本署則於會場外會議桌提供英文說帖「Ozone Layer Protection: What Taiwan is Doing」供與會者參考。

壹拾、 附件

- 附件一、 COP8 & MOP20重要決議
- 附件二、 雙邊對話重點紀要
- 附件三、 維也約公約第八次締約國大會暨蒙特婁議定書第二十次締約國會議議程
Agenda of the eighth meeting of the Conference of the Parties to the Vienna Convention and the Twentieth Meeting of the Parties to the Montreal Protocol
- 附件四、 維也約公約第八次締約國大會暨蒙特婁議定書第二十次締約國會議報告全文
Report of the eighth meeting of the Conference of the Parties to the Vienna Convention and the Twentieth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer
- 附件五、 Earth Negotiation Bulletin:COP8 & MOP20, A Reporting Service for Environment and Development Negotiations, Published by the International Institute for Sustainable Development (IISD)
- 附件六、 Report of the Seventh Meeting of the Ozone Research Managers of the Parties to the Vienna Convention for the Protection of the Ozone Layer (ORM)
- 附件七、 蒙特婁議定書締約國名單
Status of Ratification

附 件

附件一

COP8 & MOP20

重要決議

VIII/3: Vienna Convention Trust Fund for Financing Activities on Research and Systematic Observations Relevant to the Vienna Convention for the Protection of the Ozone Layer

Recalling decision VI/2, by which the Conference of the Parties established the Vienna Convention Trust Fund for Research and Systematic Observations,

Recalling further that the United Nations Environment Programme extended the Trust Fund to 31 December 2015 in order to continue supporting monitoring and research activities in developing countries and countries with economies in transition and that the Conference of the Parties is to decide in 2014 on whether to extend the Trust Fund beyond 2015,

Noting with appreciation the report provided by the Secretariat on the operation of, contributions to, and expenditures from the Trust Fund since its inception,

Also noting with appreciation the contributions to the Trust Fund made by several Parties and the joint efforts of the World Meteorological Organization and the Ozone Secretariat in the implementation of the activities of the Trust Fund,

Recognizing the need to continue and strengthen atmospheric research and monitoring activities in order to address the many uncertainties that exist regarding the expected ozone recovery process and interaction between ozone and climate changes,

Noting the recommendations of the Ozone Research Managers at their seventh meeting, particularly with regard to the Trust Fund, in respect of which the Managers emphasize its importance in enabling capacity-building activities and the need for both monetary and specific in-kind contributions that are directly targeted at ozone- and ultraviolet radiation-related activities,

1. To urge all Parties and relevant international organizations to make voluntary financial contributions to the Trust Fund and voluntary in-kind contributions to enable the continuation and enhancement of monitoring and research activities in developing countries and countries with economies in transition, taking into account the need for balanced global coverage;

2. To request the Secretariat to continue to invite Parties and relevant international organizations annually to make voluntary contributions to the Fund and with each successive invitation to the Parties to report on the prior years' contributions, funded activities and planned future activities;

3. To request the Secretariat and the World Meteorological Organization to continue their cooperation in respect of the Trust Fund pursuant to the terms of the

memorandum of understanding between the two bodies on the operation of the Fund and to alert the Parties should a need arise to amend the memorandum of understanding to take into consideration evolving needs and conditions;

4. To remind the Secretariat and the World Meteorological Organization of the request in paragraph 7 of decision VII/2 of the Conference of the Parties that they strive for regional balance in the activities supported by the Fund and that they make an effort to leverage other sources of funding;

VIII/I: Status of ratification of the Vienna Convention, the Montreal Protocol and the London, Copenhagen, Montreal and Beijing amendments to the Montreal Protocol

1. To note with satisfaction the large number of countries which have ratified the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer;

2. To note that, as of 15 November 2008, 193 Parties had ratified the Vienna Convention and the Montreal Protocol, 189 Parties had ratified the London Amendment to the Montreal Protocol, 184 Parties had ratified the Copenhagen Amendment to the Montreal Protocol, 167 Parties had ratified the Montreal Amendment to the Montreal Protocol and 144 Parties had ratified the Beijing Amendment to the Montreal Protocol;

3. To urge all States that have not yet done so to ratify, approve or accede to the Vienna Convention and the Montreal Protocol and its amendments, taking into account that universal participation is necessary to ensure the protection of the ozone layer;

VIII/2: Recommendations adopted by the Ozone Research Managers at their seventh meeting

Recalling that, pursuant to the objective defined in decision I/6 of the Conference of the Parties to the Vienna Convention, the Ozone Research Managers review ongoing national and international research and monitoring programmes with a view to ensuring the proper coordination of those programmes and identifying gaps that need to be addressed,

Recognizing that the Ozone Research Managers at their seventh meeting emphasized the discussion of satellite research and monitoring owing to concerns among scientists that there could be serious gaps in satellite monitoring and associated data when current generation satellites and associated instruments reach the end of their useful lives in the next few years,

Also recognizing that the Ozone Research Managers have noted that international funding and cooperation are essential for the implementation of their recommendations, that their previous recommendations have not received sufficient attention owing to a lack of such funding and cooperation and that problems associated with the maintenance of existing instruments and networks for ozone monitoring and the development of new capabilities have been exacerbated as a result,

Emphasizing the need for continued monitoring of the effectiveness of the implementation of the Montreal Protocol on Substances that Deplete the Ozone Layer and its adjustments and amendments, including the adjustment providing for the accelerated phase-out of hydrochlorofluorocarbons, the impact of the increasing abundance in the atmosphere of many substitute chemicals, including hydrofluorocarbons, and the expected recovery of the ozone layer in a context of climate change,

1. To take note with appreciation of the report of the seventh meeting of the Ozone Research Managers;

2. To endorse the recommendations adopted by the Ozone Research Managers at their seventh meeting, as set out in the report of that meeting;

3. To urge space agencies and Governments to ensure the continuation of satellite research and observations, particularly to allow for measurements that contribute to the long term time series for both total and profile ozone and profiles of ozone-related and climate-related species and parameters, and to carry out any necessary gap-filler missions in order to avoid gaps in areas of atmospheric observation that are critical to understanding and monitoring changes in atmospheric

ozone and surface ultraviolet radiation and their interrelationship with climate variability and change;

4. To request all Parties to make a renewed effort to implement the actions recommended by the Ozone Research Managers, particularly those adopted at their seventh meeting, with a view to:

(a) Addressing uncertainties and new questions, including actual quantification of the extent to which chemical and dynamical processes are responsible for ozone production, loss, transport and distribution as well as changes in surface ultraviolet radiation resulting from changes in ozone and other atmospheric parameters and their impact on human and biological systems;

(b) Maintaining and expanding surface observation networks where gaps in geographical coverage result in data deficiencies in order to ensure the continuity and improvement of ground-based in situ observations of ozone depleting substances, their substitutes and greenhouse gases as well as the networks that provide altitude profile information for ozone-related and climate-related species;

(c) Ensuring that data acquired through observation are of the highest possible quality and include the metadata necessary to make them valuable to users today and in the future and, to that end, that efforts are made to enhance data archiving, including through the development of appropriate data quality assurance and submission procedures and timely access by users;

(d) Strengthening the capacity of developing countries and countries with economies in transition to enable them to maintain existing instruments and networks, acquire new observational capabilities and increase their participation in scientific research and assessments;

XX/7: Environmentally sound management of banks of ozone-depleting substances

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;
- (f) Consideration of the positive and negative impacts of recovery and destruction of ozone-depleting substances, including direct and indirect climate effects;
- (g) 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;

XX/3: Essential-use exemptions for Parties operating under paragraph 1 of Article 5

Mindful of the impending 2010 phase-out of certain controlled substances in Parties operating under paragraph 1 of Article 5,

Desiring to implement effectively paragraph 7 of decision IV/25 and make the currently used essential-use exemption process and related decisions fully applicable to both Parties operating under paragraph 1 of Article 5, subject to the phase-out dates applicable to those Parties, and Parties not so operating,

Taking into consideration that some Parties operating under paragraph 1 of Article 5 may prepare essential-use nominations for the first time and may therefore face difficulties in doing so,

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;

(e) To add a new paragraph after paragraph 5 of decision IX/19 to read as follows: *5 bis*. To require Parties operating under paragraph 1 of Article 5 submitting essential-use nominations for chlorofluorocarbons for metered-dose inhalers for the treatment of asthma and chronic obstructive pulmonary disease to present to the Ozone Secretariat an initial national or regional transition strategy by 31 January 2010 for circulation to all Parties. Where possible, Parties operating under paragraph 1 of Article 5 are encouraged to develop and submit to the Secretariat an initial transition strategy by 31 January 2009. In preparing a transition strategy, Parties operating under paragraph 1 of Article 5 should take into consideration the availability and price of treatments for asthma and chronic obstructive pulmonary disease in countries currently importing chlorofluorocarbon-containing metered-dose inhalers;

(f) To add a new paragraph after paragraph 2 of decision XII/2 to read as follows: *2 bis*. That any chlorofluorocarbon metered-dose inhaler product approved after 31 December 2008, excluding any product in the process of registration and approved by 31 December 2009, for treatment of asthma and/or chronic obstructive pulmonary disease in a Party operating under paragraph 1 of Article 5, is not an essential use, unless the product meets the criteria set out in paragraph 1 (a) of decision IV/25;

(g) To add a new paragraph after paragraph 4 of decision XV/5 to read as follows: *4 bis*. That no quantity of chlorofluorocarbons for essential uses shall be authorized after the commencement of the Twenty-First Meeting of the Parties if the nominating Party operating under paragraph 1 of Article 5 has not submitted to the Ozone Secretariat, in time for consideration by the Parties at the twenty-ninth meeting of the Open-ended Working Group, a preliminary plan of action regarding the phase-out of the domestic use of chlorofluorocarbon-containing metered-dose inhalers where the sole active ingredient is salbutamol;

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;

3. To request the Secretariat to include the changes above in the relevant decisions of the Parties contained in the Montreal Protocol handbook at the time of its next revision, and to note in that handbook that the related decisions include the modifications adopted by the present decision;

4. To request the Technology and Economic Assessment Panel to reflect paragraphs 1– 3 above in a revised version of the handbook on essential-use nominations and to submit, for consideration by Parties, suggestions for any appropriate changes to the handbook and the timing to make such changes;

XX/5: Critical-use exemptions for 2009 and 2010

Noting with appreciation the work done by the Technology and Economic Assessment Panel and its Methyl Bromide Technical Options Committee,

Noting that Parties submitting requests for methyl bromide have supported their requests with management strategies as requested under decision Ex.I/4, and that they should periodically provide updated information,

1. To permit, for the agreed critical-use categories for 2009 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 decision Ex.I/4 to the extent that those conditions are applicable, the levels of production and consumption for 2009 set forth in table B of the annex to the present decision which are necessary to satisfy critical uses, in addition to the amounts permitted in decision XIX/9;

2. To permit, for the agreed critical-use categories for 2010 set forth in table C 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 2010 set forth in table D 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 uses may be approved by the Meeting of the Parties in accordance with decision IX/6;

3. To request the Technology and Economic Assessment Panel to ensure that recent findings with regard to the adoption rate of alternatives are annually updated and reported to the Parties in its first report of each year and inform the work of the Panel;

4. That when assessing supplemental requests for critical use exemptions for

2010 for a specific nomination, the Technology and Economic Assessment Panel should take into account the most current information, including any information on domestic implementation of related 2009 and 2010 critical uses, in accordance with paragraph 2 of decision IX/6;

5. That a Party with a critical use exemption level in excess of permitted levels of production and consumption for critical uses is to make up any such differences between those levels by using quantities of methyl bromide from stocks that the Party has recognized to be available;

6. That Parties shall endeavour to license, permit, authorize or allocate quantities of critical-use methyl bromide as listed in tables A and C of the annex to the present decision;

7. That each Party which has an agreed critical use renews its commitment to ensure that the criteria in paragraph 1 of decision IX/6 are applied when licensing, permitting or authorizing critical use of methyl bromide and, in particular, the criterion laid down in paragraph 1 (b) (ii) of decision IX/6. Each Party is requested to report on the implementation of the present paragraph to the Ozone Secretariat by 1 February for the years to which the present decision applies;

8. To request the Technology and Economic Assessment Panel to continue publishing annually in its progress report prior to each meeting of the Open-ended Working Group the stocks of methyl bromide held by each nominating Party as reported in that Party's accounting framework report;

9. To recognize the continued contribution of the Methyl Bromide Technical Options Committee's expertise and to agree that, in accordance with section 4.1 of the Technology and Economic Assessment Panel's terms of reference, the Committee should ensure that it develops its recommendations in a consensus process that includes full discussion among all available members of the Committee and should ensure that members with relevant expertise are involved in developing its recommendations;

10. To request the Technology and Economic Assessment Panel to ensure that the critical-use recommendations reported in its annual progress report clearly set out the reasons for recommendations and that, where requests are received from Parties for further information, the Methyl Bromide Technical Options Committee should provide a response within four weeks of submission of such a request;

11. That Parties licensing, permitting or authorizing methyl bromide for critical uses shall request the use of emission minimization techniques such as virtually impermeable films, barrier film technologies, deep shank injection and/or other

techniques that promote environmental protection, whenever technically and economically feasible;

12. That each Party should continue to ensure that its national management strategy for the phase-out of critical uses of methyl bromide addresses the aims specified in paragraph 3 of decision Ex.I/4, and that each Party should periodically update or provide supplements to its national management strategy to provide new information on actions, such as identifying alternatives or regulatory updates, being undertaken to make significant progress in reducing critical use nominations, and indicating currently envisaged progress towards a phase down;

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

XX/6: Actions by Parties to reduce methyl bromide use for quarantine and pre-shipment purposes and related emissions

Recognizing that methyl bromide use for quarantine and pre-shipment purposes is an important remaining use of an ozone-depleting substance that is not controlled pursuant to paragraph 6 of Article 2H of the Montreal Protocol and that the 2006 assessment report of the Scientific Assessment Panel indicated that “emissions associated with continued or expanded exemptions, QPS ... may also delay recovery [of the ozone layer]”,

Recalling that Article 7 of the Montreal Protocol requires Parties to report on the annual amount of methyl bromide used for quarantine and pre-shipment applications and that decision XI/13 urges Parties to implement procedures to monitor the uses of methyl bromide by commodity and quantity for quarantine and pre-shipment,

Recalling decision VII/5 urging Parties to refrain from using methyl bromide and to use non-ozone depleting technologies wherever possible and decision XI/13 encouraging Parties to use recovery and recycling technologies where technically and economically feasible until alternatives are available,

Reaffirming the importance of managing and, when economically and technically feasible, replacing quarantine and pre-shipment applications of methyl bromide, as stated in the preamble to decision XVII/15,

Stressing that methyl bromide is a potent ozone-depleting substance and that it and many of its alternatives are hazardous substances that have caused serious human health impacts, notably on workers in ports and warehouses in some Parties,

Recognizing that many Parties have relied on methyl bromide for trade and the conservation of biodiversity and will continue to do so until alternatives become available and accepted for all quarantine and pre-shipment uses,

Acknowledging the efforts made by Parties to phase out or reduce the use and emissions of methyl bromide for quarantine and pre-shipment purposes whether through adoption of alternatives or the use of recapture technologies, *Acknowledging* with appreciation the joint efforts of the Ozone Secretariat and the International Plant Protection Convention in reviewing alternatives to methyl bromide for phytosanitary purposes, particularly under ISPM-15, and the Convention's recommendation encouraging Parties to develop and implement strategies to replace and/or reduce methyl bromide use for phytosanitary applications,

Mindful that the use of methyl bromide for quarantine and pre-shipment purposes is still increasing in some regions of the world, *Recognizing* current data gaps and the need for better information to monitor and analyse trends in quarantine and pre-shipment use and further to identify opportunities for reducing global amounts of methyl bromide required for quarantine and pre-shipment applications under the Montreal Protocol,

1. To urge those Parties that have not yet done so to report data on the use of methyl bromide for quarantine and pre-shipment applications, as required under paragraph 3 of Article 7, by April 2009 and to report such data in accordance with existing Protocol requirements and decisions annually thereafter;

2. To request the Ozone Secretariat:

(a) To update the definition of pre-shipment in paragraph 5.6 of the Instructions/Guidelines for data reporting to reflect decision XI/12;

(b) To post on its website, production and consumption data reported by the Parties under paragraph 3 of Article 7 for methyl bromide used for quarantine and pre-shipment applications;

3. To request the Implementation Committee to consider the reporting of methyl bromide used for quarantine and pre-shipment applications under paragraph 3 of Article 7, in accordance with the Non-Compliance Procedure of the Montreal Protocol;

4. To request the Technology and Economic Assessment Panel, in consultation with the International Plant Protection Convention secretariat, to review all relevant, currently available information on the use of methyl bromide for quarantine and pre-shipment applications and related emissions, to assess trends in the major uses, available alternatives and other mitigation options, and barriers to the adoption of

alternatives or determine what additional information or action may be required to meet those objectives; the assessment should consider:

- (a) A description of the majority of the volumes of methyl bromide used for quarantine and pre-shipment applications, by the major uses and target pests;
- (b) The technical and economic availability of alternative substances and technologies for the main methyl bromide uses, by volume, and of technologies for methyl bromide recovery, containment and recycling;
- (c) Quarantine and pre-shipment applications for which no alternatives are available to date and an assessment of why alternatives are not technically or economically feasible or cannot be adopted;
- (d) Illustrative examples of regulations or other relevant measures that directly affect the use of methyl bromide for quarantine and pre-shipment treatment (including information requested in decision X/11);
- (e) Other barriers preventing the adoption of alternatives to methyl bromide;
- (f) Projects demonstrating technically and economically feasible alternatives, including technologies for recapture and destruction of methyl bromide for quarantine and pre-shipment applications;

5. To request the Technology and Economic Assessment Panel to present a draft report based on the analysis of the available information to the Open-ended Working Group at its twenty-ninth meeting, indicating areas where the information is not sufficient, explaining, where appropriate, why the data were inadequate and presenting a practical proposal for how best to gather the information required for a satisfactory analysis;

6. To request the Technology and Economic Assessment Panel to present a final report highlighting areas where sufficient information indicates opportunities for reductions in methyl bromide use or emissions for quarantine and pre-shipment purposes, including a list of available methyl bromide recapture technologies for consideration by the Parties and, where there is insufficient information, a final proposal for further data gathering for the consideration of the Twenty-First Meeting of the Parties;

7. To request the Technology and Economic Assessment Panel, in accordance with its terms of reference, to list categories of use it has identified that have been classified as quarantine and pre-shipment use by some Parties but not by others by the twenty-ninth meeting of the Open-ended Working Group and that those Parties are requested to provide the information on the rationale for doing so to the Technology

and Economic Assessment Panel in time for inclusion in its final report to the Twenty-First Meeting of the Parties

8. To request the Ozone Secretariat, in cooperation with the Technology and Economic Assessment Panel, the International Plant Protection Convention secretariat and other relevant bodies, to organize in the margins of the Twenty-First Meeting of the Parties a workshop to discuss the report of the assessment referred to in paragraph 4 of the present decision and other relevant inputs with a view to determining possible further actions;

9. To request the Ozone Secretariat to strengthen cooperation and coordination with the International Plant Protection Convention secretariat in accordance with decisions XVII/15 and XVIII/14;

10. To encourage Parties in accordance with the recommendations of the third meeting of the Commission on Phytosanitary Measures under the International Plant Protection Convention to put in place a national strategy that describes actions that will help them to reduce the use of methyl bromide for phytosanitary measures and/or reduce emissions of methyl bromide and make such strategies available to other Parties through the Ozone Secretariat, where possible before the Twenty-First Meeting of the Parties; the strategy may include the following areas for action:

- (a) Replacing methyl bromide use;
- (b) Reducing methyl bromide use;
- (c) Physically reducing methyl bromide emissions;
- (d) Accurately recording methyl bromide use for phytosanitary measures.

XX/8: Workshop for a dialogue on high-global warming potential alternatives for ozone-depleting substances

Noting that the transition from, and phase-out of, ozone-depleting substances has implications for climate system protection,

Recognizing that decision XIX/6 encourages Parties to promote the selection of alternatives to hydrochlorofluorocarbons to minimize environmental impacts, in particular impacts on climate,

Recognizing also that there is scope for coordination between the Montreal Protocol and the United Nations Framework Convention on Climate Change and its Kyoto Protocol for reducing emissions and minimizing environmental impacts from hydrofluorocarbons, and that Montreal Protocol Parties and associated bodies have considerable expertise in these areas which they could share,

Recognizing further that there is a need for more information on the environmental implications of possible transitions from ozone-depleting substances to high-global warming potential chemicals, in particular hydrofluorocarbons,

1. To request the Technology and Economic Assessment Panel to update the data contained within the Panel's 2005 *Supplement to the IPCC/TEAP Special Report* and to report on the status of alternatives to hydrochlorofluorocarbons and hydrofluorocarbons, including a description of the various use patterns, costs, and potential market penetration of alternatives no later than 15 May 2009;

2. To request the Ozone Secretariat to prepare a report that compiles current control measures, limits and information reporting requirements for compounds that are alternatives to ozone-depleting substances and that are addressed under international agreements relevant to climate change;

3. To request the Ozone Secretariat with input, where appropriate, from the secretariat of the United Nations Framework Convention on Climate Change and its Kyoto Protocol to convene an open-ended dialogue on high-global warming potential alternatives for ozone-depleting substances among Parties, including participation by the assessment panels and the Multilateral Fund Secretariat, and inviting the Fund's implementing agencies, other relevant multilateral environmental agreement secretariats and non-governmental organizations to discuss technical and policy issues related to alternatives for ozone-depleting substances, with a particular focus on exchanging views of the best ways of how the experience from the Montreal Protocol can be used to address the impact of hydrofluorocarbons, and also with a view to maximizing the ozone and climate benefits of the hydrochlorofluorocarbon early phase-out under the Montreal Protocol;

4. To encourage Parties to include their climate experts as participants in the workshop;

5. That the above-mentioned dialogue on high-global warming potential alternatives to ozone-depleting substances should be held just before 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;

6. To request the co-chairs of the workshop, in cooperation with the Ozone Secretariat, to prepare a summary report of the discussions that take place during the dialogue and to report on the proceedings to the Open-ended Working Group at its twenty-ninth meeting;

7. To invite one representative of a Party operating under paragraph 1 of Article 5 and one representative of a Party not so operating to serve as co-chairs of the

workshop;

8. 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 and to encourage that secretariat to make the decision available at the fourteenth meeting of the Conference of the Parties to that Convention for possible consideration of participation in the workshop;

附件二

雙邊對話重點紀要

一、 美國

國外人士	單位	EPA (Stratospheric Protection Division)	名字	Drusilla Hufford	職稱	Director
	國別	USA	E-mail	hufford.drusilla@epa.gov	聯絡電話	202-343-9101
	會晤日期	2008/11/19				
交流內容	<p>問題：</p> <ol style="list-style-type: none"> 對於2010年Non-Article 5 Country HCFCs消費量75%之削減目標，美國有何因應措施？ HCFCs之替代是否會考慮自然冷煤之使用？ <p>回覆：</p> <ol style="list-style-type: none"> 目前美國使用的HCFCs替代品為HFCs相關物質，至於大樓所使用之大型中央空調由於使用年限長，超過2010年，現在尚無替代方案。 自然冷煤的使用仍在觀察中，仍需要評估其安全性與效率問題。 					

二、 新加坡

國外人士	單位	NEA National Environment Agency (Chemical Control, Pollution Control Department)	名字	Rohaya Saharom	職稱	Senior Engineer
	國別	Singapore	E-mail	rohaya_saharom@n ea.gov.sg	聯絡電話	(65) 6731-9654
	會晤日期	2008/11/18				
交流內容	<p>問題：</p> <ol style="list-style-type: none"> 對於 2010 年 HCFCs 消費量之削減目標，新加坡有何因應措施？ 有關 CFCs 物質庫妥善處置，新加坡如何確定 CFCs 是否有確實被銷毀？ <p>回覆：</p> <ol style="list-style-type: none"> 目前新加坡並沒有強制產業要使用HCFCs或HFCs，但是HCFCs的效能較HFCs好，所以使用HCFCs的廠商仍比較多。 新加坡確實有這個問題，但我們可以做的就是透過宣導及自我意識的提升。 					

三、 日本

國外人士	單位	Ministry of Economy, Trade and Industry, Japan	名字	Masae Yamanaka	職稱	President (活動攤位代理人)
	國別	Japan	E-mail	masae-y@eva.hi-ho.ne.jp	聯絡電話	06-6441-2257
	會晤日期	2008/11/18				
交流內容	<p>問題：</p> <ol style="list-style-type: none"> 1. 為什麼日本會使用自然冷煤替代 HCFCs ？ 2. 日本政府如何推動自然冷煤技術發展？是由政府機關的哪個部門執行？ <p>回覆：</p> <ol style="list-style-type: none"> 1. 在蒙特婁議定書執行初期，日本就已經在發展自然冷煤相關技術，至今自然冷煤技術已經相當成熟。 2. 自然冷煤的技術發展是由產經省(METI)主導，提供資金給研究機構 New Energy and Industrial Technology Development Organization (NEDO)，支持其開發相關技術，並適時將技術轉移至產業。 					

四、 TEAP

國外人士	單位	Technology and Economic Assessment Panel (TEAP)	名字	Pr. Mohamed Besri	職稱	Co-chair
	國別	Morocco	E-mail	m.besri2iav.ac.ma	聯絡電話	212-37710148
	會晤日期	2008/11/18				
交流內容	<p>問題：</p> <ol style="list-style-type: none"> 1. 是否能就溴化甲烷裝運前處理 (pre-shipment, PS) 定義進行釐清。 2. 未來公約對於溴化甲烷 QPS 管制之趨勢 <p>回覆：</p> <ol style="list-style-type: none"> 1. 裝運前處理常常因締約國的不同而各自解讀其定義。實際上裝運前處理必須符合多項原則，但不管如何，都應是進出口國任一方「官方規定」必須完成燻蒸處理，且符合 ISPM15 之情形下使用溴化甲烷燻蒸才能算是裝運前處理。將另行 E-MAIL 提供相關詳細資料。 2. 目前 IPPC 已規定 2010 年後廢止溴化甲烷，歐盟也在蒙特婁議定書倡議在 2105 年時廢除溴化甲烷使用，就整體趨勢來看，完全停用溴化甲烷為大勢所趨。 					

五、 NGO

國外人士	單位	Touch Down Consulting (NGO)	名字	Dr. Melanie Millier	職稱	Director
	國別	Belgium	E-mail	melanie.millier@skynet.be	聯絡電話	32-26525455
	會晤日期	2008/11/17				
交流內容	<p>問題：</p> <p>1. 是否能就 ODS 銷毀處置提供相關資訊與建議。</p> <p>回覆：</p> <p>1. 目前在歐洲（德國）已有移動式 ODS 銷毀設施，雖仍不普遍，但對於興建銷毀設施不具成本效益之國家，或船舶可停靠之國家，也許為未來 ODS 銷毀之選項之一。</p> <p>2. 目前芝加哥期貨交易所正發展出適合用於美國國內銷毀 CFCs 之自願性溫室氣體減量方案之方法學，有鑑於台灣目前銷毀 CFCs 之成本高，也許可考慮藉由參與此類計畫籌募額外資金。</p>					

附件三

維也約公約第八次締約國大會暨
蒙特婁議定書第二十次締約國會議
議程

Agenda of the eighth meeting of
the Conference of the Parties to
the Vienna Convention and the
Twentieth Meeting of the Parties
to the Montreal Protocol



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**Eighth meeting of the Conference of the Parties to the
Vienna Convention for the Protection of the Ozone Layer**

**Twentieth Meeting of the Parties to the
Montreal Protocol on Substances that Deplete
the Ozone Layer**

Doha, 16–20 November 2008

**Provisional agenda of the eighth meeting of the Conference of the
Parties to the Vienna Convention and the Twentieth Meeting of
the Parties to the Montreal Protocol**

I. Preparatory segment (16–18 November 2008)

1. Opening of the preparatory segment:
 - (a) Statement by representative(s) of the Government of Qatar;
 - (b) Statement by representative(s) of the United Nations Environment Programme.
2. Organizational matters:
 - (a) Adoption of the agenda of the preparatory segment;
 - (b) Organization of work.
3. Consideration of Vienna Convention and combined Vienna Convention and Montreal Protocol issues:
 - (a) Presentation of and discussion on the report of the seventh meeting of the Ozone Research Managers of the Parties to the Vienna Convention;
 - (b) Status of the General Trust Fund for Financing Activities on Research and Systematic Observations Relevant to the Vienna Convention;
 - (c) Financial reports and budgets of the trust funds for the Vienna Convention and the Montreal Protocol;
 - (d) Status of ratification of the Vienna Convention, the Montreal Protocol and amendments to the Montreal Protocol.

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4. Discussion of Montreal Protocol-related issues:
 - (a) Replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol;
 - (i) Presentation and consideration of the supplemental report of the Technology and Economic Assessment Panel Replenishment Task Force;
 - (ii) Proposal on extension of the fixed-exchange-rate mechanism;
 - (b) Environmentally sound disposal of ozone-depleting substances (proposals by Argentina, the European Community, the Federated States of Micronesia and Mauritius);
 - (c) Issues related to essential uses:
 - (i) Use of CFC-113 in the aerospace industry in the Russian Federation;
 - (ii) Nominations for 2009 and 2010 for essential-use exemptions;
 - (iii) Essential uses and campaign production of CFCs for metered-dose inhalers;
 - (d) Consideration of methyl bromide-related issues:
 - (i) Nominations for 2009 and 2010 for critical-use exemptions;
 - (ii) Adjustment to the Montreal Protocol on allowances for production of methyl bromide to meet basic domestic needs of Parties operating under paragraph 1 of Article 5 (proposal by Kenya and Mauritius);
 - (iii) Quarantine and pre-shipment uses of methyl bromide (proposal by the European Community);
 - (e) Application of trade provisions to HCFCs (proposal by Australia);
 - (f) Process agents;
 - (g) Update reports by the Technology and Economic Assessment Panel:
 - (i) Carbon tetrachloride emissions and opportunities for reduction (final report);
 - (ii) Regional imbalances in respect of halons;
 - (iii) Scoping study on alternatives to HCFCs for mines and very high temperature conditions;
 - (h) Technology and Economic Assessment Panel administrative issues;
 - (i) Compliance and reporting issues considered by the Implementation Committee, including non-compliance with the Montreal Protocol that may be attributable to CFC consumption for production of metered dose inhalers in certain Parties operating under paragraph 1 of Article 5 (decision XVIII/16 paragraphs 3-5);
 - (j) Consideration of membership of Montreal Protocol bodies for 2009:
 - (i) Members of the Implementation Committee;
 - (ii) Members of the Executive Committee of the Multilateral Fund;
 - (iii) Co-Chairs of the Open-ended Working Group.
5. Other matters.

II. High-level segment (19 and 20 November 2008)

1. Opening of the high-level segment:
 - (a) Welcome by the Government of Qatar;
 - (b) Statement by representatives of the United Nations Environment Programme;
 - (c) Statement by a representative of the World Meteorological Organization;
 - (d) Statement by the President of the seventh meeting of the Conference of the Parties to the Vienna Convention;
 - (e) Statement by the President of the Nineteenth Meeting of the Parties to the Montreal Protocol.
 2. Organizational matters:
 - (a) Election of officers of the eighth meeting of the Conference of the Parties to the Vienna Convention;
 - (b) Election of officers of the Twentieth Meeting of the Parties to the Montreal Protocol;
 - (c) Adoption of the agenda of the eighth meeting of the Conference of the Parties to the Vienna Convention and the Twentieth Meeting of the Parties to the Montreal Protocol;
 - (d) Organization of work;
 - (e) Credentials of representatives.
 3. Presentations by the assessment panels on the status of their work, including latest developments.
 4. Presentation by the Chair of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol on the work of the Executive Committee.
 5. Statements by heads of delegations.
 6. Report of the co-chairs of the preparatory segment and consideration of the decisions recommended for adoption at the eighth meeting of the Conference of the Parties to the Vienna Convention and the Twentieth Meeting of the Parties to the Montreal Protocol.
 7. Dates and venues for the ninth meeting of the Conference of the Parties to the Vienna Convention and the Twenty-First Meeting of the Parties to the Montreal Protocol.
 8. Other matters.
 9. Adoption of decisions by the eighth meeting of the Conference of the Parties to the Vienna Convention.
 10. Adoption of decisions by the Twentieth Meeting of the Parties to the Montreal Protocol.
 11. Adoption of the report of the eighth meeting of the Conference of the Parties to the Vienna Convention and the Twentieth Meeting of the Parties to the Montreal Protocol.
 12. Closure of the meeting.
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**Eighth meeting of the Conference of the Parties to the
Vienna Convention for the Protection of the Ozone Layer**

**Twentieth Meeting of the Parties to the
Montreal Protocol on Substances that Deplete
the Ozone Layer**

Doha, 16–20 November 2008

**Annotated provisional agenda of the eighth meeting of the
Conference of the Parties to the Vienna Convention and the
Twentieth Meeting of the Parties to the Montreal Protocol**

A. Preparatory segment (16–18 November 2008)

1. Opening of the preparatory segment

1. The preparatory segment of the combined eighth meeting of the Conference of the Parties to the Vienna Convention and the Twentieth Meeting of the Parties to the Montreal Protocol will be opened by the co-chairs of the Open-ended Working Group on 16 November at 10 a.m. at the Sheraton Doha Resort and Convention Hotel in Doha, Qatar. Registration of participants will begin at 8 a.m. on the same day. Participants are encouraged to register well in advance of the meeting through the Ozone Secretariat's website (<http://ozone.unep.org/>). Under this agenda item, statements will be made by representatives of the Government of Qatar and the United Nations Environment Programme.

2. Organizational matters

(a) Adoption of the agenda of the preparatory segment

2. The provisional agenda set forth in document UNEP/OzL.Conv.8/1-UNEP/OzL.Pro.20/1 will be before the Parties for adoption.

(b) Organization of work

3. Mr. Mikkel Sorensen (Denmark) and Ms. Judy Francis Beaumont (South Africa) will co-chair the preparatory segment according to decision XIX/4 of the Nineteenth Meeting of the Parties. The Parties may wish to conduct their work during the segment in plenary session and draw up a specific timetable for the work on the agenda.

3. Consideration of Vienna Convention and combined Vienna Convention and Montreal Protocol issues

(a) Presentation of and discussion on the report of the seventh meeting of the Ozone Research Managers of the Parties to the Vienna Convention

4. The Parties will review the work and recommendations emanating from the seventh meeting of the Ozone Research Managers of the Parties to the Vienna Convention, held in Geneva from 18 to 21 May 2008. Further information can be found in document UNEP/OzL.Conv.8/6. The Parties may wish to make recommendations on this item for consideration during the high-level segment.

(b) Status of the General Trust Fund for Financing Activities on Research and Systematic Observations Relevant to the Vienna Convention

5. The Parties are expected to review the status of the extrabudgetary fund for receiving voluntary contributions for the purpose of financing certain activities on research and systematic observations relevant to the Vienna Convention in developing countries and countries with economies in transition. The Parties may wish to make recommendations on this item for consideration during the high-level segment.

(c) Financial reports and budgets of the trust funds for the Vienna Convention and the Montreal Protocol

6. Under this agenda item it is expected that the Parties will establish a budget committee to deliberate and recommend action on the Secretariat's budgets for the Vienna Convention and the Montreal Protocol, as contained in documents UNEP/OzL.Conv.8/4 and UNEP/OzL.Pro.20/4, respectively. The Secretariat has traditionally had separate budgets for the two agreements, with some shared budget lines. In accordance with the rules of procedure the Montreal Protocol budget is considered every year at the annual ordinary meetings of the Parties to the Protocol. The Vienna Convention budget is considered at the ordinary meetings of the Conference of the Parties to the Convention, which under decision II/8 take place every three years.

(d) Status of ratification of the Vienna Convention, the Montreal Protocol and the amendments to the Montreal Protocol

7. The Parties are expected to review the status of ratification of the Convention and the Protocol and its amendments. A draft decision to record the status of ratification at the time of the meeting has been prepared for consideration by the Parties and may be found as draft placeholder decisions VIII/AA and XX/AA in chapter II of document UNEP/OzL.Conv.8/3-UNEP/OzL.Pro.20/3.

4. Discussion of Montreal Protocol-related issues

(a) Replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol

(i) Presentation and consideration of the supplemental report of the Technology and Economic Assessment Panel Replenishment Task Force

(ii) Proposal on extension of the fixed-exchange-rate mechanism

8. At the twenty-eighth meeting of the Open-ended Working Group of the Parties to the Montreal Protocol, the Parties considered the initial report of the Technology and Economic Assessment Panel on the replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol and agreed to request the Panel's Replenishment Task Force to prepare additional analysis for the Parties to consider in further deliberating on the issue. The Parties also requested the Secretariat to prepare alternative proposals for extending the fixed-exchange-rate mechanism applicable to Party contributions to the Multilateral Fund in accordance with decisions XI/6, XIV/40 and XVII/41. Under this agenda item, the Parties are expected to hear and discuss a presentation by the Replenishment Task Force and to work to achieve consensus on the replenishment of the Multilateral Fund and the application of the fixed-exchange-rate mechanism to contributions thereto. Both proposals are included under draft decision G of chapter I of document UNEP/OzL.Conv.8/3-UNEP/OzL.Pro.20/3.

(b) Environmentally sound disposal of ozone-depleting substances (proposals by Argentina, the European Community, the Federated States of Micronesia and Mauritius)

9. At the twenty-eighth meeting of the Open-ended Working Group the Parties heard a presentation on a report on case studies on the destruction of ozone-depleting substances that had been commissioned by the Executive Committee of the Multilateral Fund pursuant to decision XVIII/9. The Open-ended Working Group also considered and agreed to forward to the Meeting of the Parties three proposals from Parties on the issue of destruction, which are contained as draft decisions A, C and E in chapter I of document UNEP/OzL.Conv.8/3-UNEP/OzL.Pro.20/3, together with a summary report and proposal from the co-chairs of the destruction contact group that met during the Working Group's twenty-eighth meeting, which is contained in section B of chapter III of the same document. The Parties may wish to make recommendations on this item for consideration during the high-level segment.

(c) Issues related to essential uses

(i) Use of CFC-113 in the aerospace industry in the Russian Federation

10. At the twenty-eighth meeting of the Open-ended Working Group it was agreed that consideration of the essential-use nomination by the Russian Federation for aerospace purposes would be suspended until further information was available. The Technology and Economic Assessment Panel will be making a site visit to the country to discuss the matter further before the Twentieth Meeting of the Parties.

(ii) Nominations for 2009 and 2010 for essential-use exemptions

11. At the twenty-eighth meeting of the Open-ended Working Group the Parties heard a presentation from the Technology and Economic Assessment Panel on its initial review of the nominations put forward by Parties for essential-use exemptions for 2009 and 2010.

(iii) Essential uses and campaign production of CFCs for metered-dose inhalers

12. At its twenty-eighth meeting the Open-ended Working Group heard a report from the Technology and Economic Assessment Panel on the possibility of producing one final quantity of chlorofluorocarbons (CFCs) that would be sufficient for the manufacture of such CFC-based metered-dose inhalers as would be required to complete the global transition to CFC-free inhalers. The Parties may wish to make recommendations on this item for consideration during the high-level segment.

(d) Consideration of methyl bromide-related issues

(i) Nominations for 2009 and 2010 for critical-use exemptions

13. In accordance with the procedures agreed on at the Second Extraordinary Meeting of the Parties to the Montreal Protocol the Methyl Bromide Technical Options Committee will deliberate for a second time to consider all available information and prepare its final recommendations on the nominations for critical-use exemptions for methyl bromide that have been submitted for 2009 and 2010. Under this agenda item it is expected that the Committee will make a presentation on its final recommendations. The Parties may then wish to make recommendations on the item for consideration during the high-level segment.

(ii) Adjustment to the Montreal Protocol on allowances for production of methyl bromide to meet basic domestic needs of Parties operating under paragraph 1 of Article 5 (proposal by Kenya and Mauritius)

14. Consistent with paragraph 9 of Article 2 of the Montreal Protocol Kenya and Mauritius have circulated a proposal to adjust the Protocol's current methyl bromide basic domestic needs provision to limit allowable production of this substance after 2010. The proposal, which is reproduced as proposal F in chapter I of document UNEP/OzL.Conv.8/3-UNEP/OzL.Pro.20/3, was discussed at the twenty-eighth meeting of the Open-ended Working Group, at which it was agreed that it should be presented to the Twentieth Meeting of the Parties for further consideration.

(iii) Quarantine and pre-shipment uses of methyl bromide (proposal by the European Community)

15. At the twenty-eighth meeting of the Open-ended Working Group the European Community introduced a draft decision on quarantine and pre-shipment uses of methyl bromide, contained under proposal F in chapter I of document UNEP/OzL.Conv.8/3-UNEP/OzL.Pro.20/3, which the Working Group agreed should be presented for further consideration at the Twentieth Meeting of the Parties. The Parties may wish to make recommendations on this item for consideration during the high-level segment.

(e) Application of trade provisions to HCFCs (proposal by Australia)

16. At its twenty-eighth meeting the Open-ended Working Group discussed a proposal from Australia to amend decision XV/3 to conform to the 2007 Montreal adjustment to the Montreal Protocol on hydrochlorofluorocarbons (HCFCs), which is contained under draft decision B in chapter I of document UNEP/OzL.Conv.8/3-UNEP/OzL.Pro.20/3. The Parties may wish to make recommendations on this item for consideration during the high-level segment.

(f) Process agents

17. In paragraph 6 of decision XVII/6 the Parties to the Montreal Protocol agreed that the Technology and Economic Assessment Panel should review national nominations and make recommendations every other year on, among other things, process-agent uses of controlled substances that could be added to or removed from table A of decision X/14. The Parties may wish to make recommendations on this item for consideration during the high-level segment.

(g) Update reports by the Technology and Economic Assessment Panel

(i) Carbon tetrachloride emissions and opportunities for reduction (final report)

18. At its twenty-eighth meeting the Open-ended Working Group heard a report by the Technology and Economic Assessment Panel on carbon tetrachloride emissions and agreed that the issue should be further considered by the Twentieth Meeting of the Parties. The Parties may wish to make recommendations on this item for consideration during the high-level segment.

(ii) Regional imbalances in respect of halons

19. Pursuant to decision XIX/6 the Technology and Economic Assessment Panel prepared a report on potential regional imbalances in the remaining supply of halons, which was presented at the twenty-eighth meeting of the Open-ended Working Group. The Parties may wish to make recommendations on this item for consideration during the high-level segment.

(iii) Scoping study on alternatives to HCFCs for mines and very high temperature conditions

20. The Technology and Economic Assessment Panel is expected to give a presentation on this issue. The Parties may wish to make recommendations on this item for consideration during the high-level segment.

(h) Technology and Economic Assessment Panel administrative issues

21. Under this item, the Parties are expected to consider administrative issues related to the Technology and Economic Assessment Panel, including, if relevant, the endorsement of any proposals for new co-chairs of the Panel's technical options committees.

(i) Compliance and reporting issues considered by the Implementation Committee, including non-compliance with the Montreal Protocol that may be attributable to CFC consumption for production of metered dose inhalers in certain Parties operating under paragraph 1 of Article 5 (decision XVIII/16 paragraphs 3-5)

22. Under this item, the President of the Implementation Committee under the Non-Compliance Procedure for the Montreal Protocol will report on the issues considered at the Committee's fortieth and forty-first meetings, including those related to consumption of CFCs for the production of metered-dose inhalers, as requested by decision XVIII/16. The Parties may wish to make recommendations on this item for consideration during the high-level segment.

(j) Consideration of membership of Montreal Protocol bodies for 2009**(i) Members of the Implementation Committee**

23. The Twentieth Meeting of the Parties will consider the issue of membership of the Implementation Committee. In accordance with the non-compliance procedure adopted by the Parties the Implementation Committee is to consist of 10 Parties elected for two-year terms on the basis of equitable geographical representation. Outgoing Parties may be re-elected for one consecutive term. Draft decision XX/BB on this item is included in chapter II of document UNEP/OzL.Conv.8/3-UNEP/OzL.Pro.20/3.

(ii) Members of the Executive Committee of the Multilateral Fund

24. The Twentieth Meeting of the Parties will consider the issue of membership of the Executive Committee. In accordance with the terms of reference of the Executive Committee approved by the Fourth Meeting of the Parties, the Executive Committee consists of 14 members: seven from the group of Parties operating under paragraph 1 of Article 5 of the Montreal Protocol and seven from the group of Parties not so operating. Each group selects its Executive Committee members, who are then formally endorsed by the Meeting of the Parties. At the current meeting the group of Parties operating under paragraph 1 of Article 5 may wish to select a member of the Committee to serve as the Vice-Chair of the Committee for 2009 and the group of Parties not operating under paragraph 1 of Article 5 may wish to select a member of the Committee to serve as Chair for 2009. The Twentieth Meeting of the Parties may wish to endorse the selections of the new representatives and note the selection of the Chair and Vice-Chair of the Committee for 2009. Draft decision XX/CC on this item is included in chapter II of document UNEP/OzL.Conv.8/3-UNEP/OzL.Pro.20/3.

(iii) Co-Chairs of the Open-ended Working Group

25. In accordance with decision XIX/4 Mr. Mikkel Sorensen (Denmark) and Ms. Judy Francis Beaumont (South Africa) have served as co-chairs of the Open-ended Working Group of the Parties to the Montreal Protocol for 2008. The Twentieth Meeting of the Parties may wish to consider the question of who should serve as co-chairs of the Open-ended Working Group for 2009. Draft decision XX/DD on this item is included in chapter II of document UNEP/OzL.Conv.8/3-UNEP/OzL.Pro.20/3.

5. Other matters

26. The Parties may wish to discuss such other matters as have been identified and agreed for consideration.

B. High-level segment (19 and 20 November 2008)**1. Opening of the high-level segment**

27. The high-level segment of the combined eighth meeting of the Conference of the Parties to the Vienna Convention and the Twentieth Meeting of the Parties to the Montreal Protocol is scheduled to be opened on 19 November at 10 a.m. at the Sheraton Doha Resort and Convention Hotel.

(a) Welcome by the Government of Qatar**(b) Statement by representatives of the United Nations Environment Programme****(c) Statement by a representative of the World Meteorological Organization****(d) Statement by the President of the seventh meeting of the Conference of the Parties to the Vienna Convention****(e) Statement by the President of the Nineteenth Meeting of the Parties to the Montreal Protocol**

28. Under these agenda items, statements will be made by representatives of the Government of Qatar, the United Nations Environment Programme, the President of the seventh meeting of the Conference of the Parties to the Vienna Convention and the President of the Nineteenth Meeting of the Parties to the Montreal Protocol.

2. Organizational matters

(a) Election of officers of the eighth meeting of Conference of the Parties to the Vienna Convention

29. Paragraph 1 of rule 21 of the rules of procedure of the Conference of the Parties to the Vienna Convention and the Meeting of the Parties to the Montreal Protocol states:

At the commencement of the first session of each ordinary meeting, a President, three Vice-Presidents and a Rapporteur are to be elected from among the representatives of the Parties present at the meeting. They will serve as the officers of the meeting. In electing its officers, the Meeting [Conference] of the Parties shall have due regard to the principle of equitable geographical representation [distribution]. The offices of the President and Rapporteur of the Meeting [Conference] of the Parties shall normally be subject to rotation among the five groups of States referred to in section I, paragraph 1, of General Assembly resolution 2997 (XXVII) of 15 December 1972, by which the United Nations Environment Programme was established.

A representative of a Party from the group of African States presided over the seventh meeting of the Conference of the Parties to the Vienna Convention while a representative of a Party from the group of Western European and other States served as Rapporteur. On the basis of rotation according to English alphabetical order among the five groups of States referred to in General Assembly resolution 2997 (XXVII), a Party from the group of Asian and Pacific States may be elected to preside over the eighth meeting of the Conference of the Parties and a representative of a Party from the group of African States may be elected as Rapporteur, unless the Conference of the Parties decides otherwise. Three additional Vice-Presidents may also be elected, one from each of the group of Eastern European States, the group of Western European and other States and the group of Latin American and Caribbean States.

(b) Election of officers of the Twentieth Meeting of the Parties to the Montreal Protocol

30. In accordance with the rule of procedure cited in the preceding paragraph the Twentieth Meeting of the Parties must also elect a President, three Vice-Presidents and a Rapporteur. A representative of a Party from the group of Asian and Pacific States presided over the Nineteenth Meeting of the Parties to the Montreal Protocol, while a representative of a Party from the group of African States served as Rapporteur. On the same basis as described above, a Party from the group of Eastern European States may be elected to preside over the Twentieth Meeting and a Party from the group of Asian and Pacific States may be elected as Rapporteur, unless the Meeting decides otherwise. Three additional Vice-Presidents may also be elected, one from each of the group of African States, the group of Latin American and Caribbean States and the group of Western European and other States.

(c) Adoption of the agenda of the eighth meeting of the Conference of the Parties to the Vienna Convention and the Twentieth Meeting of the Parties to the Montreal Protocol

31. Under this agenda item the Parties may wish to adopt the agenda for the high-level segment, including any items that they may agree to include under item 8, "Other matters."

(d) Organization of work

32. The Parties may wish to conduct their work in plenary session and draw up a specific timetable for their work on the items on the agenda.

(e) Credentials of representatives

33. In accordance with rule 18 of the rules of procedure for meetings of the Conference of the Parties to the Vienna Convention and the Meeting of the Parties to the Montreal Protocol, the credentials of representatives must be submitted to the Executive Secretary of the meeting, if possible not later than 24 hours after the opening of the Meeting. Under this agenda item, and in accordance with rule 19 of the rules of procedure, the officers of the meeting must examine the credentials and submit their report thereon to the Parties.

3. Presentations by the assessment panels on the status of their work, including latest developments

34. Under this agenda item, the assessment panels will make a brief presentation on their work and any key information relevant to the Vienna Convention and the Montreal Protocol.

4. Presentation by the Chair of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol on the work of the Executive Committee

35. The Chair of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol will present the report of the Executive Committee to the Parties, as circulated in document UNEP/OzL.Pro.20/7.

5. Statements by heads of delegations

36. Heads of delegations of the Parties will be invited to make statements.

6. Report of the co-chairs of the preparatory segment and consideration of the decisions recommended for adoption at the eighth meeting of the Conference of the Parties to the Vienna Convention and the Twentieth Meeting of the Parties to the Montreal Protocol

37. Under this agenda item the co-chairs of the preparatory segment will be invited to report to the Parties on the progress that has been made in reaching consensus on the substantive issues on the agenda.

7. Dates and venues for the ninth meeting of the Conference of the Parties to the Vienna Convention and the Twenty-First Meeting of the Parties to the Montreal Protocol

38. The Parties will be informed of any information regarding the potential venue for the Twenty-First Meeting of the Parties to the Montreal Protocol and the ninth meeting of the Conference of the Parties to the Vienna Convention. The rules of procedure governing the meetings of the Conference of the Parties and the Meeting of the Parties provide that the Meeting of the Parties shall meet every year, that the Conference of the Parties shall meet once every two years and that in those years when the Conference meets it shall do so in conjunction with the Meeting of the Parties. By decision II/8, however, the Conference of the Parties to the Vienna Convention decided that it would meet every third year rather than every other year. Since then, every third Meeting of the Parties to the Montreal Protocol has accordingly been held jointly with a meeting of the Conference of the Parties to the Vienna Convention. In accordance with that practice the ninth meeting of the Conference of the Parties to the Vienna Convention will be held jointly with the Twenty-Third Meeting of the Parties to the Protocol in 2011.

8. Other matters

39. Any additional substantive issues agreed for inclusion on the agenda under item 2 (c), "Adoption of the agenda", will be taken up under this agenda item.

9. Adoption of decisions by the Conference of the Parties to the Vienna Convention

40. Under this agenda item the Parties to the Vienna Convention assembled in Doha will adopt the Vienna Convention-related decisions to be taken at the current meeting.

10. Adoption of decisions by the Twentieth Meeting of the Parties to the Montreal Protocol

41. Under this agenda item the Parties to the Montreal Protocol assembled in Doha will adopt the Montreal Protocol-related decisions to be taken at the current meeting.

11. Adoption of the report of the eighth meeting of the Conference of the Parties to the Vienna Convention and the Twentieth Meeting of the Parties to the Montreal Protocol

42. Under this agenda item the Parties to the Montreal Protocol and the Vienna Convention will adopt the report of the combined eighth meeting of the Conference of the Parties to the Vienna Convention and the Twentieth Meeting of the Parties to the Montreal Protocol.

12. Closure of the meeting

43. The combined eighth meeting of the Conference of the Parties to the Vienna Convention and the Twentieth Meeting of the Parties to the Montreal Protocol is expected to close by 6 p.m. on Friday, 20 November 2008.

附件四

維也約公約第八次締約國大會暨
蒙特婁議定書第二十次締約國會議
報告全文

Report of the eighth meeting of
the Conference of the Parties to
the Vienna Convention and the
Twentieth Meeting of the Parties
to the Montreal Protocol on
Substances that Deplete the Ozone
Layer



**United Nations
Environment
Programme**

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**Eighth meeting of the Conference of the Parties to the
Vienna Convention for the Protection of the Ozone Layer**

**Twentieth Meeting of the Parties to the
Montreal Protocol on Substances that
Deplete the Ozone Layer**

Doha, 16–20 November 2008

**Report of the eighth meeting of the Conference of the Parties to
the Vienna Convention and the Twentieth Meeting of the Parties
to the Montreal Protocol on Substances that Deplete the Ozone
Layer**

Introduction

1. The combined eighth meeting of the Conference of the Parties to the Vienna Convention and the Twentieth Meeting of the Parties to the Montreal Protocol was held at the Sheraton Doha Resort and Convention Hotel in Doha from 16 to 20 November 2008. It consisted of a preparatory segment, held from 16 to 18 November, and a high-level segment, held on 19 and 20 November.
2. The present report reflects the deliberations under the respective items of the single agenda for the combined meeting; any references to the current meeting should be understood to denote the combined meeting of the two bodies.

Part one: Preparatory segment

I. Opening of the preparatory segment

3. The preparatory segment was opened by its Co-Chair, Mr. Mikkel Aaman Sorensen (Denmark), on 16 November 2008 at 10.15 a.m.
4. Opening statements were delivered by Mr. Abdulla Mubarak Al-Moadhadi, Minister of Environment, Qatar, and Mr. Marco González, Executive Secretary of the Ozone Secretariat. In his opening statement, Mr. Al-Moadhadi said that the current meeting represented an opportunity to tackle current global threats, given that it was humankind's responsibility to hand over the planet to future generations, just as it had been bequeathed to the present generation. While recognizing the progress made in protecting the ozone layer, he warned that phasing out ozone-depleting substances remained a significant challenge. He also welcomed the Parties' agreement to make history by conducting a paperless meeting and said that the Government of Qatar had donated the computer equipment and paperless system used during the meeting to the United Nations Environment Programme (UNEP) so that such materials could be used to make future United Nations meetings, including meetings of the Governing Council, more environmentally friendly.

5. Mr. González welcomed participants and thanked the Qatari Government for its support for the paperless meeting initiative and, in particular, its donation of the computer equipment used for the meetings. He pointed out that the paperless meeting afforded an unprecedented opportunity to spread the idea throughout the United Nations system and urged Parties to embrace it, thereby helping to preserve the environment. Noting that, in 13 months' time, the Protocol would face what some termed its "acid test" – ensuring global compliance with the 2010 requirements for the elimination of production and consumption of CFCs, halons and carbon tetrachloride – he urged all stakeholders to focus their efforts and provide any assistance that might be required in that regard. Welcoming the assistance provided by the Multilateral Fund for the Implementation of the Montreal Protocol, and by the secretariat of that body, he urged Parties to bear in mind the continuing importance of the Fund in meeting upcoming hydrochlorofluorocarbon obligations when discussing replenishment of the Fund. He also noted the role played by the assessment panels in the success of the Protocol and commended the Technology and Economic Assessment Panel on having prepared its complex analysis of the replenishment issue in a short time.

6. Recalling the importance of certain elements of the Protocol established at previous meetings, such as its adjustment provision and the indicative list of categories of incremental costs, he welcomed the flexibility shown by Parties in enabling evolution throughout the Protocol, as demonstrated by the Secretariat through the innovation of its e-newsletter *Centrum*, its participation in the UNEP multilateral environmental agreement senior management team and its outreach to other convention secretariats. He noted that the agenda of the current meeting was particularly future-oriented and placed before the Parties significant proposals on the future of the ozone-depleting substance phase-out and the destruction of ozone-depleting substances, among other things. Warning that there could be serious gaps in satellite monitoring in the near future, he expressed the hope that Parties would renew their commitment to work in that area and consider the actions required for the launch of gap-filling satellite missions and the commissioning of new ground-based monitoring stations. Recalling that the Ozone Secretariat was available to assist wherever possible, he wished the representatives fruitful discussions.

II. Organizational matters

A. Attendance

7. The combined eighth meeting of the Conference of the Parties to the Vienna Convention and the Twentieth Meeting of the Parties to the Montreal Protocol was attended by representatives of the following Parties to the two instruments: Afghanistan, Algeria, Angola, Argentina, Armenia, Australia, Austria, Azerbaijan, Bahamas, Bahrain, Bangladesh, Belarus, Belgium, Belize, Benin, Bolivia, Bosnia and Herzegovina, Brazil, Brunei Darussalam, Burkina Faso, Burundi, Cambodia, Cameroon, Canada, Cape Verde, Chad, China, Colombia, Comoros, Costa Rica, Côte d'Ivoire, Croatia, Cuba, Czech Republic, Democratic Republic of the Congo, Denmark, Djibouti, Dominican Republic, Ecuador, Egypt, El Salvador, Estonia, Ethiopia, European Community, Finland, France, Gabon, Georgia, Germany, Ghana, Greece, Grenada, Guinea, Guinea-Bissau, Holy See, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Italy, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Kiribati, Kuwait, Kyrgyzstan, Lao People's Democratic Republic, Latvia, Lebanon, Libyan Arab Jamahiriya, Liechtenstein, Lithuania, Madagascar, Malawi, Malaysia, Maldives, Mali, Mauritania, Mauritius, Mexico, Micronesia (Federated States of), Mongolia, Montenegro, Morocco, Mozambique, Myanmar, Namibia, Nepal, Netherlands, New Zealand, Nicaragua, Niger, Nigeria, Norway, Oman, Pakistan, Paraguay, Peru, Philippines, Poland, Portugal, Qatar, Republic of Korea, Romania, Russian Federation, Saint Lucia, Sao Tome and Principe, Saudi Arabia, Senegal, Serbia, Seychelles, Somalia, South Africa, Spain, Sri Lanka, Sudan, Swaziland, Sweden, Switzerland, Syrian Arab Republic, Tajikistan, Thailand, the former Yugoslav Republic of Macedonia, Togo, Trinidad and Tobago, Tunisia, Turkey, Turkmenistan, Uganda, Ukraine, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, United Republic of Tanzania, United States of America, Uruguay, Uzbekistan, Venezuela (Bolivarian Republic of), Yemen, Zambia, Zimbabwe.

8. The representative of Palestine attended the meeting as an observer.

9. Representatives of the following United Nations bodies and specialized agencies also attended: Global Environment Facility, assessment panels of the Montreal Protocol, Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Secretariat of the Multilateral Fund for the Implementation of the Montreal Protocol, Secretariat of the United Nations Framework Convention on Climate Change, Technology and

Economic Assessment Panel and its Technical Options Committees, Secretariat of the Basel Convention, United Nations Development Programme, United Nations Environment Programme – Division of Technology, Industry, and Economics, United Nations Environment Programme – Regional Office for West Asia, United Nations Industrial Development Organization, World Bank, World Intellectual Property Organization and the World Meteorological Organization.

10. The following intergovernmental, non-governmental and industry bodies were also represented: AGRAMKOW / RTI Technologies, Alliance, Alliant International, Arysta Life Science North America Corporation, Boehringer Ingelheim Pharmaceuticals, Inc., California Cut Flowers, California Strawberry Commission, Canon Spa (Bono Sistemi), Carbon Reduction Technologies AS, Chemtura Corporation, Cooperation Council for the Arab States of the Gulf, Crop Protection Coalition, DG Regulation and Enforcement, Dow AgroSciences LLC, DuPont Fluoroproducts, Energy and Resources Group, Environmental Investigation Agency, Florida Tomato Exchange/Crop Protection Coalition, Global Investment House, Greenpeace International, Institute for Governance and Sustainable Development, ICF International, Industrial Estate Authority of Thailand, Industrial Technology Research Institute, Japan Industrial Conference for Ozone Layer and Climate Protection, Legal Advice and Legislation Council of Ministers, Kuwait Economic Society, Middle East Industrial Fire and Safety, Natural Resources Defense Council, Nordiko Quarantine Systems Pty Ltd, Palestine, Qatar Petroleum, Qatar Science and Technology Park, Regency Group, Teijin Twaron, Trical, TouchDown Consulting, Thompson's Specialities Middle East, Trans-Mond Environment Ltd., and the University of Qatar.

B. Officers

11. The preparatory segment of the combined meeting was co-chaired by Mr. Sorensen and Ms. Judy Francis Beaumont (South Africa).

C. Adoption of the agenda of the preparatory segment

12. The following agenda for the preparatory segment was adopted on the basis of the provisional agenda contained in document UNEP/OzL.Conv.8/1-UNEP/OzL.Pro.20/1, as orally amended:

1. Opening of the preparatory segment:
 - (a) Statement by representative(s) of the Government of Qatar;
 - (b) Statement by representative(s) of the United Nations Environment Programme.
2. Organizational matters:
 - (a) Adoption of the agenda of the preparatory segment;
 - (b) Organization of work.
3. Consideration of Vienna Convention and combined Vienna Convention and Montreal Protocol issues:
 - (a) Presentation and discussion of the report of the seventh meeting of the Ozone Research Managers of the Parties to the Vienna Convention;
 - (b) Status of the General Trust Fund for Financing Activities on Research and Systematic Observations Relevant to the Vienna Convention;
 - (c) Financial reports and budgets of the trust funds for the Vienna Convention and the Montreal Protocol;
 - (d) Status of ratification of the Vienna Convention, the Montreal Protocol and amendments to the Montreal Protocol.
4. Discussion of Montreal Protocol-related issues:
 - (a) Replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol;
 - (i) Presentation and consideration of the supplemental report of the Technology and Economic Assessment Panel Replenishment Task Force;
 - (ii) Proposal on extension of the fixed-exchange-rate mechanism;

- (b) Environmentally sound disposal of ozone-depleting substances (proposals by Argentina, the European Community, the Federated States of Micronesia, Mauritius and Mexico);
 - (c) Issues related to essential uses:
 - (i) Use of CFC-113 in the aerospace industry in the Russian Federation;
 - (ii) Nominations for 2009 and 2010 for essential-use exemptions;
 - (iii) Essential uses and campaign production of CFCs for metered-dose inhalers;
 - (d) Consideration of methyl bromide-related issues:
 - (i) Nominations for 2009 and 2010 for critical-use exemptions;
 - (ii) Adjustment to the Montreal Protocol on allowances for production of methyl bromide to meet basic domestic needs of Parties operating under paragraph 1 of Article 5 (proposal by Kenya and Mauritius);
 - (iii) Quarantine and pre-shipment uses of methyl bromide (proposal by the European Community);
 - (e) Application of trade provisions to HCFCs (proposal by Australia);
 - (f) Process agents;
 - (g) Update reports by the Technology and Economic Assessment Panel:
 - (i) Carbon tetrachloride emissions and opportunities for reduction (final report);
 - (ii) Regional imbalances in respect of halons;
 - (iii) Scoping study on alternatives to HCFCs for mines and very high temperature conditions;
 - (h) Technology and Economic Assessment Panel administrative issues;
 - (i) Compliance and reporting issues considered by the Implementation Committee, including non-compliance with the Montreal Protocol that may be attributable to CFC consumption for production of metered-dose inhalers in certain Parties operating under paragraph 1 of Article 5 (decision XVIII/16 paragraphs 3–5);
 - (j) Consideration of membership of Montreal Protocol bodies for 2009:
 - (i) Members of the Implementation Committee;
 - (ii) Members of the Executive Committee of the Multilateral Fund;
 - (iii) Co-Chairs of the Open-ended Working Group.
5. Other matters.

13. The following issues were included for discussion under agenda item 5, “Other matters”: release by Nepal of stocks of confiscated chlorofluorocarbons; difficulties faced by Iraq as a new Party, Doha Declaration; high-global warming potential substitutes for ozone-depleting substances; and the new electronic tool of the UNEP Division of Technology, Industry and Economics “Who’s Who in the Montreal Protocol”.

D. Organization of work

14. The Parties agreed to take up the agenda items in the order in which they were listed on the agenda. They also agreed to continue the contact group on replenishment that had been formed at the twenty-eighth meeting of the Open-ended Working Group, with the understanding that it would be co-chaired by Ms. Laura Berón (Argentina) and Mr. Jozef Buys (Belgium). They also requested the other contact groups that had been set up at that meeting to continue their deliberations at the current meeting under the same chairs. Specifically, those groups were on the environmentally sound disposal of ozone-depleting substances, co-chaired by Mr. Martin Sirois (Canada) and Mr. Agustín Sánchez (Mexico), and on metered-dose inhalers, co-chaired by Mr. Paul Krajnik (Austria) and Mr. A. Duraisamy (India).

III. Consideration of Vienna Convention and combined Vienna Convention and Montreal Protocol issues

A. Presentation and discussion of the report of the seventh meeting of the Ozone Research Managers of the Parties to the Vienna Convention

B. Status of the General Trust Fund for Financing Activities on Research and Systematic Observations Relevant to the Vienna Convention

15. The Parties took up sub-items 3 (a) and 3 (b) together.

16. Mr. Michael Kurylo (United States of America), Chair of the seventh meeting of the Ozone Research Managers of the Parties to the Vienna Convention, gave a presentation on work of the seventh meeting, held in Geneva from 18 to 21 May 2008. He began by explaining the complementary but distinct purposes of Ozone Research Managers' reports and scientific assessments prepared by the World Meteorological Organization (WMO) and UNEP. The seventh meeting, he said, had begun with presentations on the state of the global ozone layer and plans for the 2010 scientific assessment, and updates on international monitoring programmes with a special focus on satellite research and monitoring. The reports of the six WMO regions that had followed had informed the drafting of recommendations in the four principal areas of research needs, systematic observations, data archiving and capacity-building. Those recommendations were set out in the report of the seventh meeting, alongside the national reports.

17. He said that, as detailed in the report of the meeting, more research was needed on ozone recovery; the relationship of ozone depletion and climate change; and emissions, banks and atmospheric evolution of ozone-depleting substances, substitutes and other climate-related trace gases. Systematic observations were critical to understanding and monitoring long-term changes in ozone and surface ultraviolet radiation, which implied a continuing need for better surface networks in some regions and actions to fill the anticipated gap in satellite monitoring capacity. Data archiving and quality assurance were also crucial, implying a need to implement fully the recommendations of the Research Managers at their sixth meeting; to use historical data more effectively; to standardize data quality assurance procedures; to establish better links among data centres; and to archive data from regional process studies. Lastly, he noted that there were insufficient regional centres for research, calibration and training, particularly in developing countries, for effective capacity-building. Responses could include encouraging monetary and in-kind contributions to the Trust Fund for Observation and Research, establishing a procedure for submitting requests for Trust Fund support and including capacity-building support in ozone work under the UNEP Compliance Assistance Programme.

18. The representative of the Secretariat gave a presentation outlining the history of the General Trust Fund for Financing Activities on Research and Systematic Observations Relevant to the Vienna Convention, including its genesis in 2003, the extension of it to 2015 that had been approved in 2007 and the institutional arrangements agreed between the Secretariat and the World Meteorological Organization (WMO) in respect of its operation that had been approved in 2005.

19. She also detailed the administrative activities undertaken by the Secretariat under the Trust Fund, such as annual dispatch of invitations for contributions, and provided information on contributions and expenditures. In 2008, a brochure on ozone monitoring in developing countries, prepared jointly by WMO and the Secretariat, had informed Parties of the priority activities requiring financing and the estimated costs involved. To date, \$179,135, including interest accrued, had been received. The contributing Parties were the Czech Republic, Estonia, Finland, Kazakhstan, South Africa, Spain, Switzerland and the United Kingdom of Great Britain and Northern Ireland. Total expenditure on three activities amounted to \$31,100, while further projects were in preparation for the remaining balance of \$148,035.

20. Mr. Geir Braathen, WMO, gave a presentation on the WMO Global Atmosphere Watch ozone observing system, underlining the constant emphasis on data quality assurance and data archiving. He said that three activities had so far been supported through the Trust Fund: Egypt had hosted an intercomparison and calibration of nine Dobson spectrophotometers in 2004; and Brewer instruments Nos. 116 and 176 had been calibrated in September 2006 in Nepal and Indonesia, respectively. Planned activities included an intercomparison and calibration of

African Dobson spectrophotometers in South Africa and calibration of Brewer spectrophotometers in Brazil.

21. In the ensuing discussion, several representatives paid tribute to the achievements of the Ozone Research Managers and broad support was voiced for the findings and recommendations of their seventh meeting, as set out in document UNEP/OzL.Conv.8/6.

22. All speakers stressed the importance of research and information exchange in restoring the stratospheric ozone layer and responding to the special needs of developing countries. Several representatives highlighted the need to strengthen the systematic observation network, establishing more, better equipped monitoring stations and building capacity in some regions. There was also broad agreement that the possible shortage of satellite data on the ozone layer predicted in the Research Managers' report was a matter of considerable concern.

23. Several representatives drew attention to their countries' efforts to gather and analyse data on the ozone layer. One representative, speaking on behalf of a number of countries, also called for improved mechanisms to tackle data consistency and vulnerability to ultraviolet radiation.

24. One representative noted that her Government had presented its report at the seventh meeting of the Ozone Research Managers in Geneva in May 2008 and highlighted, in particular, its continuous and active support for the Montreal Protocol through making high quality observations of ozone and ultraviolet radiation, providing leadership through hosting the WMO World Ozone and UV Data Centre and sustaining the Brewer Ozone Standard Triad at Environment Canada, in Toronto, producing leading scientific papers and reviews and helping to develop and train individuals through Brewer users' workshops. She also expressed her conviction regarding the importance of enhancing global capacity to monitor the long-term evolution of the ozone layer, which was the reason Canada generally supported the recommendations emanating from the seventh meeting of the Ozone Research Managers of the Parties to the Vienna Convention, including the need to recognize and address the gap in satellite observations of the ozone layer and to submit quality control data on ozone and ultraviolet radiation to the WMO World Ozone and UV Data Centre in Toronto.

25. Two representatives noted the need to strengthen stratospheric ozone monitoring capacity in the Gulf region. Responding, Mr. Braathen explained that, upon request, WMO would be happy to assist interested Parties to acquire and calibrate necessary equipment and to submit data.

26. Mr. Djibo Leity Kâ (Senegal), President of the Bureau of the seventh meeting of the Conference of the Parties to the Vienna Convention, subsequently submitted two draft decisions on behalf of the Bureaux of the seventh meeting and of the Nineteenth Meeting of the Parties to the Montreal Protocol. One concerned the recommendations of the Ozone Research Managers and the other related to the Trust Fund.

27. In the ensuing discussion, Mr. Kurylo outlined some of the efforts under way to identify short- and long-term measures to offset the anticipated shortage of satellite capacity to monitor ozone and ultraviolet radiation levels. Responding to a query from one Party, he added that the Ozone Research Managers and the International Ozone Commission were working hard to publicize the satellite monitoring issue and he called upon the representatives at the current meeting to support those efforts.

28. Following informal consultations, minor amendments were agreed in the texts of both draft decisions. The Parties approved the draft decisions for further consideration during the high-level segment.

(c) Financial reports and budgets of the trust funds for the Vienna Convention and the Montreal Protocol

29. Introducing the item, the Co-Chair drew attention to the proposed budgets set out in documents UNEP/OzL.Conv.8/4 and UNEP/OzL.Pro.20/4 and the financial statements set out in documents UNEP/OzL.Conv.8/4/Add.1 and UNEP/OzL.Pro.20/4/Add.1. He noted that it had been the practice of the Parties at past meetings to establish a budget committee to review budget-related documents and prepare one or more draft decisions on budgetary matters. In accordance with that practice, the Parties agreed to establish a budget committee, was co-chaired by Mr. Alessandro Giuliano Peru (Italy) and Mr. Ives Enrique Gómez Salas (Mexico), to agree on budgets for the Vienna Convention and the Montreal Protocol trust funds and to prepare draft decisions on financial matters for the Convention and the Protocol.

30. Mr. Peru reported back that agreement had been reached on the proposed budget allocations for both trust funds and the draft decisions. He explained that by drawing on the reserve, the budget allocations for 2009 and 2010 would remain at the 2008 level. Following that report the Parties approved the draft decisions for further consideration during the high-level segment.

(d) Status of ratification of the Vienna Convention, the Montreal Protocol and the amendments to the Montreal Protocol

31. Introducing the item, the Co-Chair presented a brief summary of the information contained in document UNEP/OzL.Conv.8/INF/2-UNEP/OzL.Pro.20/INF/1 on the status of ratification, accession, acceptance or approval of the agreements on the protection of the stratospheric ozone layer. She noted that since the Nineteenth Meeting of the Parties two additional Parties had ratified the Vienna Convention and the Montreal Protocol, bringing the total for both instruments to 193. As to the amendments to the Protocol, three additional Parties had ratified the London Amendment, for a total of 189; six had ratified the Copenhagen Amendment, for a total of 184; 10 had ratified the Montreal Amendment, for a total of 167; and 12 had ratified the Beijing Amendment, for a total of 144.

32. The Co-Chair drew attention to the draft decision on the status of ratification of the Vienna Convention, the Montreal Protocol and the amendments to the Montreal Protocol contained in document UNEP/OzL.Conv.8/3-UNEP/OzL.Pro.20/3, which was a standard decision of the kind that had been taken in the past to record the status of ratifications.

33. The Parties agreed that the draft decision should be updated by the Secretariat for further consideration during the high-level segment.

IV. Discussion of Montreal Protocol-related issues

A. Replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol

1. Presentation and consideration of the supplemental report of the Technology and Economic Assessment Panel Replenishment Task Force

2. Proposal on extension of the fixed-exchange-rate mechanism

34. Mr. Lambert Kuijpers, co-chair of the Technology and Economic Assessment Panel Replenishment Task Force, gave a presentation on the findings in the supplement to the May 2008 Panel replenishment report, published in October 2008. He noted that, as indicated in the supplemental report, on the basis of two HCFC consumption funding scenarios and two cost-effectiveness scenarios for Parties operating under paragraph 1 of Article 5 (Article 5 Parties), expected funding needs for the triennium 2009–2011 ranged from \$339 million to \$630 million. Those figures represented adjustments to the estimates set out in the Panel's May 2008 study in the light of the decisions of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol at its fifty-sixth meeting. He described the important elements of decisions XIX/6 and XIX/10, which had guided the studies undertaken for the supplemental report.

35. Ms. Shiqiu Zhang, co-chair of the Task Force, said that at its twenty-eighth meeting the Open-ended Working Group had requested the Panel to consider certain issues in more detail. She said that the Panel had considered all of those elements, with a particular focus on the

triennium 2009–2011. One such issue has been further analysis of the costs of destroying ozone-depleting substances. In that context she explained that the Task Force had conducted further investigations in an effort to estimate the quantities of CFCs and halons that were ready for destruction. Analysis based on submissions from 28 Article 5 Parties indicated that, in keeping with the Panel's May 2008 report, \$27 million would cover all possible destruction costs in the next triennium.

36. Ms. Zhang then turned to costs associated with non-HCFC non-investment funding, which the May 2008 replenishment report had forecast to be \$202.7 million. She recalled that the Open-ended Working Group had requested the Panel to study the potential impact of inflation on the replenishment. Having considered the costs susceptible to inflation, the Task Force had concluded that funding requirements for the triennium 2009–2011 would increase by between \$4 million and \$9 million per percentage point rise in inflation, depending on which of the HCFC funding scenarios was considered.

37. She said that, in response to the Open-ended Working Group's requests, the Panel had re-evaluated institutional strengthening costs. On the basis of a review of the Executive Committee's work and comments submitted by some Parties, the Task Force had concluded that there was little justification to either decrease or increase funding for institutional strengthening. She noted, however, that funding included in the replenishment estimate for HCFC servicing included \$13.3 million for elements that were normally regarded as institutional strengthening activities. Such funding could, therefore, be seen as an implicit increase in institutional strengthening spending.

38. Continuing the presentation, Mr. Kuijpers turned to the Task Force's review of the funding needs implied by alternative cut-off dates (i.e., dates after which projects relating to capacities for manufacturing chemicals, products and equipment were not eligible for funding) to apply to HCFC projects. He noted that in its supplemental report the Task Force had considered cut-off dates of 2000, 2004 and 2007 and that a cut-off date of 2010 would produce the same results as a cut off date of 2007. In general, later cut-off dates implied less consumption eligible for funding and, conversely, earlier cut-off dates implied smaller eligible HCFC consumption levels and lower funding needs. In the case of HCFCs, however, analysis of the costs produced unusual results. Earlier cut-off dates necessitated more reductions in the more expensive refrigeration and air conditioning sub-sector. On that basis, costs associated with a 2000 cut-off date, for example, were estimated to be \$16–\$105 million higher than those with a 2007 cut-off date. Early cut-off dates affected funding requirements for the first triennium (2009–2011) but also for subsequent trienniums. In addition, while several Parties might have no difficulty in identifying eligible consumption to reduce their HCFC consumption by up to 30 per cent, other Parties might struggle to locate potential reductions in consumption eligible for funding in the second or the third trienniums (2012–2017). In the long term, he said, early cut-off dates implied a lower funding requirement by the Fund but also implied the need for some funding by Article 5 Parties.

39. On the issue of second conversions (i.e., conversions by firms that the Multilateral Fund had earlier helped make the transition to using HCFCs), he said that the Panel's supplemental report focused primarily on firms that the Fund had assisted to convert from CFC-11 to HCFC-141b. Two scenarios had been considered for the funding of second conversions, one with such conversions spread over several trienniums and one with all second conversions undertaken in the first triennium. He said that the reality would likely share elements of either scenario and would depend on Parties' choices in their HCFC phase-out management plans, which were currently being developed. He concluded with an explanation of the derivation of the cost effectiveness factors used in the study.

40. Continuing the presentation, Mr. José Pons Pons, member of the Task Force, outlined the potential climate benefits of HCFC phase-out described in the supplemental report. Using four scenarios for analysis, the Task Force had sought to identify methods to evaluate costs and benefits. It had determined, however, that the rapidly changing technological landscape made it impossible to plot reliable cost abatement curves at that stage. He stressed that the timing of the transitions would influence potential climate gains, that the concept of cost-effectiveness in decision XIX/6 was firmly anchored within the ozone criteria and that more innovative funding mechanisms were emerging but needed to be governed by appropriate methodologies.

41. In the discussion on the supplemental report of the impact of the Multilateral Fund's international trade and multinational ownership rules, Mr. Pons Pons said that in the May 2008 report the Panel had applied a 20 per cent reduction in its funding requirement calculations to take account of the two rules. He noted that exports could be larger, but that no reliable

information was available. In addition, the multinational component in foam enterprises had not been considered in the May 2008 report.

42. In the case of demonstration projects, the Task Force had reconsidered the funding assumed in the May 2008 report. Based on the assumption that demonstration projects would be twice as expensive as normal projects, and assuming a regional distribution of such projects, the funding requirement of \$5.4 million that had been included in the May 2008 report had been split into two equal parts, one specifically for the demonstration aspect and the other assumed to fall under the HCFC consumption funding requirement. As a result of the new calculations, including the offset of reductions that would be achieved through the demonstration projects, the Panel estimated that those assumptions would reduce the funding requirement for the triennium 2009–2011 by \$2.7 million.

43. In conclusion, he gave a detailed overview of the funding requirement for the period 2009–2011. He considered activities for the non-HCFC consumption sector, for destruction and for supporting activities, where he mentioned that the funding requirement would be lower due to recent decisions of the Executive Committee on metered-dose inhaler conversions. He summarized the activities related to HCFCs and mentioned that the amount had increased as a result of recent Executive Committee decisions in relation to HCFC phase-out management plan preparation funding and that that would more or less balance the decrease mentioned earlier.

44. As a consequence of taking into account some of the changes noted above, he stated, that for the triennium 2009–2011 the funding requirement currently suggested by the Panel would be in the range of \$339 million–\$387 million for the baseline funding scenario and \$511 million–\$630 million for the 2012 funding scenario.

45. The ensuing discussion covered a number of aspects of the Panel's presentation. In their general comments on the activities to be funded through the replenishment, representatives urged that they should be carried out in a pragmatic and flexible manner, with one representative stating that the cost-effective operation of the Fund thus far served as an exemplary model for funding the phase-out of HCFCs. Several representatives said that it was important to maintain levels of funding to assist Article 5 Parties to meet their compliance objectives, bearing in mind the continuing need for institutional strengthening and capacity-building, the stocks of ozone-depleting substances requiring destruction and the need to develop and implement HCFC phase-out management plans. Demonstration projects and technology transfer were mentioned as important elements of the process.

46. Some representatives said that various factors, including adverse exchange rates and the increasing cost of labour, were reducing the value of programme financing. In contrast, one delegation noted the impact of inflation on levels of funding, which might be obviated by the current recession. He also expressed a belief that the assumptions in the replenishment report on the growth in HCFC consumption might be higher than would actually be experienced, given current economic conditions. Other representatives, however, said that HCFC growth would continue and that the HCFC growth assumptions in the replenishment study were overly conservative. Some representatives stressed the need to ensure that replenishment decisions took account of synergies with other instruments, particularly the Kyoto Protocol to the United Nations Framework Convention on Climate Change.

47. In respect of the incremental costs of second conversions, some representatives said that funding for second conversions should cover all costs, including capital costs and operating costs. Some noted that whatever decision was taken in that regard, care should be taken to ensure that it did not have the unintended consequence of encouraging alternatives or technologies that might result in reduced environmental performance. Regarding the two HCFC funding scenarios considered in the replenishment report, one representative said that care should be taken, when developing a consensus, to avoid perverse incentives that might increase rather than reduce HCFC consumption in the short term.

48. Regarding the fixed-exchange-rate mechanism, one representative said that application of the mechanism had aided efficient operation of the Fund and that its permanent adoption could prove advantageous. While noting that the mechanism had proved effective in times of robust economic growth, one representative said that it had not had to operate under economic conditions such as those obtaining currently; accordingly, while his delegation could not support the permanent establishment of the mechanism at the current meeting, it could support its continued trial use over the next three years.

49. The Parties agreed to refer further consideration of the fixed-exchange-rate mechanism to the contact group on replenishment.

50. Following discussion in the contact group, the Parties approved the draft decision extending the fixed exchange-rate mechanism to the period 2009–2011 for further consideration during the high-level segment.

51. Following further discussion in the contact group, the co-chair announced that the group had been able to reach consensus on the amount of the replenishment of the Multilateral Fund for the triennium 2009–2011. That would total \$490 million, of which \$73.9 million consisted of funds remaining from anticipated contributions due to the Fund and other sources for the 2006–2008 triennium, while \$16.1 million would be provided from interest accruing to the Fund over the period 2009–2011. The requirement for new funding would therefore be \$400 million. She thanked all the members of the group for their hard work and spirit of cooperation and observed that the agreement demonstrated the continued success of the Montreal Protocol even in the most challenging circumstances.

52. Responding to questions, the representative of the Multilateral Fund Secretariat clarified that the column in the annex to the draft decision referring to the fixed exchange-rate mechanism indicated the eligibility of Parties to use the mechanism, not whether they had actually done so or taken a decision to do so.

53. The Parties approved the draft decision on the replenishment of the Multilateral Fund for further consideration during the high-level segment.

B. Environmentally sound disposal of ozone-depleting substances (proposals by Argentina, the European Community, the Federated States of Micronesia and Mauritius)

54. Introducing the item, the Co-Chair recalled the discussions during the twenty-eighth meeting of the Open-ended Working Group in July, when the Working Group had considered a consultants' report and a series of proposals from Parties. After discussion, the chairs of the contact group established to consider the issue at the Working Group's meeting had put forward a proposal of their own; more recently a new proposal had been received from Mexico.

55. The representative of Canada, one of the co-chairs of the contact group, expressed his thanks to all participants in the group and to all those that had submitted comments subsequently. The discussions in the contact group had improved all participants' understanding of the issue and had enabled a wide range of issues to be discussed. He noted that there had been general consensus on the need for a step-by-step approach, of which the first step would be to address existing stocks of certain confiscated and contaminated substances; it was possible that the Multilateral Fund could have a role to play in that process. Issues meriting further discussion included the possibility of reusing confiscated or contaminated stocks; funding modalities; the speed of action, particularly given that the bulk of CFCs in banks would be emitted by 2015; and coordination with other multilateral environmental agreements, including the United Nations Framework Convention on Climate Change and the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. Achieving consensus on all remaining issues would be a challenging task, but he anticipated making good progress in the contact group that would work on the issue during the current meeting.

56. The representative of Mexico introduced a draft decision aimed at minimizing the risks of disposal of contaminated stocks in Article 5 Parties, in order to reduce both climate change and ozone depletion. The draft decision set out suggested criteria for the provision of financial support, and proposed organizing regional workshops on existing destruction technologies and available financial mechanisms. He suggested that the draft decision could be discussed by the contact group.

57. In the ensuing discussion, representatives highlighted the importance of the issue for both climate change and ozone depletion, particularly given the likely emissions from banks in the absence of any further action. Some representatives noted that the volume of some ozone-depleting substances held in banks substantially exceeded their production and consumption. In addition to the issues listed by the representative of Canada, further potential topics for discussion were raised including, in the short term, improving the management of banks and widening the scope for containment, recovery and recycling and, in the medium and long term, further work by the Technology and Economic Assessment Panel on cost-benefit analyses. The possibility of an intersessional working group was suggested, together with the need to work with the appropriate bodies of the Framework Convention on Climate Change and the Kyoto Protocol in time for a clear message to be communicated to the fourteenth session of

the Conference of the Parties to the United Nations Framework Convention on Climate Change in Poznań, Poland, in December 2008.

58. The Parties agreed to refer all those matters to the contact group established by the Open-ended Working Group at its twenty-eighth meeting.

59. The co-chair of the contact group subsequently reported on the group's discussions. Thanking all the participants, and his co-chair, for their hard work, he reported that all outstanding issues had been resolved and that he was thus able to present a consensus draft decision on the environmentally sound management of banks of ozone-depleting substances. The Parties approved the draft decision for further consideration during the high-level segment.

C. Issues related to essential uses

1. Use of CFC-113 in the aerospace industry in the Russian Federation

60. Mr. Stephen O. Andersen, Co-Chair of the Technology and Economic Assessment Panel, recalled that requests by the Russian Federation for essential-use exemptions for the use of CFC-113 for certain aerospace applications had been agreed at the Eighteenth and Nineteenth Meetings of the Parties. The latter Meeting, however, had only approved exemptions for 2008 and 2009 on the proviso that no alternatives were identified by the Panel that could be implemented by 2009 and on the basis that experts nominated by the Panel would meet Russian engineers to evaluate the applications and to recommend proven alternatives if possible and that the Russian Federation was ready to explore the availability of CFC-113 from global stocks.

61. The experts nominated by the Panel had visited the Russian Federation in October 2008 and had conducted extensive discussions. They had concluded that it would be possible to use HCFC-122 and HCFC-141b to replace some applications of CFC-113 but that their commercial use still required the completion of various approval processes. Successful substitution by 2010 was in theory possible but would require close cooperation between various organizations and significant research, testing and initiatives by the Russian space industry. Accordingly, the Panel was recommending the reaffirmation of essential-use exemptions for 140 tonnes of CFC-113 for 2008 and 130 tonnes for 2009 based on progress made to date and work remaining to commercialize HCFC alternatives.

62. The representative of the Russian Federation thanked the Panel for organizing the visit of experts to Moscow and for the helpful suggestions that the experts had made during their discussions with the Russian space agency and other bodies. He expressed his country's determination to fulfil the aims of the Montreal Protocol.

63. Responding to questions from representatives, Mr. Andersen explained that two experts identified by the Panel had visited Moscow for four days in October 2008. They had discussed the issues in depth with 12 experts from the Russian space agency, technical and academic institutes and component manufacturers. They had evaluated the applications of CFC-113 and had reviewed research findings on the use of possible alternatives, which they had found to be technically suitable, and had identified a number of other possible alternatives that would warrant investigation. In some cases, however, the use of the alternatives would not be permitted under the environmental regulations of the Russian Federation, which set human exposure limits for the substances at levels significantly lower than in other industrialized countries. As a consequence they had concluded that the use of CFC-113 for aerospace applications did qualify as "essential" under the Montreal Protocol. Mr. Andersen stated in conclusion that the Panel was reviewing the report of the experts, together with its comprehensive technical appendices, during the current meeting and would make the results of its review available as soon as feasible.

64. The Parties agreed to confirm the allocation in 2008 of 140 tonnes and in 2009 of the 130 tonnes agreed to by the Parties in 2007 for that use by the Russian Federation.

2. Nominations for 2009 and 2010 for essential-use exemptions

65. Ms. Helen Tope, Co-Chair of the Medical Technical Options Committee, introduced the report of the Technology and Economic Assessment Panel on requests for essential-use exemptions for CFCs for metered-dose inhalers. At the beginning of 2008, the European Community and the Russian Federation had requested 38 and 248 tonnes respectively for 2009, and the United States of America 182 tonnes for 2010. The Committee had discussed the nominations of the European Community and the United States further with the Parties after the twenty-eighth meeting of the Open-ended Working Group in July.

66. Those discussions had led the European Community to withdraw its request for CFCs for three active ingredients, reducing its total request to 22 tonnes. Of the remaining volume, 40 per cent had been intended for CFCs for metered-dose inhalers for Parties operating under paragraph 1 of Article 5, and 60 per cent for CFCs for combination products in Italy. The Party had supplied additional information to support the latter request. Although most members of the Committee did not consider production of those combination products to be an essential use, given that 2009 was the final year of nomination the Panel had decided reluctantly to recommend the nomination owing to progress with reformulations and the inaccessibility of available stockpiles.

67. Similarly, the United States had withdrawn its nominations for two active ingredients, allowing a reduction of its total request to 92 tonnes, and had submitted new information to support the remaining nomination, for CFCs for epinephrine. Although some members of the Committee did not consider the use of CFCs for epinephrine-based metered-dose inhalers to be an essential use, the Panel had decided reluctantly to recommend the nomination owing to anticipated progress with reformulations and the inaccessibility of available stockpiles. The Committee was, however, clear that it would not recommend CFCs for epinephrine after 2010.

68. The representatives of the United States of America and the European Community thanked the Medical Technical Options Committee for its hard work and willingness to discuss the issues at length. The United States had had a very positive exchange of views that had enabled that Party to determine that it could revise its original request by relying on existing inventories. The Party decided to retain only one medication in its request, epinephrine, which was subject to an existing rule-making process. The representative of the United States of America remained concerned, however, about the Committee's suggestion that it would not agree to recommend the use of CFCs in epinephrine metered-dose inhalers after 2010. He stressed the importance of ensuring that the transition to non-CFC alternatives was well planned, and that adequate time was allowed for the education of patients; in the current case, the issue was complicated by the fact that epinephrine was available over the counter rather than only by prescription. He said that his delegation had prepared a proposal for a draft decision and suggested that it could be combined with the proposal of the European Community; the representative of the European Community accepted that suggestion.

69. The representative of the European Community subsequently reported that his delegation and that of the United States had consulted all interested Parties and had reached agreement on a draft decision. The Parties accordingly approved the draft decision for further consideration during the high-level segment.

3. Essential uses and campaign production of CFCs for metered-dose inhalers

70. Ms. Tope, Co-Chair of the Medical Technical Options Committee, introduced the report of the Technology and Economic Assessment Panel on essential uses and campaign production of CFCs for metered-dose inhalers. The Committee had observed significant progress in the transition from CFC-based metered-dose inhalers in all Article 5 Parties, with a range of technically feasible alternatives becoming available. Many projects funded by the Multilateral Fund to convert locally-owned CFC metered-dose inhaler manufacturing remained in their early stages, however. Since continued production of small amounts of pharmaceutical-grade CFCs after 2009 was likely to be impractical, the Panel was recommending a final CFC manufacturing campaign. The date for final campaign production could be set when the timelines for project implementation were clearer and projections for CFC requirements were known; the Panel believed that 2011 was feasible, provided that there was careful planning and coordination and that conversion project implementation was not delayed further.

71. Following the presentation by the Panel, the Co-Chair recalled that at its twenty-eighth meeting the Open-ended Working Group had established a contact group to consider essential uses and campaign production of CFCs for metered-dose inhalers. Mr. Krajnik (Austria), co-chair of that contact group, summarized the group's discussions, which had included determining whether there was a need for a final campaign to produce metered-dose-inhaler-grade CFCs after the CFC final phase-out date and making the essential-use mechanism relevant to all Parties. He thanked the Secretariat for the review of essential use decisions (UNEP/OzL.Pro.20/8), which it had prepared at the contact group's request.

72. The Parties agreed that the contact group on essential uses and campaign production of CFCs should resume its deliberations at the current meeting in the light of the Secretariat's analysis in document UNEP/OzL.Pro.20/8. Mr. Krajnik and Mr. Duraisamy (India) agreed to continue as the group's co-chairs.

73. The co-chair of the contact group subsequently reported that the group had been able to reach a conclusion on its discussions on campaign production and was accordingly presenting a draft decision dealing with the needs of Article 5 Parties after 2010, their possible use of essential-use exemptions and the remaining requirements for the production of pharmaceutical-grade CFCs. The group had concluded that more information was needed on all those issues, so the draft decision requested the Technology and Economic Assessment Panel to work on those and related topics and to present a report to the meeting of the Open-ended Working Group preceding the next Meeting of the Parties. The Parties approved the draft decision for further consideration during the high-level segment.

74. The co-chair of the contact group also subsequently reported that the group had been able to agree on a draft decision on procedures for essential-use exemptions for Article 5 Parties, which would amend 12 previous decisions of the Parties. The aim was to allow Article 5 Parties to apply for exemptions during 2009 so that they could be assessed by the Technology and Economic Assessment Panel and take effect from 2010. One paragraph of the draft decision specified that CFC-using metered-dose inhaler products approved after 31 December 2008 would not qualify as essential, with the exception of products in the process of registration and approved by 31 December 2009. The draft decision also requested the Ozone Secretariat to reflect the modifications to decisions in the next edition of the Montreal Protocol handbook, and the Technology and Economic Assessment Panel to do likewise in its handbook on essential-use nominations.

75. The Parties approved the draft decision for further consideration during the high-level segment.

D. Consideration of methyl bromide-related issues

1. Nominations for 2009 and 2010 for critical-use exemptions

76. Four co-chairs of the Methyl Bromide Technical Options Committee, Mr. Mohamed Besri, Ms. Michelle Marcotte, Ms. Marta Pizano and Mr. Ian Porter, gave a presentation on critical-use nominations, summarizing the findings set out in the report of the Technology and Economic Assessment Panel on evaluations of 2008 critical-use nominations for methyl bromide and related matters.

77. Introducing the issue, Mr. Besri provided information on trends in global methyl bromide consumption in the period 1991–2007. By 2007, Article 5 Parties had reduced their annual consumption to 6,146 tonnes, or approximately 38 per cent of the baseline level; countries not operating under that paragraph had realized a reduction of almost 90 per cent, bringing their consumption down to approximately 6,000 tonnes. In all, 93 per cent of 2007 consumption in Article 5 Parties was scheduled for phase-out by 2015 or earlier under projects funded by the Multilateral Fund.

78. He noted that global methyl bromide output for quarantine and pre-shipment uses represented the largest remaining uncontrolled production of a controlled ozone-depleting substance. In 2006 such production stood at roughly 10,275 tonnes, 34 per cent of total methyl bromide production in that year. Concluding his part of the presentation, he outlined the Methyl Bromide Technical Options Committee's 2009 work plan and summarized recent communications with Parties regarding the Committee's use of its meta-analysis of certain soil uses of methyl bromide.

79. Ms. Pizano gave an overview of critical-use nominations that had been submitted to the Committee over the past six years. She noted that the total volumes of methyl bromide consumption approved or recommended for critical uses had declined over the period 2005–2010 in all countries, albeit at varying rates. Approved nominations for 2008 stood at 6,996 tonnes, recommended nominations for 2009 totalled 5,250 tonnes and recommended nominations for 2010 were 3,567 tonnes. The Committee had not accounted for existing methyl bromide stocks, which stood at 6,723.338 tonnes at the end of 2007, when evaluating critical-use nominations.

80. Mr. Porter presented the nominations received for pre-plant soil use of methyl bromide in 2009 and 2010. The Committee had received 31 nominations in total: 12 for 2009 and 19 for 2010. Ten nominations had been reassessed following the twenty-eighth meeting of the Open-ended Working Group to take account of regulatory changes in one nominating Party that had facilitated wider use of iodomethane in place of methyl bromide. As a result, the total amount nominated by that Party had been revised downwards from 3,722.230 tonnes to 3,164.982 tonnes. The critical-use recommendation for pre-plant soil uses in another Party had

been amended in the light of technical advice submitted by that Party. Taking into account those revised nominations, the Committee had recommended a total of 3,608.454 tonnes for soil use in 2009 and not recommended 88.594 tonnes; for 2010 the Committee had recommended 3,297.800 tonnes and not recommended 187.498 tonnes.

81. He recalled that, at the request of one Party at the twenty-eighth meeting of the Open-ended Working Group, the Committee had subsequently considered the economic feasibility of iodomethane in a partial budgeting analysis framework. The Committee had determined that for many crops and locations iodomethane was an economically feasible alternative. Fumigants typically accounted for a relatively small share of production costs and yields using methyl bromide and iodomethane were comparable; the cost of shifting to iodomethane could therefore be less than 2 per cent of net revenue. He concluded his part of the presentation by outlining progress in the registration of iodomethane and other alternatives to methyl bromide in several countries and identifying regulatory changes that could permit reduced critical-use nominations.

82. Ms. Marcotte summarized nominations relating to quarantine, structures and commodities. She noted several areas of progress, including the development of methyl bromide alternatives for high moisture dates, continuing commercial-scale trials on other alternatives and the imposition of regulations that had resulted in reduced demand for critical-use nominations. She provided information on each of the 10 quarantine, structures and commodities nominations for 2009 and 2010. Lastly, she summarized the efficacy and costs of adopting alternatives to methyl bromide in flour mills, which had been presented in the Technology and Economic Assessment Panel's May 2008 progress report.

83. In the ensuing discussion, several representatives commended the efforts of non-Article 5 Parties to find alternatives but expressed concerns about the time frame for phasing out critical uses of methyl bromide. One representative, speaking for a number of Parties, expressed the view that the rate of transition to alternatives could be improved and reported that the delegations that he represented had submitted a draft decision on the issue. Two representatives expressed concerns related to policies and procedures and another on the need to ensure the safety of production.

84. The representative of one non-Article 5 Party reported that the final methyl bromide phase-out date in that country had been set at 2013, notwithstanding considerable opposition from industry and local government. Support had been promised to farmers and a national project to develop alternatives, especially biological controls, was under way.

85. Another representative from a non-Article 5 Party reported on progress in his country's efforts to phase out methyl bromide, particularly by registering iodomethane as an alternative and developing a broader base of alternatives, but noted that local regulatory provisions imposed certain constraints, which needed to be taken into account in the consideration of its critical-use nominations.

86. The representative of a non-governmental organization also expressed concern at the amounts of methyl bromide for which critical-use exemptions were being sought, the slow decline in the amounts for which exemptions were being granted and the extremely large stocks of methyl bromide being held.

87. The Parties agreed to establish a contact group, co-chaired by Mr. Barry Reville (Australia) and Mr. Gabriel Hakizimana (Burundi), to prepare a draft decision on the 2009 and 2010 critical-use nominations.

88. The Co-Chair subsequently reported that the contact group had agreed on a draft decision. The Parties approved the draft decision for further consideration during the high-level segment.

2. Adjustment to the Montreal Protocol on allowances for production of methyl bromide to meet basic domestic needs of Parties operating under paragraph 1 of Article 5 (proposal by Kenya and Mauritius)

89. The Co-Chair recalled that Mauritius and Kenya had introduced at the twenty-eighth meeting of the Open-ended Working Group a proposed adjustment to the Montreal Protocol that would provide for the reduction of the maximum allowance for the production of methyl bromide to meet the basic domestic needs of Article 5 Parties to 5,038 metric tonnes starting in 2010. One representative, representing 27 Parties, said that they supported the proposal and that the availability of cost-effective alternatives would aid the phase-out. The representative of Kenya briefly reviewed the status of the proposal, including its discussion by a contact group at the meeting of the Open-ended Working Group. He highlighted the reduction in consumption of methyl bromide in non-Article 5 Parties, 74 per cent of whom had reported zero consumption, and a desire to align supply with demand, as the rationales behind the proposal.

90. In the ensuing discussion several representatives, while commending the initiative, said that they could not support it, largely because there was a lack of access to proven alternatives to methyl bromide and because it would have significant cost implications for agriculture in their countries. Other representatives said that, although reducing the supply of methyl bromide would increase its cost, cost-effective alternatives would also be available and that that would aid phase-out.

91. In the light of the concerns expressed, the representative of Kenya formally withdrew the proposal but said that it was possible that it would be resubmitted in 2009.

3. Quarantine and pre-shipment uses of methyl bromide (proposal by the European Community)

92. The Co-Chair recalled that the European Community had put forth at the twenty-eighth meeting of the Open-ended Working Group a draft decision aimed at reducing the amount of methyl bromide used for quarantine and pre-shipment purposes. The Parties had agreed that the proponent would consult informally with other Parties in the period between that meeting and the current meeting of the Parties.

93. The representative of the European Community reported that the draft decision, which was set out in section D of chapter I of document UNEP/OzL.Conv.8/3-UNEP/OzL.Pro.20/3, had been revised in the light of concerns expressed by Parties during the intersessional consultations and that consultations were continuing during the current meeting. He noted that the draft decision as it then stood provided that a workshop would be held on the availability of technically and economically feasible alternatives and technologies for reducing methyl bromide emissions.

94. In the ensuing discussion one representative commended the content of the draft decision and expressed support for holding a workshop, but said that it was premature to discuss the issue in the absence of more technical data.

95. The Parties agreed that the contact group established under sub-item 1 above would work further on the terms of a new draft decision.

96. The Co-Chair subsequently presented a draft decision, which the Parties approved for further consideration during the high-level segment.

E. Application of trade provisions to HCFCs (proposal by Australia)

97. Introducing the item, the Co-Chair recalled that at the twenty-eighth meeting of the Open-ended Working Group Australia had introduced a draft decision that would harmonize the date on which HCFC import and export bans would come into effect with the date on which production and consumption limits for HCFCs would commence in Article 5 Parties, namely, 1 January 2013. He recalled that no opposition to the proposal had been voiced during the meeting of the Open-ended Working Group.

98. Following the Co-Chair's introduction the Parties agreed to forward the draft decision for further approval during the high-level segment.

F. Process agents

99. Introducing the item, the Co-Chair recalled that by decision XVII/6 the Parties had requested the Technology and Economic Assessment Panel to make recommendations on process-agent use exemptions and on insignificant emissions associated with process-agent uses

listed in decision X/14. He also noted that the issue of whether the list of process-agent uses needed to be amended had been raised at the meeting of the Open-ended Working Group.

100. One representative reported having conducted detailed investigations on the issue and having submitted a report to the Technical and Economic Assessment Panel but also commented that the list of process agents had been updated in 2007 and was normally only updated every two years. The Parties agreed, in the light of that comment, to defer further consideration and that the Meeting of the Parties would take it up at its next meeting, in 2009.

G. Update reports by the Technology and Economic Assessment Panel

1. Carbon tetrachloride emissions and opportunities for reduction (final report)

101. Mr. José Pons Pons, Co-Chair of the Technology and Economic Assessment Panel, presented an update of the findings of the Panel's task force on carbon tetrachloride emissions, further to its 2006 report produced in response to decision XVI/4. Atmospheric concentrations of carbon tetrachloride had remained high despite phase-out; there was a discrepancy between the observed concentrations and "bottom-up" estimates of emissions derived from a model developed by the Panel based on data on production, consumption, use for feedstock and destruction. The fall in emissions from controlled uses appeared to be being offset by a rapidly growing new source. The Chemical Technical Options Committee planned to investigate possible new sources; one candidate was high-growth products such as HCFC-22, which could require co-production of carbon tetrachloride with chloroform.

102. In the ensuing discussion it was acknowledged that the issue of carbon tetrachloride emissions was complex and required further study. One representative said that in continuing its investigations the Panel might bear in mind that the Executive Committee, by decision 55/45, had requested the Secretariat of the Multilateral Fund to take into account information to be provided by the Panel in response to decision XVIII/10 of the Meeting of the Parties on sources of carbon tetrachloride emissions, and any decisions taken at the current meeting, in preparing a report for the 58th meeting of the Executive Committee on emission reductions and phase-out of carbon tetrachloride in both Article 5 Parties and non-Article 5 Parties. The representative of the Panel expressed his willingness to discuss the matter further with interested Parties. Another representative suggested that the Panel's continuing work on carbon tetrachloride should be incorporated into its progress reports rather than be presented under a separate agenda item.

103. Following discussion the Parties agreed that the representatives of Sweden, the United States of America and the Technology and Economic Assessment Panel would hold informal discussions on the item at the current meeting.

104. It was subsequently reported that the representatives in question had agreed with the Panel that the further work of the Panel would be incorporated into its 2009 progress report and that the Panel would consult the Multilateral Fund and incorporate information on phase-out projects of carbon tetrachloride.

2. Regional imbalances in respect of halons

105. Mr David Catchpole, Co-Chair of the Halons Technical Options Committee, recalled that in decision XIX/16 the Parties had requested the Technology and Economic Assessment Panel to undertake a further study on projected regional imbalances in the availability of halons and to investigate and propose mechanisms to better predict and mitigate such imbalances in the future. Unfortunately, however, the report was not yet ready for presentation, owing to the limited availability of country data and the late start of the Multilateral Fund banking study. Additional country data had been received, however, since the twenty-eighth meeting of the Open-ended Working Group, and members of the Committee had also been obtaining data through their own regional contacts. The banking study had begun in October 2008 and a peer-review draft was anticipated by the end of 2008. The Committee would meet in March 2009 to finalize the report for review by the Panel and for presentation at the twenty-ninth meeting of the Open-ended Working Group in July 2009.

106. One representative reported that a halon bank had been established in Indonesia. She indicated that in the near future there would be difficulties in obtaining halon 1211 for important uses. Accordingly, the representative urged the Committee to finalize the study as soon as possible.

107. The Parties agreed that the Technology and Economic Assessment Panel would take up the issue in 2009.

3. Scoping study on alternatives to HCFCs for mines and very high temperature conditions

108. Mr Lambert Kuijpers, Co-Chair of the Technology and Economic Assessment Panel, recalled that under decision XIX/8 the Parties had requested the Panel to undertake a scoping study to assess alternatives to HCFCs in the refrigeration and air-conditioning sectors in Article 5 Parties, with specific reference to unique climatic and operating conditions, including the use of HCFCs in mines other than open pit mines. The Panel had been asked to assess alternatives available for those unique conditions and to identify areas requiring more detailed study.

109. Mr Kuijpers explained that the Panel had assembled a sub-committee of the Refrigeration Technical Options Committee comprising six experts, including two from Article 5 Parties. The study had been delayed, however, partly because of difficulties encountered in gathering commercial data, particularly from Article 5 Parties and on the use of specialized equipment, mostly because of logistic difficulties. Nevertheless, analyses were being performed, based on both theoretical models and such commercial data as was available, on the impacts of elevated temperatures on the performance and impacts of alternative refrigerants. He anticipated that the scoping study would be open for technical review after January 2009 and would form part of the Panel's April/May 2009 progress report.

110. In the ensuing discussion representatives welcomed the study and agreed that the issue should be accorded high priority. A number of representatives of Parties subject to high temperature ambient conditions spoke of the difficulties facing their countries in finding adequate alternatives to HCFCs. Several representatives, while acknowledging the economic constraints under which the Panel and its technical options committees operated, said that they would welcome field visits by members of the Refrigeration, Air-Conditioning and Heat Pumps Technical Options Committee to assess the particular situations in their countries.

111. The representative of the Panel said that the final study would be available for consideration by the Open-ended Working Group in July 2009 and that every effort would be made to carry out field visits, subject to budgetary constraints.

112. The Parties took note of the Panel's presentation on the scoping study on alternatives to HCFCs for mines and very high temperature conditions and of the timetable for completion of the final report.

H. Technology and Economic Assessment Panel administrative issues

113. Mr Stephen O. Andersen, Co-Chair of the Technology and Economic Assessment Panel, gave a presentation on administrative issues. He explained that the Panel was requesting a budget of \$100,000 for 2009 for travel and meeting expenses, noting that actual expenditures for such purposes would require approval by the Panel Co-Chairs and the Ozone Secretariat, and would not include consulting fees or wages. Regarding membership of the technical options committees, the Panel was proposing Mr. Sergey Kopylov (Russian Federation) as a new co-chair of the Halons Technical Options Committee. Other expert positions needing to be filled included those for nutsedge control, orchard replant, forestry and nursery propagation for the Methyl Bromide Technical Options Committee; for aviation fire protection for the Halons Technical Options Committee; and for several refrigeration and air-conditioning subsectors for the Refrigeration, Air-Conditioning and Heat Pumps Technical Options Committee.

114. It was agreed that the Secretariat would prepare a draft decision on the nomination of Mr. Kopylov for consideration during the high-level segment.

I. Compliance and reporting issues considered by the Implementation Committee, including non-compliance with the Montreal Protocol that may be attributable to CFC consumption for production of metered dose inhalers in certain Parties operating under paragraph 1 of Article 5 (decision XVIII/16 paragraphs 3–5)

115. The Co-Chair invited Mr Hassen Hannachi (Tunisia), President of the Implementation Committee, to present a summary of the report of the forty-first meeting of the Committee, which had taken place from 12 to 14 November 2008, and the draft decisions prepared by the Committee at its fortieth and forty-first meetings, which had been circulated in a conference-room paper.

116. He observed that much of the Committee's report was good news. The rate of data reporting by Parties had improved significantly: no fewer than 188 Parties out of 191 – more

than 98 per cent – had reported data for 2007, the highest rate ever achieved for Parties reporting prior to the end-of-year meeting of the Implementation Committee. Seventy-five Parties had been able to report data for 2007 by 30 June 2008, in accordance with decision XV/15, which had meant that the Committee had been able to carry out much useful work at its fortieth meeting in July. The early submission of data had been exceptionally helpful.

117. One Party, Saudi Arabia, had requested a revision of its baseline data for methyl bromide. The Committee had been satisfied with the comprehensive range of supporting information that Saudi Arabia had provided and had concluded that it had fully complied with the requirements of decision XV/19, including carrying out investigations and site visits to methyl bromide users. The Committee accordingly recommended approval of the Party's request for revision.

118. Three draft decisions dealt with issues of compliance: requests for plans of action from two Parties regarding CFC consumption (Solomon Islands and Somalia) and the approval of Ecuador's plan of action to phase out its methyl bromide consumption. The Committee had also reviewed all existing plans of action and the extent to which Parties were meeting, or, in several cases, exceeding their commitments under them; the Committee's recommendations with respect to each case were recorded in the full report of the Committee's meeting, which would be available in due course on the Secretariat's website.

119. The Committee had also considered reports on the implementation of systems for licensing imports and exports of ozone-depleting substances. All of the eight Parties that had been required to establish and operate licensing systems had either done so or were beginning to do so; the Committee looked forward at its next meeting to receiving confirmation of the completion of that process.

120. The efforts of Bangladesh to phase out its use of CFCs in the manufacture of metered-dose inhalers had occupied much of the Committee's time. In 2006 Bangladesh had notified the Secretariat that it expected to fall into non-compliance in the years 2007–2009 owing to difficulties in phasing out CFCs for that use. Bearing in mind decision XVIII/16, which had requested the Committee to give "special consideration" to Parties facing phase-out challenges owing to CFC consumption for metered-dose inhaler manufacture, and after extensive discussions with the representative of Bangladesh, who had attended the meeting, the Committee had decided that it was appropriate to defer further consideration of the Party's compliance status until 2010.

121. The situation of Somalia had also been discussed at length, including with a representative of the Party who had attended the meeting. Somalia's consumption data indicated that it was in non-compliance with its obligations for halon consumption for 2006 and 2007, and for CFC consumption for 2007. The Party of course faced significant challenges as a result of the extensive political and economic disruption that it faced. Nevertheless, it had succeeded in drawing up a plan of action and proposals for a licensing system. The Committee had taken due consideration of Somalia's special situation and had agreed to forward a draft decision to the Meeting of the Parties.

122. The Committee had discussed the reports submitted by Parties, under Article 9 of the Montreal Protocol, on research, development, public awareness and exchange of information. Although every Party was obliged to submit such a report every two years the number of Parties providing them had been relatively small; for example, only 18 Parties had submitted such data to the Secretariat in 2007 and 2008, of which the vast majority were Article 5 Parties. In 2005 the Committee had concluded not only that Article 9 imposed a legal obligation but also that the reports called for by the Article had real value. In its discussion during 2008 the Committee had decided to request the Secretariat to share the reported information with all Parties through its website.

123. The Committee had also considered the reporting, presentation and review of data in respect of very small – or "*de minimis*" – quantities of ozone-depleting substances relative to compliance. A problem had arisen because the approach taken by Parties and the Secretariat to rounding off figures when reporting and presenting data had varied over the years. The Secretariat, for example, had from 2004 used three decimal places in presenting reported data while there had been no uniform approach among Parties. The Eighteenth Meeting of the Parties had agreed that the Secretariat should henceforth round to one decimal place in presenting reported data.

124. Unfortunately, however, the method adopted by the Eighteenth Meeting of the Parties raised a number of issues: data rounded to one place could, for example, serve to disguise a

small level of consumption; and it could put a Party into apparent compliance when more precise figures might reveal that it was in fact not within the control limits. The matter was at the moment of particular importance given that total phase-out for several categories of ozone-depleting substances was approaching for Article 5 Parties and the final stages of phase-out could involve very small quantities. Given the complexity of the issue the Committee had agreed to bring it to the attention of the Meeting of the Parties.

125. The Committee had also discussed a paper prepared by the Secretariat on the review of decisions of the Meeting of the Parties on recurrent actions or activities which should be monitored or reviewed on a regular basis by the Implementation Committee. The paper had been prepared in response to a corresponding recommendation by the Committee. In its effort to respond to that recommendation, however, the Secretariat had found itself faced with issues necessitating legal interpretation of the Protocol, which was the sole preserve of the Parties. The Secretariat had therefore sought guidance from the Committee, which had in turn agreed to consider the issue at future meetings.

126. Lastly, the Committee had discussed the recording of destinations of exports. Decision XVII/16 had urged Parties to use the new reporting format to identify the destinations of exports (including re-exports) of all ozone-depleting substances. To enable the Committee to review the implementation of that reporting requirement, the Secretariat had been requested to identify in its regular data report to the Committee those Parties that had not reported in accordance with decision XVII/16.

127. The Secretariat had sent letters to Parties informing them of exports of ozone-depleting substances bound for their countries. In the experience of several Committee members, however, that information had proved to be inconsistent with their own import data. Committee members recognized the data uncertainties involved, which were caused by factors such as trade through free trade zones and illegal trade. Recognizing the importance of the issue, the Committee had concluded that it was not in a position to make any recommendation at the current time but expressed the hope that the issue would be discussed by the Meeting of the Parties.

128. In closing, he thanked the representatives of the Multilateral Fund secretariat and the implementing agencies and the Chair of the Executive Committee for their assistance. He also thanked the Ozone Secretariat for its support and the members of the Committee for their hard work. The international ozone community, he concluded, had helped to build a compliance system that was internationally regarded with respect and as a model to be emulated. He was confident that it would be able to cope with the challenges to be faced over the coming year, as the Parties approached the 2010 deadline for total phase-out of key ozone-depleting substances.

129. All representatives who took the floor complimented the Committee on its hard work and dedication. One representative observed that he had recently submitted information on exports. Another representative said that he believed that the Parties should retain their practice of rounding data to one decimal place. As total phase-out of various substances, particularly HCFCs, approached, Parties would find themselves dealing with smaller and smaller quantities of substances. Rounding figures to one decimal place rather than three would allow them greater flexibility in meeting their commitments.

130. The representative of Bangladesh gave a summary of his Party's situation, explaining that his delegation had come to the meeting with high hopes that the Parties would consider its non-compliance situation with due regard for the spirit of decision XVIII/16. He said that his country had been working hard to implement the Montreal Protocol ever since its accession to the agreement in 1990. In the aerosol sector, which had accounted for 50 per cent of the country's consumption of CFCs, total phase-out had been achieved in 2002. That, together with reductions in CFC consumption in the refrigeration and air-conditioning sector, had enabled Bangladesh to meet its 2005 target of a 50 per cent phase-out of CFCs. The national phase-out plan currently being implemented would see total phase-out of CFCs in refrigeration and air-conditioning by 2010.

131. Phase-out in the metered-dose inhaler sector, however, posed much more difficult challenges, as metered-dose inhalers were essential for the health of the population. As set out in the Party's metered-dose inhaler transition strategy, consumption for that use was projected to increase in each year from 2007 to 2009, before reductions due to the conversion project would be seen. As an Article 5 Party Bangladesh would not be eligible for essential-use exemptions until 2010.

132. From as early as 2004, therefore, Bangladesh had been raising the issue of its potential future non-compliance at meetings of the Implementation Committee, the Open-ended Working

Group and the Meeting of the Parties. A series of recommendations and decisions had been adopted, culminating in decision XVIII/16, which he regarded as a very positive development. Furthermore, progress had been made in recent months: the Government had signed agreements with UNDP and UNEP in October 2008, and was working with the implementing agencies for the implementation of the conversion project and the transition strategy. He expected the first alternative products to be launched in late 2010.

133. In conclusion, he expressed his thanks to the members of the Implementation Committee for the sympathy and concern with which they had approached that issue. Nevertheless, he also expressed reservations about some aspects of the draft decision, in particular the requirement that CFC consumption for metered-dose inhalers should not rise more than 20 per cent above its 2007 level, which he believed would be impossible to satisfy. The Executive Committee of the Multilateral Fund had already approved a transition strategy that permitted higher levels of consumption, and he did not believe that two distinct bodies of the Montreal Protocol should contradict each other. He accordingly suggested a series of amendments to the text of the draft decision.

134. Expressing their support for the position of Bangladesh, a number of representatives observed that Article 5 Parties faced significant difficulties in phasing out the use of CFCs in metered-dose inhalers, not least that the technology necessary for non-CFC alternatives was usually owned by multinational companies and could not be transferred easily to domestic enterprises. It was essential to maintain the position of domestic companies and to enable them to compete in the market for such medications, which in turn would help to keep prices down for patients.

135. Several other representatives, however, while sympathizing with Bangladesh's predicament, expressed misgivings at the Committee's suggested draft decision. The proposal to defer consideration of a Party's compliance status represented a departure from established practice and did not seem likely to offer a satisfactory way of assisting the Party in question or of monitoring its progress in meeting its obligations. One reason for the success of the Montreal Protocol was its robust and effective compliance system and a decision in effect not to apply it would send the wrong signal. The "special consideration" requested under decision XVIII/16 did not require the Committee to defer its consideration of the Party's compliance status. The representatives suggested that the draft decision should not be adopted, and instead that the Implementation Committee should return to the issue at its next meeting, in 2009.

136. Responding to the discussion, the President of the Committee observed that the Committee had considered the issue of Bangladesh at great length and that the final decision had been reached with the support of all members, after discussing the issue with the representative of the Party. The Committee had considered two options and had decided to proceed with flexibility in the light of the requirements of decision XVIII/16. Nevertheless, if the Parties felt that they would prefer the Committee to consider the situation of Bangladesh further at its next meeting then it would of course do so.

137. Following their discussion the Parties agreed to forward the draft decisions recommended by the Implementation Committee, with the exception of that dealing with Bangladesh, for further consideration during the high-level segment.

138. The Parties also agreed to forward a draft decision on the numbers of Parties reporting data for consideration during the high-level segment.

J. Consideration of membership of Montreal Protocol bodies for 2009

- 1. Members of the Implementation Committee**
- 2. Members of the Executive Committee of the Multilateral Fund**
- 3. Co-Chairs of the Open-ended Working Group**

139. Introducing the item, the Co-Chair recalled that it would be necessary at the current meeting to nominate candidates for several positions in Montreal Protocol bodies for 2009, according to the procedures set out in paragraph 10 of document UNEP/OzL.Pro.20/2. He called on the regional groups to submit nominations to the Ozone Secretariat. The Parties subsequently agreed on the membership of the Implementation Committee and the Executive Committee and on co-chairs of the Open-ended Working Group and approved draft decisions reflecting that agreement for further consideration during the high-level segment.

V. Other matters

A. *Who's Who in the Montreal Protocol*

140. Mr. González presented a short video film introducing a new electronic publication produced by the UNEP Division of Technology, Industry and Economics: *Who's Who in the Montreal Protocol*. Explaining that it was a web-based information tool to be launched during the current meeting, he expressed the hope that it would prove useful to all participants in the Protocol.

B. Release by Nepal of stocks of confiscated chlorofluorocarbons

141. The representative of Nepal introduced a draft decision that would permit Nepal to release its stock of confiscated CFCs on to its domestic market, explaining that the proposal represented a departure from the terms of decision XVI/27, which had limited the release of CFCs seized when Nepal had interrupted illegal trade. That decision did not permit the release of any of the stock after 2010, which would leave Nepal with a volume that would have to be destroyed, at significant expense, even though there would be residual demand for CFCs for servicing existing equipment within the country. The proposal would permit Nepal instead to release small quantities of CFCs on to its domestic market until 2013. He observed that a similar issue arose with respect to the disposal of confiscated and contaminated ozone-depleting substances, which had been discussed at an earlier stage of the meeting.

142. Several representatives acknowledged Nepal's efforts to deal with the issue in an open and transparent manner. They said that they understood Nepal's concerns but felt that the issue needed to be considered at more length, and in concert with the discussion on destruction and disposal of ozone-depleting substances, before it could be agreed.

143. The representative of Nepal subsequently announced that, after further consideration and discussion, his delegation had decided to withdraw its draft decision. He expressed the hope that the Implementation Committee would consider the issue at its next meeting before the meeting of the Open-ended Working Group in July 2009.

C. Difficulties faced by Iraq as a new Party

144. The representative of Iraq introduced a revised draft decision. She explained the series of amendments that had been made to the earlier text, which provided for, among other things, encouragement for Iraq to participate in an informal prior informed consent procedure for trade in ozone-depleting substances, as referred to in decision XIX/12, and a request to the Implementation Committee to report on the compliance situation of the Party to the Open-ended Working Group preceding the Twenty-Third Meeting of the Parties, during which the decision should be reconsidered. The Parties agreed to forward the draft decision for consideration during the high-level segment.

D. Doha Declaration

145. The representative of Qatar introduced a draft decision on the adoption by the Twentieth Meeting of the Parties of a Doha declaration. He explained that his country had been honoured to host the joint meeting of the Conference of the Parties to the Vienna Convention and the Meeting of the Parties to the Montreal Protocol. His proposed declaration highlighted key issues in the phase-out of ozone-depleting substances which had been addressed at the current meeting, including destruction of controlled substances (which would be of benefit to efforts to combat both climate change and ozone depletion), replenishment of the Multilateral Fund and enhancement of satellite monitoring of the atmosphere. He also hoped that the paperless system introduced at the meeting would serve as a model for other United Nations forums.

146. Several representatives announced their support for the declaration. A number commented that, while they supported the aims of the declaration, the exact wording, which in some cases depended on the outcomes of discussions in contact groups, needed some amendment.

147. The representative of Qatar subsequently introduced a revised draft decision, which the Parties approved for further consideration during the high-level segment.

E. High-global warming potential substitutes for ozone-depleting substances

148. The representative of the United States of America, introducing a draft decision on a workshop for a dialogue on high global-warming potential substitutes for ozone-depleting substances, said that, given the transition from ozone-depleting substances to high

global-warming potential chemicals, in particular HFCs, there was a need for additional information on, and discussion of, substitutes with high global-warming potential. The Party had accordingly circulated a draft decision proposing various actions that would add to existing knowledge on the matter, including convening of a half-day open-ended dialogue on high global-warming potential substitutes.

149. During the ensuing discussion a number of Parties expressed broad support for the initiative, and it was agreed that informal discussions would be held on the issue among interested Parties.

150. The representative of the United States subsequently provided an interim report on the discussions that had been held with other Parties. While they had been fruitful, Parties had not been able to agree on whether the proposed workshop should be organized only between Parties to the Montreal Protocol or also jointly with Parties to the United Nations Framework Convention on Climate Change. He hoped to be able to resolve the issue after further discussions.

151. The representative of the United States subsequently introduced a revised draft decision. It requested the Technology and Economic Assessment Panel to update its 2005 special report on the ozone layer and climate; the Ozone Secretariat, with input, where appropriate, from the secretariat of the Framework Convention on Climate Change and Kyoto Protocol, to organize an open-ended dialogue on alternatives, with the participation of both ozone and climate experts, and to produce a summary report for the Open-ended Working Group at its twenty-ninth meeting; and the Secretariat to communicate that intention to the Conference of the Parties to the Framework Convention on Climate Change and its Kyoto Protocol in December 2008. Although such agreement was not reflected in the text of the draft decision, he announced that it had also been agreed that the dialogue would take the form of a one-day workshop and that funding would be available to allow Article 5 Parties to play a full part.

152. The Co-Chair of the preparatory segment confirmed that the sum of \$115,000 had been set aside in the budget of the Montreal Protocol Trust Fund for the organization of the workshop, including an amount to support the participation of Article 5 Parties. On that understanding, the Parties approved the draft decision for further consideration during the high-level segment.

Part two: High-level segment (19 and 20 November 2008)

I. Opening of the high-level segment

153. The high-level segment of the combined meeting commenced at 10.15 a.m. on Wednesday, 19 November, with an opening ceremony facilitated by Mr. Khaled Faleh, who acted as master of ceremonies.

A. Welcome by the Government of Qatar

154. The segment was formally opened by Mr. Al-Moadhadi, who welcomed the participants to Qatar, expressing pride in the achievements of the ozone family in its endeavours to find a solution to the problems threatening the ozone layer. The Qatari Government was committed to bequeathing a healthy planet to future generations and to keeping its place at the forefront of scientific progress for the benefit of its citizens. To that end, he announced, Qatar would establish an atmospheric monitoring station in the country, in cooperation with the United States National Aeronautics and Space Administration, and a research centre on applied technologies for ozone protection, in conjunction with UNEP. Wishing the participants fruitful discussions, he expressed the hope that Qatar would leave a lasting impression upon them.

B. Statement by the President of the seventh meeting of the Conference of the Parties to the Vienna Convention

155. In his opening statement, Mr. Djibo Leity Kâ (Senegal), who had replaced Mr. Thierno Lo as President of the seventh meeting of the Conference of the Parties to the Vienna Convention, recalled that since the previous meeting of the Conference significant activities to implement the Convention had been undertaken. The Ozone Research Managers had met in Geneva and had stressed the need, among other things, to build capacity in ozone-layer monitoring and observation, to find hydrofluorocarbon substitutes and to reconstitute the ozone layer. A draft decision, containing a request to Parties to provide contributions to the General Trust Fund for Financing Activities on Research and Systematic Observations Relevant to the Vienna Convention for continued research and monitoring, was before the Parties. He noted that the Bureau of the seventh meeting had also met twice and that, while it had welcomed the progress made in implementing decisions, it had called for increased funding for research. He pointed out that implementation of the Protocol required cooperation and, given that the Protocol was often held up as an exemplar to be followed, he urged the participants to be guided by the spirit of compromise when discussing the items on their agenda.

C. Statement by representatives of the United Nations Environment Programme

156. In his opening statement, Mr. González, speaking on behalf of Mr. Achim Steiner, Executive Director, UNEP, thanked the Government of Qatar for hosting the meeting and for its creativity and leadership in piloting the paperless meeting initiative, which, he said, would be introduced in 2009 at the twenty-fifth session of the Governing Council/Global Ministerial Environment Forum. Welcoming the initiatives announced by the Government to establish an atmospheric monitoring centre and a research centre on applied technologies, he expressed the willingness of UNEP to assist in those endeavours.

157. He went on to stress the importance of greening the economy, pointing out that, in the current climate of economic hardship, investments in energy efficiency represented what he termed genuine “win-win” options. Noting that money spent in the green economy could have a multiplying effect, he urged the Parties to consider the replenishment of the Multilateral Fund to be an investment in accelerating the arrival of the twenty-first century economy. Looking ahead to the forthcoming session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, which would take place in Poznań, Poland, he called for the Parties to work in the spirit of cooperation manifested in Doha so that they could achieve the cuts required to stabilize the atmosphere and find the funds to assist vulnerable countries to adapt to climate change. In conclusion, he suggested that, as the initiatives of the Qatari Government demonstrated, both in times of crisis and in times of progress, the biggest stimulus package of them all was human creativity and ingenuity.

II. Organizational matters

A. Election of officers of the eighth meeting of the Conference of the Parties to the Vienna Convention

158. At the opening session of the high-level segment of the combined meeting, in accordance with paragraph 1 of rule 21 of the rules of procedure, the following Parties were elected, by acclamation, to designate officers to the Bureau of the eighth meeting of the Conference of the Parties to the Vienna Convention:

President:	[]	Sri Lanka (Asian and Pacific group)
Vice-Presidents:	[]	Kyrgyzstan (Eastern European group)
	[]	Cuba (Latin American and Caribbean group)
	[]	Canada (Western European and others group)
Rapporteur:	[]	Egypt (African group)

B. Election of officers of the Twentieth Meeting of the Parties to the Montreal Protocol

159. At the opening session of the high-level segment, in accordance with paragraph 1 of rule 21 of the rules of procedure, the following Parties were elected, by acclamation, to designate officers to the Bureau of the Twentieth Meeting of the Parties to the Montreal Protocol:

President:	[]	Hungary (Eastern European group)
Vice-Presidents:	[]	Senegal (African group)
	[]	Grenada (Latin America and Caribbean group)
	[]	Netherlands (Western European and others group)
Rapporteur:	[]	Indonesia (Asian and Pacific Group)

C. Adoption of the agenda of the high-level segment

160. The following agenda for the high-level segment was adopted on the basis of the provisional agenda contained in document UNEP/OzL.Conv.8/1-UNEP/OzL.Pro.20/:

1. Opening of the high-level segment:
 - (a) Welcome by the Government of Qatar;
 - (b) Statement by representatives of the United Nations Environment Programme;
 - (c) Statement by a representative of the World Meteorological Organization;
 - (d) Statement by the President of the seventh meeting of the Conference of the Parties to the Vienna Convention;
 - (e) Statement by the President of the Nineteenth Meeting of the Parties to the Montreal Protocol.
2. Organizational matters:
 - (a) Election of officers of the eighth meeting of the Conference of the Parties to the Vienna Convention;
 - (b) Election of officers of the Twentieth Meeting of the Parties to the Montreal Protocol;
 - (c) Adoption of the agenda of the high-level segment;
 - (d) Organization of work;
 - (e) Credentials of representatives.
3. Presentations by the assessment panels on the status of their work, including latest developments.
4. Presentation by the Chair of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol on the work of the Executive Committee.
5. Statements by heads of delegations.
6. Report of the co-chairs of the preparatory segment and consideration of the decisions recommended for adoption at the eighth meeting of the Conference of the Parties to the Vienna Convention and the Twentieth Meeting of the Parties to the Montreal Protocol.
7. Dates and venues for the ninth meeting of the Conference of the Parties to the Vienna Convention and the Twenty-First Meeting of the Parties to the Montreal Protocol.
8. Other matters.
9. Adoption of decisions by the Conference of the Parties to the Vienna Convention.
10. Adoption of decisions by the Twentieth Meeting of the Parties to the Montreal Protocol.

11. Adoption of the report of the eighth meeting of the Conference of the Parties to the Vienna Convention and the Twentieth Meeting of the Parties to the Montreal Protocol.
12. Closure of the meeting.

D. Organization of work

161. The Parties agreed to follow their customary procedures.

E. Credentials of representatives

162. The Bureaux of the eighth meeting of the Conference of the Parties to the Vienna Convention and the Twentieth Meeting of the Parties to the Montreal Protocol approved the credentials of the representatives of 95 of the 143 Parties represented. The Bureaux provisionally approved the participation of four Parties on the understanding that they would forward their credentials to the Secretariat as soon as possible. The Bureaux urged all Parties attending future meetings of the Parties to make their best efforts to submit credentials to the Secretariat as required under rule 18 of the rules of procedure. The Bureaux also recalled that under the rules of procedure credentials had to be issued either by a head of State or Government or by a minister for foreign affairs or, in the case of a regional economic integration organization, by the competent authority of that organization. The Bureaux further recalled that representatives of Parties not presenting credentials in the correct form could be precluded from full participation in the meetings of the Parties, including the right to vote.

III. Presentations by the assessment panels on the status of their work, including latest developments

163. Speaking on behalf of the Scientific Assessment Panel, Mr. A. R. Ravishankara set out the Panel's plans for the preparation of the 2010 assessment. The topics to be addressed had been listed in decision XIX/20; the key issues included levels and trends of ozone-depleting substances and their substitutes, with an emphasis on HCFCs; the level of atmospheric ozone and its trends; and understanding of atmospheric science relating to ozone layer changes. The impact of climate change on ozone layer recovery and the impact of ozone layer changes on the climate and climate change represented new areas of scientific enquiry. Urging all Parties to nominate experts to take part in the 2010 assessment, he outlined the schedule for its production; the report was expected to be completed in late 2010 and to be published in March 2011.

164. Speaking on behalf of the Environmental Effects Assessment Panel, Mr. Jan van der Leun recalled that the Parties had asked the Panel to assess the interaction of ozone depletion and climate change. The Panel's enquiry had revealed that there were several significant effects of that interaction. For example, higher levels of ultraviolet irradiation and higher temperatures both raised emissions from plants of methane, a powerful greenhouse gas, though the scale of the impact on climate change was not yet clear. Similarly, higher temperatures increased the rate of induction of skin cancer with, it was estimated, each one-degree rise in temperature increasing the rate of induction of skin cancer by some 2 per cent. More details of those and other research findings would be included in the Panel's 2008 progress report, which would soon be made available.

165. Speaking on behalf of the Technology and Economic Assessment Panel, Mr. Lambert Kuijpers explained that much of the work of the Panel was conducted by its six technical options committees, which published both regular (usually annual) reports and special reports in response to requests from Meetings of the Parties. He set out the schedule for production of the 2010 assessment report, which would be submitted by the end of 2010, and listed the key issues that would be covered by each technical options committee.

IV. Presentation by the Chair of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol on the work of the Executive Committee

166. Mr. Albert Rombonot, Chair of the Executive Committee of the Multilateral Fund, delivered a presentation on the Committee's activities in 2008, summarizing the report contained in document UNEP/OzL.Pro.20/7. During the year, the Executive Committee had approved about 50 new agreements with national Governments and disbursed approximately \$140 million

to assist countries to implement those agreements. Projects funded by the Multilateral Fund had resulted in the permanent removal of 8,000 ODP-tonnes of ozone-depleting substances from the stratosphere.

167. Analysis by the Multilateral Fund secretariat on the potential of countries to meet their obligations showed that most Article 5 Parties would be able to complete the phase-out of CFCs by 2010. That represented a major achievement on the part of the international community.

168. The Executive Committee had responded to the decision of the Nineteenth Meeting of the Parties to accelerate the phase out of HCFCs by adjusting its basic policy framework for the funding of HCFC phase-out, approving detailed guidelines for the preparation of HCFC phase-out management plans, approving funding for such plans in over 100 countries; and beginning to draw up guidelines for the costing of HCFC phase-out.

169. Speaking also on behalf of the implementing agencies, he observed that during 2008 the United Nations Development Programme (UNDP) had reinforced its efforts to accelerate project implementation. With programmes in over 100 countries, by the end of 2008 UNDP would have assisted Article 5 Parties in phasing out over 62,000 ODP-tonnes of controlled substances, including CFCs for the manufacture of metered-dose inhalers in several countries, including India, one of the largest manufacturers of such inhalers. UNDP had assisted countries in setting up phase-out programmes for eliminating HCFC consumption, including large consuming countries such as Brazil, China, India and Mexico. UNDP had also developed two pilot projects to validate alternatives that were both ozone- and climate-friendly in Brazil and Mexico.

170. The core mandate of UNEP comprised targeting compliance assistance mainly at low-volume-consuming countries. Its regional networks now covered 145 Article 5 Parties and its programme to assist such Parties in raising awareness was providing significant help to national ozone units. UNEP had continued its network activities, including cooperation between developing countries over technology transfer and the prevention of illegal trade, and was cooperating with existing regional and international organizations to strengthen ozone-related policy and regulation.

171. Projects funded through the United Nations Industrial Development Organization (UNIDO) had phased out another 766 ODP-tonnes of ozone-depleting substances in 2008, bringing the total volume phased out to over 63,000 ODP-tonnes. In particular, UNIDO had assisted a number of countries to phase out the use of CFCs in the production of metered-dose inhalers and had begun an ambitious programme to phase out HCFCs in over 30 Article 5 Parties. UNIDO was well positioned to deliver assistance to Article 5 Parties because of its in-house technical expertise.

172. Since the inception of the Multilateral Fund the World Bank had assisted Article 5 Parties in removing over 280,000 ODP-tonnes of ozone-depleting substances from the stratosphere. During 2008, the World Bank had started to refocus its programme to assist countries in taking on the challenge of HCFC phase-out and was exploring various possibilities for co-financing. It had also commissioned a study to determine how the voluntary carbon market could be mobilized for financing the destruction of unwanted ozone-depleting substances.

173. The Chair observed that despite those achievements there remained a number of challenges for the Executive Committee to tackle in the future. By the end of October 2008, \$51 million of the pledged total contributions of \$133 million for 2008 had not yet been paid, and he appealed for the timely payment of all contributions. Work remained to be completed on various issues related to the financing of HCFC phase-out, including the permissibility of financing second-stage conversion and the definition of cut-off dates for funding eligibility. There were also complex technical and policy issues remaining to be resolved on the matter of climate, energy and further environmental impacts in accordance with the requirements of decision XIX/6.

174. In conclusion, the Chair expressed his belief that the Montreal Protocol was one of the most successful international environmental agreements, of which the Multilateral Fund was an integral part. The Montreal Protocol community could feel proud of its efforts to phase out ozone-depleting substances, which had contributed not only to the recovery of the ozone layer but also to the reduction of greenhouse gases. All participants needed to continue and reinforce that success by attending to the phase-out of HCFCs.

V. Statements by heads of delegations

175. At the high-level segment, statements were made by heads of delegation of the following Parties, listed in the order in which they spoke: Egypt, India, Bosnia and Herzegovina, Sri Lanka, Uganda, Mauritius, Iraq, Djibouti, Mauritania, Dominican Republic, United States of America, South Africa, France (on behalf of the European Union and its member States), Jordan, Lebanon, United Republic of Tanzania, Lao People's Democratic Republic, Yemen, the former Yugoslav Republic of Macedonia, Burundi, United Arab Emirates, Burkina Faso, Japan, Bangladesh, Finland, Mozambique, Croatia, Serbia, Brunei Darussalam, Cambodia, Iran (Islamic Republic of), Armenia, Kenya, Venezuela (Bolivarian Republic of), Malaysia, Kuwait, China, Brazil, Trinidad and Tobago, Cuba, Afghanistan, Philippines, Pakistan, Turkey, Sudan, Syrian Arab Republic, Myanmar, Malawi, Micronesia (Federated States of), Angola and Cameroon.

176. The representative of the Secretariat of the Basel Convention made a statement.

177. Statements were also made by representatives of Greenpeace, the International Institute of Refrigeration and the Institute of Governance and Sustainable Development.

178. All speakers expressed their appreciation to the Government and people of Qatar for hosting the current meeting and welcomed the innovation of a paperless meeting.

179. Many representatives congratulated the members of the Bureaux on their election and thanked UNEP and the Ozone Secretariat, the Multilateral Fund secretariat and implementing agencies, donor countries, international organizations and other stakeholders for their role in ensuring the success of the meeting and the successful development and implementation of the Protocol.

180. Several representatives said that the Protocol was an exemplary multilateral environmental agreement and expressed pride in its achievements, stating that in addition to protecting the ozone layer it had also helped to alleviate climate change. Some highlighted the active participation of all relevant stakeholders in the Protocol's implementation and highlighted the importance of maintaining its strong scientific basis, developing strong partnerships between the public and the private sectors, involving communities and raising awareness of ozone-related issues.

181. Many representatives said that, while there were reasons to celebrate the Protocol's success, much work remained to be done and Parties needed to maintain momentum to ensure that the Protocol met its objectives. Many speakers from Article 5 Parties identified the continued use and accelerated phase-out of HCFCs as a major challenge, both technologically and financially. Several representatives said that accelerated phase-out would demand a significant input of technology for the development and application of alternatives and financial resources to compensate for the economic costs involved.

182. Numerous representatives emphasized the links between the ozone treaties and related environmental agreements such as the United Nations Framework Convention on Climate Change and its Kyoto Protocol and suggested that the synergies between them should be developed. One representative suggested that it might be possible to expand the national centre that had been established in her country, originally under the Basel Convention and later expanded to related conventions, to deal with Montreal Protocol issues. A number of representatives of Article 5 Parties said that small island developing States were particularly vulnerable to climate change and welcomed actions under the Protocol that could mitigate its effects. One representative stressed the importance of ground measurement and commented that there were not enough regional centres and that their geographical distribution was inadequate.

183. While agreeing that it had been necessary to accelerate the schedule for phasing out HCFCs, most speakers from Article 5 Parties said that they would only be able to implement the accelerated schedule if they received adequate financial and technical assistance. Several stressed the need to provide financial and technical support to those industries that had already converted from CFCs to HCFCs and were then being asked to undertake a second conversion to other climate- and ozone-friendly technologies.

184. Some representatives expressed concern about replenishment levels in the light of the current global economic situation. All representatives of Article 5 Parties expressed the need for adequate resources to enable work under the Convention and Protocol to proceed effectively and urged a generous replenishment of the Multilateral Fund.

185. Other challenges that representatives identified included the difficulties in reducing the use of CFCs in metered-dose inhaler manufacture, taking into account possible implications for human health and the availability of feasible cost-effective alternatives for many of them. One

representative pointed out that the capacity to develop alternatives was often constrained by the existence of patents and pharmaceutical regulations. Ensuring the environmentally sound management and destruction of ozone-depleting substance wastes, including those contained in banks, was said to be another challenge. Many representatives stressed the need to combat illegal trade in ozone-depleting substances, to train customs officials, to establish effective import and export licensing systems and to continue to provide institutional strengthening.

186. Many representatives outlined the status of their countries' ratification of the ozone instruments and their efforts to fulfil their obligations under the Protocol. The latter included work to phase out controlled substances, sometimes ahead of schedule; to promote and move towards alternative technologies, including climate-friendly technologies; to combat illegal trade in ozone-depleting substances; to engage in training and capacity-building activities; and to raise awareness in industry and communities about national efforts and obligations.

187. Several representatives expressed their solidarity with Iraq as a new Party and supported its efforts with regard to the Protocol.

188. The representative of the Basel Convention, recalling that one of the major challenges under discussion was the environmentally sound management and destruction of CFCs stockpiled and contained in banks, stressed the importance of the transboundary movement of wastes. Drawing attention to the synergies between the various environmental conventions, he expressed an interest in working together with Parties to the Montreal Convention and mentioned specifically the discussions under way for a joint project on the transboundary movement of waste ozone-depleting substances.

189. The representative of a non-governmental organization urged the Parties to adopt a policy barring the use of HFCs in any new or retrofit applications where technologically proven, safe, efficient, low-GWP HFC-free technologies existed and urged the Multilateral Fund to stop funding HFC-based projects immediately. He called for additional funding to assist developing countries in their phase-out activities and to provide incremental funding to level the playing field for climate-friendly technologies in comparison with those using HFCs. He also called on the Parties to secure adequate funding for the establishment of a global network for the recapture and safe destruction of CFCs and HCFCs in domestic and commercial refrigeration equipment.

190. A representative of a non-governmental organization urged that a replacement calendar be drawn up for the refrigeration sector and that further efforts be made to use existing natural refrigerants and to explore new technologies such as solar refrigeration.

191. Another representative of a non-governmental organization commended the progress made by the Montreal Protocol and stated that it was beginning to acquire global recognition as the most successful of the environmental conventions. He expressed the view that the Montreal Protocol had shown that global atmospheric problems could be solved.

VI. Report of the co-chairs of the preparatory segment and consideration of the decisions recommended for adoption at the eighth meeting of the Conference of the Parties to the Vienna Convention and the Twentieth Meeting of the Parties to the Montreal Protocol

192. Reporting on the preparatory segment of the Meetings, the co-chair said that a great deal had been achieved, with four decisions under the Vienna Convention and over twenty decisions under the Montreal Protocol approved for consideration and possible adoption during the high-level segment. The paperless system, she said, had been a breakthrough in the way that United Nations meetings take place, and she hoped that it would be used for other United Nations meetings in the future. She thanked the representatives for their hard work and their spirit of cooperation; the co-chairs of the contact groups for their skill, patience and tireless efforts in preparing the draft decisions; and the Secretariat for its excellent work and professionalism.

VII. Dates and venues for the ninth meeting of the Conference of the Parties to the Vienna Convention and the Twenty-First Meeting of the Parties to the Montreal Protocol

193. The Parties accepted with pleasure the offer of the Government of Egypt to hold the Twenty-first Meeting of the Parties to the Montreal Protocol in Sharm el Sheikh, Egypt. The date of the meeting would be announced as soon as possible. The Parties also agreed to hold the next meeting of the Conference of the Parties to the Vienna Convention back-to-back with the Twenty-Third Meeting of the Parties to the Montreal Protocol.

VIII. Other matters

194. No other matters were discussed.

IX. Adoption of decisions by the Conference of the Parties to the Vienna Convention

The Conference of the Parties decides:

VIII/I: Status of ratification of the Vienna Convention, the Montreal Protocol and the London, Copenhagen, Montreal and Beijing amendments to the Montreal Protocol

1. To note with satisfaction the large number of countries which have ratified the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer;
2. To note that, as of 15 November 2008, 193 Parties had ratified the Vienna Convention and the Montreal Protocol, 189 Parties had ratified the London Amendment to the Montreal Protocol, 184 Parties had ratified the Copenhagen Amendment to the Montreal Protocol, 167 Parties had ratified the Montreal Amendment to the Montreal Protocol and 144 Parties had ratified the Beijing Amendment to the Montreal Protocol;
3. To urge all States that have not yet done so to ratify, approve or accede to the Vienna Convention and the Montreal Protocol and its amendments, taking into account that universal participation is necessary to ensure the protection of the ozone layer;

VIII/2: Recommendations adopted by the Ozone Research Managers at their seventh meeting

Recalling that, pursuant to the objective defined in decision I/6 of the Conference of the Parties to the Vienna Convention, the Ozone Research Managers review ongoing national and international research and monitoring programmes with a view to ensuring the proper coordination of those programmes and identifying gaps that need to be addressed,

Recognizing that the Ozone Research Managers at their seventh meeting emphasized the discussion of satellite research and monitoring owing to concerns among scientists that there could be serious gaps in satellite monitoring and associated data when current generation satellites and associated instruments reach the end of their useful lives in the next few years,

Also recognizing that the Ozone Research Managers have noted that international funding and cooperation are essential for the implementation of the their recommendations, that their previous recommendations have not received sufficient attention owing to a lack of such funding and cooperation and that problems associated with the maintenance of existing instruments and networks for ozone monitoring and the development of new capabilities have been exacerbated as a result,

Emphasizing the need for continued monitoring of the effectiveness of the implementation of the Montreal Protocol on Substances that Deplete the Ozone Layer and its adjustments and amendments, including the adjustment providing for the accelerated phase-out of hydrochlorofluorocarbons, the impact of the increasing abundance in the atmosphere of many

substitute chemicals, including hydrofluorocarbons, and the expected recovery of the ozone layer in a context of climate change,

1. To take note with appreciation of the report of the seventh meeting of the Ozone Research Managers;¹
2. To endorse the recommendations adopted by the Ozone Research Managers at their seventh meeting, as set out in the report of that meeting;
3. To urge space agencies and Governments to ensure the continuation of satellite research and observations, particularly to allow for measurements that contribute to the long-term time series for both total and profile ozone and profiles of ozone-related and climate-related species and parameters, and to carry out any necessary gap-filler missions in order to avoid gaps in areas of atmospheric observation that are critical to understanding and monitoring changes in atmospheric ozone and surface ultraviolet radiation and their interrelationship with climate variability and change;
4. To request all Parties to make a renewed effort to implement the actions recommended by the Ozone Research Managers, particularly those adopted at their seventh meeting, with a view to:
 - (a) Addressing uncertainties and new questions, including actual quantification of the extent to which chemical and dynamical processes are responsible for ozone production, loss, transport and distribution as well as changes in surface ultraviolet radiation resulting from changes in ozone and other atmospheric parameters and their impact on human and biological systems;
 - (b) Maintaining and expanding surface observation networks where gaps in geographical coverage result in data deficiencies in order to ensure the continuity and improvement of ground-based in situ observations of ozone depleting substances, their substitutes and greenhouse gases as well as the networks that provide altitude profile information for ozone-related and climate-related species;
 - (c) Ensuring that data acquired through observation are of the highest possible quality and include the metadata necessary to make them valuable to users today and in the future and, to that end, that efforts are made to enhance data archiving, including through the development of appropriate data quality assurance and submission procedures and timely access by users;
 - (d) Strengthening the capacity of developing countries and countries with economies in transition to enable them to maintain existing instruments and networks, acquire new observational capabilities and increase their participation in scientific research and assessments;

VIII/3: Vienna Convention Trust Fund for Financing Activities on Research and Systematic Observations Relevant to the Vienna Convention for the Protection of the Ozone Layer

Recalling decision VI/2, by which the Conference of the Parties established the Vienna Convention Trust Fund for Research and Systematic Observations,

Recalling further that the United Nations Environment Programme extended the Trust Fund to 31 December 2015 in order to continue supporting monitoring and research activities in developing countries and countries with economies in transition and that the Conference of the Parties is to decide in 2014 on whether to extend the Trust Fund beyond 2015,

Noting with appreciation the report provided by the Secretariat on the operation of, contributions to, and expenditures from the Trust Fund since its inception,²

Also noting with appreciation the contributions to the Trust Fund made by several Parties and the joint efforts of the World Meteorological Organization and the Ozone Secretariat in the implementation of the activities of the Trust Fund,

1 World Meteorological Organization/United Nations Environment Programme, Report of the Seventh Meeting of the Ozone Research Managers, WMO Global Ozone Research and Monitoring Project, Report No. 51.

2 UNEP/OzL.Conv.8/5.

Recognizing the need to continue and strengthen atmospheric research and monitoring activities in order to address the many uncertainties that exist regarding the expected ozone recovery process and interaction between ozone and climate changes,

Noting the recommendations of the Ozone Research Managers at their seventh meeting, particularly with regard to the Trust Fund, in respect of which the Managers emphasize its importance in enabling capacity-building activities and the need for both monetary and specific in-kind contributions that are directly targeted at ozone- and ultraviolet radiation-related activities,

1. To urge all Parties and relevant international organizations to make voluntary financial contributions to the Trust Fund and voluntary in-kind contributions to enable the continuation and enhancement of monitoring and research activities in developing countries and countries with economies in transition, taking into account the need for balanced global coverage;
2. To request the Secretariat to continue to invite Parties and relevant international organizations annually to make voluntary contributions to the Fund and with each successive invitation to the Parties to report on the prior years' contributions, funded activities and planned future activities;
3. To request the Secretariat and the World Meteorological Organization to continue their cooperation in respect of the Trust Fund pursuant to the terms of the memorandum of understanding between the two bodies on the operation of the Fund and to alert the Parties should a need arise to amend the memorandum of understanding to take into consideration evolving needs and conditions;
4. To remind the Secretariat and the World Meteorological Organization of the request in paragraph 7 of decision VII/2 of the Conference of the Parties that they strive for regional balance in the activities supported by the Fund and that they make an effort to leverage other sources of funding;

VIII/4: Financial matters: financial reports and budgets

Recalling decision VII/3 on financial matters,

Recognizing that voluntary contributions are an essential complement for the effective implementation of the Vienna Convention;

Welcoming the continued excellent management by the Secretariat of the finances of the Trust Fund for the Vienna Convention for the Protection of the Ozone Layer:

1. To take note with appreciation of the financial statement of the Trust Fund for the biennium 2006-2007 ended 31 December 2007 and the report on the actual expenditures for 2007 as compared to the approvals for that year;³
2. To approve the revised 2008 budget for the Trust Fund in the amount of \$1,213,142, the budget for 2009 in the amount of \$699,897, the budget for 2010 in amount of \$717,901, and the budget for 2011 in the amount of \$1,268,489 as set out in annex I to the report of the eighth meeting of the Conference of the Parties to the Vienna Convention for the Protection of the Ozone Layer and the Twentieth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer;⁴
3. To authorize the Secretariat to draw down amounts of \$96,897 in 2009, \$114,901 in 2010 and \$665,489 in 2011, respectively, from the Fund balance for the purpose of reducing that balance;
4. To ensure, as a consequence of the draw-downs referred to in paragraph 3, that the contributions to be paid by the Parties amount to \$603,000 for each of the years 2009, 2010 and 2011 as set out in annex II to the report of the eighth meeting of the Conference of the Parties to the Vienna Convention for the Protection of the Ozone Layer and the Twentieth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer;
5. To urge all Parties to pay their outstanding contributions as well as their future contributions promptly and in full;

³ UNEP/OzL.Conv.8/4/Add.1.

⁴ UNEP/OzL.Conv.8/7-UNEP/OzL.Pro.20/9.

6. To request the Executive Director to extend the Vienna Convention Trust Fund until 31 December 2015;⁵

VIII/5: Ninth meeting of the Conference of the Parties to the Vienna Convention

To convene the ninth meeting of the Conference of the Parties to the Vienna Convention back-to-back with the Twenty-Third Meeting of the Parties to the Montreal Protocol.

X. Adoption of decisions by the Twentieth Meeting of the Parties to the Montreal Protocol

A. Adoption of decisions

The Meeting of the Parties decides:

XX/1: Status of ratification of the Vienna Convention, the Montreal Protocol and the London, Copenhagen, Montreal and Beijing amendments to the Montreal Protocol

1. To note with satisfaction the large number of countries which have ratified the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer;

2. To note that, as of 15 November 2008, 193 Parties had ratified the Vienna Convention and the Montreal Protocol, 189 Parties had ratified the London Amendment to the Montreal Protocol, 184 Parties had ratified the Copenhagen Amendment to the Montreal Protocol, 167 Parties had ratified the Montreal Amendment to the Montreal Protocol and 144 Parties had ratified the Beijing Amendment to the Montreal Protocol;

3. To urge all States that have not yet done so to ratify, approve or accede to the Vienna Convention and the Montreal Protocol and its amendments, taking into account that universal participation is necessary to ensure the protection of the ozone layer;

XX/2: Essential-use nominations for Parties not operating under paragraph 1 of Article 5 for controlled substances for 2009 and 2010

Noting with appreciation the work done by the Technology and Economic Assessment Panel and its Medical Technical Options Committee,

Mindful that, according to decision IV/25, the use of chlorofluorocarbons for metered-dose inhalers does not qualify as an essential use if technically and economically feasible alternatives or substitutes are available that are acceptable from the standpoint of environment and health,

Noting the Technology and Economic Assessment Panel's conclusion that technically satisfactory alternatives to chlorofluorocarbon-based metered-dose inhalers are available for short-acting beta-agonists and other therapeutic categories for asthma and chronic obstructive pulmonary disease,

Mindful that paragraph 8 of decision XII/2 allows the transfer of chlorofluorocarbons between metered-dose inhaler companies,

Welcoming the continued progress in several Parties not operating under paragraph 1 of Article 5 in reducing their reliance on chlorofluorocarbon based metered-dose inhalers as alternatives are developed, receive regulatory approval and are marketed for sale,

5 Budget tables are set out in section B of the annex to the present compilation.

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

XX/3: Essential-use exemptions for Parties operating under paragraph 1 of Article 5

Mindful of the impending 2010 phase-out of certain controlled substances in Parties operating under paragraph 1 of Article 5,

Desiring to implement effectively paragraph 7 of decision IV/25 and make the currently used essential-use exemption process and related decisions fully applicable to both Parties operating under paragraph 1 of Article 5, subject to the phase-out dates applicable to those Parties, and Parties not so operating,

Taking into consideration that some Parties operating under paragraph 1 of Article 5 may prepare essential-use nominations for the first time and may therefore face difficulties in doing so,

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;
- (e) To add a new paragraph after paragraph 5 of decision IX/19 to read as follows:
- 5 bis.* To require Parties operating under paragraph 1 of Article 5 submitting essential-use nominations for chlorofluorocarbons for metered-dose inhalers for the treatment of asthma and chronic obstructive pulmonary disease to present to the Ozone Secretariat an initial national or regional transition strategy by 31 January 2010 for circulation to all Parties. Where possible, Parties operating under paragraph 1 of Article 5 are encouraged to develop and submit to the Secretariat an initial transition strategy by 31 January 2009. In preparing a transition strategy, Parties operating under paragraph 1 of Article 5 should take into consideration the availability and price of treatments for asthma and chronic obstructive pulmonary disease in countries currently importing chlorofluorocarbon-containing metered-dose inhalers;
- (f) To add a new paragraph after paragraph 2 of decision XII/2 to read as follows:
- 2 bis.* That any chlorofluorocarbon metered-dose inhaler product approved after 31 December 2008, excluding any product in the process of registration and approved by 31 December 2009, for treatment of asthma and/or chronic obstructive pulmonary disease in a Party operating under paragraph 1 of Article 5, is not an essential use, unless the product meets the criteria set out in paragraph 1 (a) of decision IV/25;
- (g) To add a new paragraph after paragraph 4 of decision XV/5 to read as follows:
- 4 bis.* That no quantity of chlorofluorocarbons for essential uses shall be authorized after the commencement of the Twenty-First Meeting of the Parties if the nominating Party operating under paragraph 1 of Article 5 has not submitted to the Ozone Secretariat, in time for consideration by the Parties at the twenty-ninth meeting of the Open-ended Working Group, a preliminary plan of action regarding the phase-out of the domestic use of chlorofluorocarbon-containing metered-dose inhalers where the sole active ingredient is salbutamol;
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;
 3. To request the Secretariat to include the changes above in the relevant decisions of the Parties contained in the Montreal Protocol handbook at the time of its next revision, and to note in that handbook that the related decisions include the modifications adopted by the present decision;
 4. To request the Technology and Economic Assessment Panel to reflect paragraphs 1–3 above in a revised version of the handbook on essential-use nominations and to submit, for consideration by Parties, suggestions for any appropriate changes to the handbook and the timing to make such changes;

XX/4: Campaign production of chlorofluorocarbons for metered-dose inhalers

Acknowledging that chlorofluorocarbon consumption and production in Parties operating under paragraph 1 of Article 5 will cease from 1 January 2010, with possible essential-use exemptions,

Acknowledging that many Parties operating under paragraph 1 of Article 5 import chlorofluorocarbon-free metered-dose inhalers from Parties not operating under paragraph 1 of Article 5,

Recognizing that campaign production offers potential advantages in lieu of annual essential-use nominations under decision IV/25 to meet needs for pharmaceutical-grade chlorofluorocarbons,

Noting that decision XVIII/16, paragraph 12, requested the Technology and Economic Assessment Panel to assess “quantities for a limited campaign production of chlorofluorocarbons exclusively for metered-dose inhalers in Parties operating under paragraph 1 of Article 5 and Parties not operating under paragraph 1 of Article 5,”

Noting that the Medical Technical Options Committee presented findings concerning the amounts of chlorofluorocarbons that may be needed for metered-dose inhalers only for Parties operating under paragraph 1 of Article 5 in 2008,

Acknowledging that the Medical Technical Options Committee has reported the need for additional information concerning the operations of a final campaign for Article 5 Parties except from one major manufacturing Party,

1. To request that the Technology and Economic Assessment Panel present a report to the Twenty-First Meeting of the Parties, preceded by a preliminary report to the Open-ended Working Group at its twenty-ninth meeting, concerning:

(a) The potential timing for final campaign production, taking into account, among other things, the information submitted in the nominations for 2010 and that some Parties operating under paragraph 1 of Article 5 may prepare essential use nominations for the first time for the Twenty-First Meeting of the Parties;

(b) Options for long-term storage, distribution, and management of produced quantities of pharmaceutical-grade chlorofluorocarbons before they are needed by Parties, including existing methods used by Parties not operating under paragraph 1 of Article 5;

(c) Options for minimizing the potential for too much or too little chlorofluorocarbons production as part of a final campaign;

(d) Contractual arrangements that may be necessary, considering the models currently used by Parties not operating under paragraph 1 of Article 5 that submit essential-use nominations consistent with decision IV/25;

(e) Options for reducing production of non-pharmaceutical-grade chlorofluorocarbons, together with options for final disposal of such chlorofluorocarbons;

2. To request the Multilateral Fund Secretariat to report to the Open-ended Working Group at its twenty-ninth meeting on the status of agreements to convert metered-dose inhaler manufacturing facilities located in Parties operating under paragraph 1 of Article 5 and the implementation of approved projects;

XX/5: Critical-use exemptions for 2009 and 2010

Noting with appreciation the work done by the Technology and Economic Assessment Panel and its Methyl Bromide Technical Options Committee,

Noting that Parties submitting requests for methyl bromide have supported their requests with management strategies as requested under decision Ex.I/4, and that they should periodically provide updated information,

1. To permit, for the agreed critical-use categories for 2009 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 decision Ex.I/4 to the extent that those conditions are applicable, the levels of production and consumption for 2009 set forth in table B of the annex to the present decision which are necessary to satisfy critical uses, in addition to the amounts permitted in decision XIX/9;

2. To permit, for the agreed critical-use categories for 2010 set forth in table C 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 2010 set forth in table D 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 uses may be approved by the Meeting of the Parties in accordance with decision IX/6;

3. To request the Technology and Economic Assessment Panel to ensure that recent findings with regard to the adoption rate of alternatives are annually updated and reported to the Parties in its first report of each year and inform the work of the Panel;

4. That when assessing supplemental requests for critical use exemptions for 2010 for a specific nomination, the Technology and Economic Assessment Panel should take into account the most current information, including any information on domestic implementation of related 2009 and 2010 critical uses, in accordance with paragraph 2 of decision IX/6;

5. That a Party with a critical use exemption level in excess of permitted levels of production and consumption for critical uses is to make up any such differences between those levels by using quantities of methyl bromide from stocks that the Party has recognized to be available;

6. That Parties shall endeavour to license, permit, authorize or allocate quantities of critical-use methyl bromide as listed in tables A and C of the annex to the present decision;

7. That each Party which has an agreed critical use renews its commitment to ensure that the criteria in paragraph 1 of decision IX/6 are applied when licensing, permitting or authorizing critical use of methyl bromide and, in particular, the criterion laid down in paragraph 1 (b) (ii) of decision IX/6. Each Party is requested to report on the implementation of the present paragraph to the Ozone Secretariat by 1 February for the years to which the present decision applies;

8. To request the Technology and Economic Assessment Panel to continue publishing annually in its progress report prior to each meeting of the Open-ended Working Group the stocks of methyl bromide held by each nominating Party as reported in that Party's accounting framework report;

9. To recognize the continued contribution of the Methyl Bromide Technical Options Committee's expertise and to agree that, in accordance with section 4.1 of the Technology and Economic Assessment Panel's terms of reference, the Committee should ensure that it develops its recommendations in a consensus process that includes full discussion among all available members of the Committee and should ensure that members with relevant expertise are involved in developing its recommendations;

10. To request the Technology and Economic Assessment Panel to ensure that the critical-use recommendations reported in its annual progress report clearly set out the reasons for recommendations and that, where requests are received from Parties for further information, the Methyl Bromide Technical Options Committee should provide a response within four weeks of submission of such a request;

11. That Parties licensing, permitting or authorizing methyl bromide for critical uses shall request the use of emission minimization techniques such as virtually impermeable films, barrier film technologies, deep shank injection and/or other techniques that promote environmental protection, whenever technically and economically feasible;

12. That each Party should continue to ensure that its national management strategy for the phase-out of critical uses of methyl bromide addresses the aims specified in paragraph 3 of decision Ex.I/4, and that each Party should periodically update or provide supplements to its national management strategy to provide new information on actions, such as identifying alternatives or regulatory updates, being undertaken to make significant progress in reducing critical use nominations, and indicating currently envisaged progress towards a phasedown;

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

Annex to decision XX/5

Critical-use exemptions for 2009 and 2010

Table A. 2009 agreed critical use categories (metric tonnes)

Canada	Pasta (4.74)
Israel	Dates (2.100), flour mills (0.300), broomrape (125.000), cut flowers – bulbs – protected (85.431), cut flowers – open field (34.698), melon – protected and field (87.500), potato (75.000), sweet potatoes (95.000), strawberry runners (Sharon and Gaza) (28.075), strawberry fruit – protected (Sharon and Gaza) (77.750)

Table B. 2009 permitted levels of production and consumption (metric tonnes)

Canada	4.74
Israel	610.554

Table C. 2010 agreed critical use categories (metric tonnes)

Australia	Strawberry runners (29.790), Rice (6.65)
Canada	Mills (22.878), strawberry runners (Prince Edward Island) (7.462)
Japan	Chestnuts (5.400), cucumbers (30.690), ginger - field (53.400), ginger – protected (8.300), melons (81.72), pepper - green and hot (72.99), watermelon (14.500)
United States of America	Commodities (19.242), NPMA food processing structures (cocoa beans removed) (37.778), mills and processors (173.023), dried cured pork (4.465), cucurbits (302.974), eggplant – field (32.820), forest nursery seedlings (117.826), nursery stock – fruit, nut, flower (17.363), orchard replant (215.800), ornamentals (84.617), peppers – field (463.282), strawberries – field (1007.477), strawberry runners (4.690), tomatoes – field (737.584), sweet potato slips (14.515)

Table D. 2010 permitted levels of production and consumption (metric tonnes)

Australia	36.44
Canada	30.34
Japan	267.0
United States of America	2 763.456*

* Minus available stocks.

XX/6: Actions by Parties to reduce methyl bromide use for quarantine and pre-shipment purposes and related emissions

Recognizing that methyl bromide use for quarantine and pre-shipment purposes is an important remaining use of an ozone-depleting substance that is not controlled pursuant to paragraph 6 of Article 2H of the Montreal Protocol and that the 2006 assessment report of the Scientific Assessment Panel indicated that “emissions associated with continued or expanded exemptions, QPS ... may also delay recovery [of the ozone layer]”,⁶

Recalling that Article 7 of the Montreal Protocol requires Parties to report on the annual amount of methyl bromide used for quarantine and pre-shipment applications and that decision XI/13 urges Parties to implement procedures to monitor the uses of methyl bromide by commodity and quantity for quarantine and pre-shipment,

Recalling decision VII/5 urging Parties to refrain from using methyl bromide and to use non-ozone depleting technologies wherever possible and decision XI/13 encouraging Parties to use recovery and recycling technologies where technically and economically feasible until alternatives are available,

Reaffirming the importance of managing and, when economically and technically feasible, replacing quarantine and pre-shipment applications of methyl bromide, as stated in the preamble to decision XVII/15,

Stressing that methyl bromide is a potent ozone-depleting substance and that it and many of its alternatives are hazardous substances that have caused serious human health impacts, notably on workers in ports and warehouses in some Parties,

Recognizing that many Parties have relied on methyl bromide for trade and the conservation of biodiversity and will continue to do so until alternatives become available and accepted for all quarantine and pre-shipment uses,

⁶ *Scientific Assessment of Ozone Depletion: 2006*, p. 21. Available at the website http://ozone.unep.org/Assessment_Panels/SAP/Scientific_Assessment_2006/index.shtml.

Acknowledging the efforts made by Parties to phase out or reduce the use and emissions of methyl bromide for quarantine and pre-shipment purposes whether through adoption of alternatives or the use of recapture technologies,

Acknowledging with appreciation the joint efforts of the Ozone Secretariat and the International Plant Protection Convention in reviewing alternatives to methyl bromide for phytosanitary purposes, particularly under ISPM-15, and the Convention's recommendation encouraging Parties to develop and implement strategies to replace and/or reduce methyl bromide use for phytosanitary applications,

Mindful that the use of methyl bromide for quarantine and pre-shipment purposes is still increasing in some regions of the world,

Recognizing current data gaps and the need for better information to monitor and analyse trends in quarantine and pre-shipment use and further to identify opportunities for reducing global amounts of methyl bromide required for quarantine and pre-shipment applications under the Montreal Protocol,

1. To urge those Parties that have not yet done so to report data on the use of methyl bromide for quarantine and pre-shipment applications, as required under paragraph 3 of Article 7, by April 2009 and to report such data in accordance with existing Protocol requirements and decisions annually thereafter;
2. To request the Ozone Secretariat:
 - (a) To update the definition of pre-shipment in paragraph 5.6 of the Instructions/Guidelines for data reporting to reflect decision XI/12;
 - (b) To post on its website, production and consumption data reported by the Parties under paragraph 3 of Article 7 for methyl bromide used for quarantine and pre-shipment applications;
3. To request the Implementation Committee to consider the reporting of methyl bromide used for quarantine and pre-shipment applications under paragraph 3 of Article 7, in accordance with the Non-Compliance Procedure of the Montreal Protocol;
4. To request the Technology and Economic Assessment Panel, in consultation with the International Plant Protection Convention secretariat, to review all relevant, currently available information on the use of methyl bromide for quarantine and pre-shipment applications and related emissions, to assess trends in the major uses, available alternatives and other mitigation options, and barriers to the adoption of alternatives or determine what additional information or action may be required to meet those objectives; the assessment should consider:
 - (a) A description of the majority of the volumes of methyl bromide used for quarantine and pre-shipment applications, by the major uses and target pests;
 - (b) The technical and economic availability of alternative substances and technologies for the main methyl bromide uses, by volume, and of technologies for methyl bromide recovery, containment and recycling;
 - (c) Quarantine and pre-shipment applications for which no alternatives are available to date and an assessment of why alternatives are not technically or economically feasible or cannot be adopted;
 - (d) Illustrative examples of regulations or other relevant measures that directly affect the use of methyl bromide for quarantine and pre-shipment treatment (including information requested in decision X/11);
 - (e) Other barriers preventing the adoption of alternatives to methyl bromide;
 - (f) Projects demonstrating technically and economically feasible alternatives, including technologies for recapture and destruction of methyl bromide for quarantine and pre-shipment applications;
5. To request the Technology and Economic Assessment Panel to present a draft report based on the analysis of the available information to the Open-ended Working Group at its twenty-ninth meeting, indicating areas where the information is not sufficient, explaining, where appropriate, why the data were inadequate and presenting a practical proposal for how best to gather the information required for a satisfactory analysis;

6. To request the Technology and Economic Assessment Panel to present a final report highlighting areas where sufficient information indicates opportunities for reductions in methyl bromide use or emissions for quarantine and pre-shipment purposes, including a list of available methyl bromide recapture technologies for consideration by the Parties and, where there is insufficient information, a final proposal for further data gathering for the consideration of the Twenty-First Meeting of the Parties;

7. To request the Technology and Economic Assessment Panel, in accordance with its terms of reference, to list categories of use it has identified that have been classified as quarantine and pre-shipment use by some Parties but not by others by the twenty-ninth meeting of the Open-ended Working Group and that those Parties are requested to provide the information on the rationale for doing so to the Technology and Economic Assessment Panel in time for inclusion in its final report to the Twenty-First Meeting of the Parties

8. To request the Ozone Secretariat, in cooperation with the Technology and Economic Assessment Panel, the International Plant Protection Convention secretariat and other relevant bodies, to organize in the margins of the Twenty-First Meeting of the Parties a workshop to discuss the report of the assessment referred to in paragraph 4 of the present decision and other relevant inputs with a view to determining possible further actions;

9. To request the Ozone Secretariat to strengthen cooperation and coordination with the International Plant Protection Convention secretariat in accordance with decisions XVII/15 and XVIII/14;

10. To encourage Parties in accordance with the recommendations of the third meeting of the Commission on Phytosanitary Measures under the International Plant Protection Convention to put in place a national strategy that describes actions that will help them to reduce the use of methyl bromide for phytosanitary measures and/or reduce emissions of methyl bromide and make such strategies available to other Parties through the Ozone Secretariat, where possible before the Twenty-First Meeting of the Parties; the strategy may include the following areas for action:

- (a) Replacing methyl bromide use;
- (b) Reducing methyl bromide use;
- (c) Physically reducing methyl bromide emissions;
- (d) Accurately recording methyl bromide use for phytosanitary measures.

XX/7: Environmentally sound management of banks of ozone-depleting substances

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;

(f) Consideration of the positive and negative impacts of recovery and destruction of ozone-depleting substances, including direct and indirect climate effects;

(g) 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;

XX/8: Workshop for a dialogue on high-global warming potential alternatives for ozone-depleting substances

Noting that the transition from, and phase-out of, ozone-depleting substances has implications for climate system protection,

Recognizing that decision XIX/6 encourages Parties to promote the selection of alternatives to hydrochlorofluorocarbons to minimize environmental impacts, in particular impacts on climate,

Recognizing also that there is scope for coordination between the Montreal Protocol and the United Nations Framework Convention on Climate Change and its Kyoto Protocol for reducing emissions and minimizing environmental impacts from hydrofluorocarbons, and that Montreal Protocol Parties and associated bodies have considerable expertise in these areas which they could share,

Recognizing further that there is a need for more information on the environmental implications of possible transitions from ozone-depleting substances to high-global warming potential chemicals, in particular hydrofluorocarbons,

1. To request the Technology and Economic Assessment Panel to update the data contained within the Panel's 2005 *Supplement to the IPCC/TEAP Special Report*⁷ and to report on the status of alternatives to hydrochlorofluorocarbons and hydrofluorocarbons, including a description of the various use patterns, costs, and potential market penetration of alternatives no later than 15 May 2009;

⁷ Available at the website http://ozone.unep.org/Assessment_Panels/TEAP/Reports/TEAP_Reports/teap-supplement-ippc-teap-report-nov2005.pdf.

2. To request the Ozone Secretariat to prepare a report that compiles current control measures, limits and information reporting requirements for compounds that are alternatives to ozone-depleting substances and that are addressed under international agreements relevant to climate change;

3. To request the Ozone Secretariat with input, where appropriate, from the secretariat of the United Nations Framework Convention on Climate Change and its Kyoto Protocol to convene an open-ended dialogue on high-global warming potential alternatives for ozone-depleting substances among Parties, including participation by the assessment panels and the Multilateral Fund Secretariat, and inviting the Fund's implementing agencies, other relevant multilateral environmental agreement secretariats and non-governmental organizations to discuss technical and policy issues related to alternatives for ozone-depleting substances, with a particular focus on exchanging views of the best ways of how the experience from the Montreal Protocol can be used to address the impact of hydrofluorocarbons, and also with a view to maximizing the ozone and climate benefits of the hydrochlorofluorocarbon early phase-out under the Montreal Protocol;

4. To encourage Parties to include their climate experts as participants in the workshop;

5. That the above-mentioned dialogue on high-global warming potential alternatives to ozone-depleting substances should be held just before 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;

6. To request the co-chairs of the workshop, in cooperation with the Ozone Secretariat, to prepare a summary report of the discussions that take place during the dialogue and to report on the proceedings to the Open-ended Working Group at its twenty-ninth meeting;

7. To invite one representative of a Party operating under paragraph 1 of Article 5 and one representative of a Party not so operating to serve as co-chairs of the workshop;

8. 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 and to encourage that secretariat to make the decision available at the fourteenth meeting of the Conference of the Parties to that Convention for possible consideration of participation in the workshop;

XX/9: Application of the Montreal Protocol's trade provisions to hydrochlorofluorocarbons

Recalling decision XV/3, which clarifies the definition of States not party to the Montreal Protocol for the purposes of obligations of Parties to the Copenhagen and Beijing Amendments to the Montreal Protocol in respect of control measures on hydrochlorofluorocarbons,

Noting decision XIX/6, by which the Parties agreed to accelerate the phase-out of hydrochlorofluorocarbons, including the establishment of the new freeze date of 1 January 2013 for Parties operating under paragraph 1 of Article 5,

Acknowledging that the accelerated phase-out of hydrochlorofluorocarbons as determined by decision XIX/6 brings forward control measures for hydrochlorofluorocarbons for Parties operating under paragraph 1 of Article 5 of the Protocol from 2016 to 2013,

1. To annul paragraph 1 (a) of decision XV/3, which reads

the term "State not party to this Protocol" in Article 4, paragraph 9 does not apply to those States operating under Article 5, paragraph 1, of the Protocol until January 1, 2016 when, in accordance with the Copenhagen and Beijing Amendments, hydrochlorofluorocarbon production and consumption control measures will be in effect for States that operate under Article 5, paragraph 1, of the Protocol;

and replace it with:

the term "State not party to this Protocol" in Article 4, paragraph 9, does not apply to those States operating under Article 5, paragraph 1, of the Protocol until 1 January 2013 when, in accordance with the Copenhagen and Beijing

Amendments, hydrochlorofluorocarbon production and consumption control measures will be in effect for States that operate under Article 5, paragraph 1, of the Protocol;

XX/10: 2009–2011 replenishment of the Multilateral Fund

1. To adopt a budget for the Multilateral Fund for the Implementation of the Montreal Protocol for 2009–2011 of \$490,000,000 on the understanding that \$73,900,000 of that budget will be provided from anticipated contributions due to the Multilateral Fund and other sources for the 2006–2008 triennium, and that \$16,100,000 will be provided from interest accruing to the Fund during the 2009–2011 triennium. The Parties note that outstanding contributions from some Parties with economies in transition in the period 2006–2008 stand at \$5,604,438;

2. To adopt the scale of contributions for the Multilateral Fund based on a replenishment of \$133,333,334 for 2009, \$133,333,333 for 2010, and \$133,333,333 for 2011 as it appears in annex III to the report of the eighth meeting of the Conference of the Parties to the Vienna Convention for the Protection of the Ozone Layer and the Twentieth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer;⁸

3. That the Executive Committee should take action to ensure, as far as possible, that the whole of the budget for 2009–2011 is committed by the end of 2011, and that Parties not operating under paragraph 1 of Article 5 should make timely payments in accordance with paragraph 7 of decision XI/6;

XX/11: Extension of the fixed-exchange-rate mechanism to the 2009–2011 replenishment of the Multilateral Fund

1. To direct the Treasurer to extend the fixed-exchange-rate mechanism to the period 2009–2011;

2. That Parties choosing to pay their contributions to the Multilateral Fund for the Implementation of the Montreal Protocol in national currencies will calculate their contributions based on the average United Nations exchange rate for the six-month period commencing 1 January 2008;

3. That, subject to paragraph 4 below, Parties not choosing to pay in national currencies pursuant to the fixed-exchange-rate mechanism will continue to pay in United States dollars;

4. That no Party should change the currency selected for its contribution in the course of the triennium 2009–2011;

5. That only Parties with inflation rate fluctuations of less than 10 per cent, as per published figures of the International Monetary Fund, for the preceding triennium will be eligible to use the fixed-exchange-rate mechanism;

6. To urge Parties to pay their contributions to the Multilateral Fund in full and as early as possible in accordance with paragraph 7 of decision XI/6;

7. To agree that if the fixed-exchange-rate mechanism is to be used for the replenishment period 2012–2014 Parties choosing to pay their contributions in national currencies will calculate their contributions based on the average United Nations exchange rate for the six-month period commencing 1 January 2011;

XX/12: Data and information provided by the Parties in accordance with Article 7 of the Montreal Protocol

1. To note with appreciation that 189 Parties out of the 191 which should have reported data for 2007 have now done so and that 75 of those Parties reported their data by 30 June 2008 in conformity with decision XV/15;

2. To note, however, that the following Parties have to date not reported data for 2007: Solomon Islands and Tonga;

3. To note that their non-reporting of data places the Parties named above in non-compliance with their data-reporting obligations under the Montreal Protocol until such time as the Secretariat receives their outstanding data;

4. To urge those Parties, where appropriate, to work closely with the implementing agencies to report the required data to the Secretariat as a matter of urgency and to request the Implementation Committee to review the situation of those Parties at its next meeting;

5. To note that a lack of timely data reporting by Parties impedes effective monitoring and assessment of Parties' compliance with their obligations under the Montreal Protocol by the Implementation Committee and the Meeting of the Parties;

6. To note further that reporting data by 30 June each year greatly facilitates the work of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol in assisting Parties operating under paragraph 1 of Article 5 to comply with the control measures of the Montreal Protocol;

7. To encourage Parties to continue to report consumption and production data as soon as figures are available, and preferably by 30 June each year, as agreed in decision XV/15;

XX/13: Reports of Parties submitted under Article 9 of the Montreal Protocol

1. To note with appreciation the reports submitted in 2007 and 2008 by the following 18 Parties in accordance with Article 9 of the Montreal Protocol: Argentina, Belize, Bosnia and Herzegovina, Costa Rica, Cyprus, Latvia, Lebanon, Lithuania, Mexico, Namibia, Norway, Oman, Spain, Sri Lanka, Sweden, Thailand, Uganda and Zambia;

2. To recall that paragraph 3 of Article 9 states that, every two years after entry into force of the Montreal Protocol, which entered into force in 1989, each Party shall submit to the Secretariat a summary of activities that it has conducted pursuant to that Article and that relevant activities include promotion of research and development, information exchange on technologies for reducing emissions of ozone-depleting substances, alternatives to the use of controlled substances and the costs and benefits of relevant control strategies and raising awareness of the environmental effects of emissions of controlled and other substances that deplete the ozone layer;

3. To recognize that information relevant to the reporting obligation under paragraph 3 of Article 9 may be generated through cooperative efforts undertaken in the context of regional ozone networks, activities by ozone research managers under Article 3 of the Vienna Convention for the Protection of the Ozone Layer, participation by Parties in the assessment work of both the Technology and Economic Assessment Panel and the Scientific Assessment Panel under Article 6 of the Montreal Protocol and national public awareness-raising initiatives;

4. To note that the reporting under paragraph 3 of Article 9 of the Protocol can be undertaken through electronic means;

5. To request the Secretariat to share the information reported under paragraph 3 of Article 9 of the Protocol with other Parties through the Secretariat's website;

XX/14: Report on the establishment of licensing systems under Article 4B of the Montreal Protocol

Noting that paragraph 3 of Article 4B of the Montreal Protocol requires each Party, within three months of the date of introducing its system for licensing the import and export of new, used, recycled and reclaimed controlled substances in Annexes A, B, C and E of the Protocol, to report to the Secretariat on the establishment and operation of that system,

Noting with appreciation that 159 Parties to the Montreal Amendment to the Protocol have established import and export licensing systems for ozone-depleting substances as required under the terms of the amendment,

Noting also with appreciation that 18 Parties to the Protocol that have not yet ratified the Montreal Amendment have also established import and export licensing systems for ozone-depleting substances,

Recognizing that licensing systems provide for the monitoring of imports and exports of ozone-depleting substances, prevent illegal trade and enable data collection,

1. To encourage all remaining Parties to the Protocol that have not yet ratified the Montreal Amendment to ratify it and to establish import and export licensing systems for ozone-depleting substances if they have not yet done so;

2. To urge all Parties that already operate licensing systems for ozone-depleting substances to ensure that they are structured in accordance with Article 4B of the Protocol and that they are implemented and enforced effectively;

3. To review periodically the status of the establishment of import and export licensing systems for ozone-depleting substances by all Parties to the Protocol, as called for in Article 4B of the Protocol;

XX/15: Difficulties faced by Iraq as a new Party

Noting with appreciation Iraq's joining the international community in its efforts to preserve the ozone layer, which came into effect with the recent accession of Iraq as a Party to the Vienna Convention, the Montreal Protocol and all its amendments,

Recognizing also the difficulties faced by Iraq by joining the Vienna Convention and the Montreal Protocol and all its amendments shortly before key phase-out dates,

Recognizing the security situation and the political, economic and social difficulties faced by Iraq over the last two decades,

Understanding Iraq's commitments for phasing out ozone-depleting substances under the Montreal Protocol and its amendments within a limited time frame,

1. To urge all Parties to assist Iraq, as a new Party, in controlling the export of ozone-depleting substances and ozone-depleting substance-based technologies into Iraq through the control of trade as per the provisions of the Montreal Protocol and relevant decisions of the Meeting of the Parties and to encourage Iraq to participate in an informal prior informed consent process as referred to in decision XIX/12;

2. To request the Executive Committee when considering project proposals for Iraq to phase out ozone-depleting substances to take into account the special situation of this new Party, which may face difficulties in the phase out of ozone-depleting substances in annexes A and B, and to be flexible in considering the project proposals, without prejudice to the possible review of the non-compliance situation of Iraq by the Parties;

3. To request the implementing agencies to provide appropriate assistance to Iraq in developing its country programme and national phase-out plans and in continuing its efforts to report to the Secretariat, as soon as possible, data on consumption of ozone-depleting substances in accordance with the Montreal Protocol requirements;

4. To request the Implementation Committee to report on the compliance situation of Iraq to the Open-ended Working Group preceding the Twenty-Third Meeting of the Parties, during which the present decision will be reconsidered;

XX/16: Non-compliance with the Montreal Protocol by Ecuador

Noting that Ecuador ratified the Montreal Protocol on 30 April 1990, the London Amendment on 23 February 1993, the Copenhagen Amendment on 24 November 1993 and the Montreal Amendment on 16 February 2007, is classified as a Party operating under paragraph 1 of Article 5 of the Protocol and had its country programme approved by the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol in February 1992,

Noting also that the Executive Committee has approved \$6,352,995 from the Multilateral Fund to enable Ecuador's compliance with the Protocol in accordance with Article 10 of the Protocol,

Noting further that Ecuador has reported annual consumption of the controlled substances in Annex E (methyl bromide) for 2007 of 122.4 ODP tonnes, which exceeds the Party's maximum allowable consumption of 53.0 ODP tonnes for the controlled substance for that year, and that Ecuador is therefore in non-compliance with the control measures for methyl bromide under the Protocol for methyl bromide in 2007,

1. To record with appreciation Ecuador's submission of a plan of action to ensure its prompt return to compliance with the Protocol's methyl bromide control measures under which, without prejudice to the operation of the financial mechanism of the Protocol, Ecuador specifically commits itself:

- (a) To reducing methyl bromide consumption to no greater than:
 - (i) 52.8 ODP tonnes in 2008 and in each subsequent calendar year until 2014;
 - (ii) Zero ODP tonnes in 2015, save for critical uses that may be authorized by the Parties;

(b) To monitoring its import and export licensing system for ozone-depleting substances;

2. To urge Ecuador to work with the relevant implementing agencies to implement its plan of action to phase out consumption of methyl bromide;

3. To monitor closely the progress of Ecuador with regard to the implementation of its plan of action and the phase-out of methyl bromide. To the degree that the Party is working toward and meeting the specific Protocol control measures, it should continue to be treated in the same manner as a Party in good standing. In that regard, Ecuador should continue to receive international assistance to enable it to meet those commitments in accordance with item A of the indicative list of measures that may be taken by a Meeting of the Parties in respect of non-compliance;

4. To caution Ecuador in accordance with item B of the indicative list of measures that may be taken by a Meeting of the Parties in respect of non-compliance that, in the event that it fails to remain in compliance, the Parties will consider measures consistent with item C of the indicative list of measures. Those measures may include the possibility of actions available under Article 4, such as ensuring that the supply of the methyl bromide that is the subject of non-compliance is ceased so that exporting Parties are not contributing to a continuing situation of non-compliance;

XX/17: Request for change in baseline data by Saudi Arabia

Noting that Saudi Arabia has submitted a request to revise its consumption data for the Annex E controlled substance (methyl bromide) for the baseline years 1995–1998 from 0.7 to 204.1 ODP tonnes,

Noting also that decision XV/19 of the Fifteenth Meeting of the Parties sets out the methodology for the submission and review of requests to revise baseline data,

Noting with appreciation the extensive efforts undertaken by Saudi Arabia to fulfil the information requirements of decision XV/19, in particular its efforts to verify the accuracy of its proposed new baseline data through a national survey of methyl bromide use carried out with the assistance of the United Nations Industrial Development Organization and the United Nations Environment Programme with funding from the Multilateral Fund for the Implementation of the Montreal Protocol,

1. That Saudi Arabia has presented sufficient information, in accordance with decision XV/19, to justify its request to change its baseline consumption data for methyl bromide;

2. To change the baseline consumption data of Saudi Arabia for methyl bromide for the years 1995–1998 from 0.7 to 204.1 ODP tonnes based on the average calculated level of consumption for the following four years: 1995 – 161.8 ODP tonnes; 1996 – 222.5 ODP tonnes; 1997 – 210.4 ODP tonnes; 1998 – 221.7 ODP tonnes.

XX/18: Potential non-compliance in 2006 with the provisions of the Montreal Protocol in respect of consumption of the controlled substances in Annex A,

group I, (chlorofluorocarbons) by Solomon Islands and request for a plan of action and data for the year 2007

Noting that Solomon Islands ratified the Montreal Protocol on 17 June 1993, the London Amendment on 17 August 1999 and the Copenhagen Amendment on 17 August 1999, is classified as a Party operating under paragraph 1 of Article 5 of the Protocol and had its country programme approved by the Executive Committee in March 2002,

Noting that the Executive Committee has approved \$119,233 from the Multilateral Fund to enable Solomon Islands' compliance in accordance with Article 10 of the Protocol,

Noting further that Solomon Islands has reported annual consumption for the controlled substance in Annex A, group I (chlorofluorocarbons), for 2006 of 1.4 ODP tonnes, which exceeds the Party's maximum allowable consumption level of 1.1 ODP tonnes for that controlled substance for that year and that in the absence of further clarification Solomon Islands is therefore presumed to be in non-compliance with the control measures under the Protocol,

Noting also that Solomon Islands has still not reported its ozone-depleting substances data for 2007 in accordance with Article 7 of the Protocol, thereby placing the Party in non-compliance with its data-reporting obligations under the Montreal Protocol,

1. To request Solomon Islands to submit to the Secretariat, as a matter of urgency and no later than 31 March 2009, for consideration by the Implementation Committee at its next meeting, an explanation for its excess consumption in 2006, together with a plan of action with time-specific benchmarks to ensure the Party's prompt return to compliance;

2. To request Solomon Islands further to report the outstanding data for 2007 as a matter of urgency, and preferably no later than 31 March 2009, in time for consideration by the Implementation Committee at its forty-second meeting;

3. To monitor closely the progress of Solomon Islands with regard to the phase-out of chlorofluorocarbons. To the degree that the Party is working toward and meeting the specific Protocol control measures, it should continue to be treated in the same manner as a Party in good standing. In that regard, Solomon Islands should continue to receive international assistance to enable it to meet its commitments in accordance with item A of the indicative list of measures that may be taken by a Meeting of the Parties in respect of non-compliance;

4. To caution Solomon Islands, in accordance with item B of the indicative list of measures, that in the event that it fails to return to compliance in a timely manner the Meeting of the Parties will consider measures consistent with item C of the indicative list of measures. Those measures may include the possibility of actions available under Article 4, such as ensuring that the supply of the chlorofluorocarbons that is the subject of non-compliance is ceased so that exporting Parties are not contributing to a continuing situation of non-compliance;

XX/19: Non-compliance with the provisions of the Montreal Protocol in respect of consumption of the controlled substances in Annex A, groups I (chlorofluorocarbons) and II (halons) by Somalia

Noting that Somalia ratified the Montreal Protocol and its London, Copenhagen, Montreal and Beijing Amendments on 1 August 2001 and is classified as a Party operating under paragraph 1 of Article 5 of the Protocol,

Noting that Somalia has no country programme that has been approved by the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol,

Acknowledging the serious challenges faced by Somalia in implementing its obligations under the Montreal Protocol and also acknowledging the progress made by the Party in spite of those challenges,

Noting that Somalia has reported annual consumption for the controlled substances in Annex A, group I (chlorofluorocarbons), for the year 2007 of 79.5 ODP tonnes, which exceeds the Party's maximum allowable consumption level of 36.2 ODP tonnes for those controlled substances for that year, and that in the absence of further clarification Somalia is therefore presumed to be in non-compliance with the control measures under the Protocol,

Noting that Somalia reported annual consumption for the controlled substances in Annex A, group-II (halons), for 2006 of 18.8 ODP tonnes and 13.2 ODP tonnes for 2007, which

exceeds the Party's maximum allowable consumption of 8.8 ODP tonnes for those controlled substances for those years and that Somalia was therefore in non-compliance with the control measures for halons under the Protocol,

1. To note with appreciation Somalia's submission of a plan of action to ensure its prompt return to compliance with the Protocol's halon control measures under which, without prejudice to the operation of the financial mechanism of the Protocol, Somalia specifically commits itself:

(a) To reducing halon consumption to no greater than:

- (i) 9.4 ODP tonnes in 2008;
- (ii) 9.4 ODP tonnes in 2009;
- (iii) Zero ODP tonnes in 2010, save for essential uses that may be authorized by the Parties;

(b) To introducing a system for licensing the imports and exports of ozone-depleting substances, including import quotas, by the end of December 2009;

2. To request Somalia to submit to the Secretariat, as a matter of urgency and no later than 31 March 2009, for consideration by the Implementation Committee at its next meeting, a plan of action with time-specific benchmarks to ensure the Party's prompt return to compliance with its consumption of chloroflourocarbons;

3. To urge Somalia to work with the relevant implementing agencies to implement its plan of action to phase out consumption of halons and implementation of its licensing system and to participate in regional network activities;

4. To request the Executive Committee, without prejudice to the operation of the financial mechanism, to consider innovative ways of assisting the Party, through the implementing agencies of the Multilateral Fund, to implement its plan of action to phase out halons and to implement its licensing system, including, but not limited to, awareness-raising, institutional strengthening and technical assistance;

5. To monitor closely the progress of Somalia with regard to the implementation of its plan of action to phase-out halons and the implementation of its licensing system;

6. To monitor closely the progress of Somalia with regard to the phase-out of halons. To the degree that the Party is working toward and meeting the specific Protocol control measures, it should continue to be treated in the same manner as a Party in good standing. In that regard, Somalia should continue to receive international assistance to enable it to meet those commitments in accordance with item A of the indicative list of measures that may be taken by a Meeting of the Parties in respect of non-compliance;

7. To caution Somalia in accordance with item B of the indicative list of measures that may be taken by a Meeting of the Parties in respect of non-compliance that, in the event that it fails to remain in compliance, the Parties will consider measures consistent with item C of the indicative list of measures. Those measures may include the possibility of actions available under Article 4 such as ensuring that the supply of halons that are the subject of non-compliance is ceased so that exporting Parties are not contributing to a continuing situation of non-compliance;

XX/20: Montreal Protocol financial matters: financial reports and budgets

Recalling decision XIX/5 on financial matters,

Recognizing that voluntary contributions are an essential complement for the effective implementation of the Montreal Protocol,

Welcoming the continued excellent management by the Secretariat of the finances of the Trust Fund for the Montreal Protocol on Substances that Deplete the Ozone Layer,

1. To take note with appreciation of the financial statement of the Trust Fund for the biennium 2006–2007 ended 31 December 2007 and the report by the Secretariat on the actual expenditures for 2007 as compared to the approvals for that year;⁹

⁹ UNEP/OzL.Pro.20/4/Add.1.

2. To approve the revised 2008 budget for the Trust Fund in the amount of \$4,679,658, and the 2009 budget in the amount of \$5,258,828 and to take note of the proposed budget of \$4,843,983 for 2010, as set out in annex IV to the report of the eighth meeting of the Conference of the Parties to the Vienna Convention on the Protection of the Ozone Layer and the Twentieth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer;¹⁰

3. To authorize the Secretariat to draw down \$981,895 in 2009 and note the proposed drawdown of \$567,050 in 2010;

4. To approve, as a consequence of the draw-downs referred to in paragraph 3 above, total contributions to be paid by the Parties of \$4,276,933 for 2009 and to note the contributions of \$4,276,933 for 2010, as set out in annex IV to the report of the Twentieth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer;

5. Also to approve that the contributions of individual Parties for 2009 shall be listed in annex V to the report of the eighth meeting of the Conference of the Parties to the Vienna Convention on the Protection of the Ozone Layer and the Twentieth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer;

6. To authorize the Secretariat to maintain a constant operating cash reserve at 15 per cent of the estimated annual planned expenditures that will be used to meet the final expenditures under the Trust Fund;

7. To express its concern over delays in payment of agreed contributions by Parties, contrary to the provisions in paragraphs 3 and 4 of the terms of reference for the administration of the Trust Fund for the Montreal Protocol on Substances that Deplete the Ozone Layer;

8. To urge all Parties to pay their contributions promptly and in full and further to urge Parties that have not done so to pay their contributions for prior years as soon as possible;

9. To encourage Parties, non-Parties, and other stakeholders to contribute financially and with other means to assist members of the three assessment panels and their subsidiary bodies with their continued participation in the assessment activities under the Protocol;

10. To invite Parties to notify the Secretariat of the Montreal Protocol of all contributions made to the Trust Fund at the time such payments are made;

11. To request the Executive Secretary, in accordance with rule 14 of the rules of procedure, to provide Parties with an indication of the financial implications of draft decisions which cannot be met from existing resources within the budget of the Trust Fund;

12. To request the Secretariat of the Montreal Protocol to ensure the implementation of Secretariat-related decisions adopted by the Meeting of the Parties as approved, within the budgets and the availability of financial resources in the Trust Fund;

13. To request the Secretariat to inform the Open-ended Working Group of the Parties to the Montreal Protocol on all sources of income received, including the reserve and fund balance and interest, as well as actual and projected expenditures and commitments, and to request the Executive Secretary to provide an indicative report on all expenditures against budget lines;

14. To request the Open-ended Working Group to keep under review the financial information provided by the Secretariat, including the timeliness and transparency of that information;

15. To request the Executive Director of the United Nations Environment Programme to extend the Trust Fund until 31 December 2015;¹¹

XX/21: Membership of the Implementation Committee

1. To note with appreciation the work done by the Implementation Committee under the Non-compliance Procedure for the Montreal Protocol in 2008;

¹⁰ UNEP/OzL.Conv.8/7-UNEP/OzL.Pro.20/9.

¹¹ Budget tables are set out in section B of the annex to the present compilation.

2. To confirm the positions of Jordan, Mauritius, Mexico, New Zealand and the Russian Federation as members of the Committee for one further year and to select Armenia, Germany, Nicaragua, Niger and Sri Lanka as members of the Committee for a two-year period commencing 1 January 2009;

3. To note the selection of Ms. Robyn Washbourne (New Zealand) to serve as President and of Mr. Ghazi Faleh Odat (Jordan) to serve as Vice-President and Rapporteur of the Committee for one year commencing 1 January 2009;

XX/22: Membership of the Executive Committee of the Multilateral Fund

1. To note with appreciation the work done by the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol with the assistance of the Fund secretariat in 2008;

2. To endorse the selection of Australia, Belgium, Germany, Japan, Romania, Sweden and the United States of America as members of the Executive Committee representing Parties not operating under paragraph 1 of Article 5 of the Protocol and the selection of Bolivia, China, Dominican Republic, Gabon, Georgia, Namibia and Yemen as members representing Parties operating under that paragraph, for one year commencing 1 January 2009;

3. To note the selection of Mr. Husamuddin Ahmadzai (Sweden) to serve as Chair and Mr. Juan Tomas Filpo (Dominican Republic) to serve as Vice-Chair of the Executive Committee for one year commencing 1 January 2009;

XX/23: Co-Chairs of the Open-ended Working Group of the Parties to the Montreal Protocol

To endorse the selection of Mr. Martin Sirois (Canada) and Mr. Muhammad Maqsood Akhtar (Pakistan) as Co-Chairs of the Open-ended Working Group of the Parties to the Montreal Protocol in 2009;

XX/24: Endorsement of new co-chair of the Technical Options Committee of the Technology and Economic Assessment Panel

1. To endorse the selection of Mr. Sergey Kopylov (Russian Federation) as the new Co-Chair of the Halons Technical Options Committee;

XX/25: Twenty-First Meeting of the Parties to the Montreal Protocol

To convene the Twenty-First Meeting of the Parties to the Montreal Protocol in Sharm el Sheikh, Egypt, and to announce a firm date for the meeting as soon as possible;

XX/26: Adoption of the Doha Declaration

To adopt the Doha Declaration, as set out in annex VI to the report of the eighth meeting of the Conference of the Parties to the Vienna Convention for the Protection of the Ozone Layer and the Twentieth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer.¹²

B. Comments made at the time of adoption of the decisions

195. Several representatives made comments in connection with the adoption of the decisions. The representative of Germany noted that under German law all international financial commitments were subject to approval by the Budget Committee of the German Parliament. His agreement to adoption of the decision on replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol was therefore subject to approval from that committee. He expected, however, that approval would be forthcoming shortly.

¹² UNEP/OzL.Conv.8/7-UNEP/OzL.Pro.20/9.

196. While expressing satisfaction with the decision on the environmentally sound management of banks of ozone-depleting substances, the representative of the European Community said that the concept of net global warming potential was scientifically vague and should not set a precedent for future decisions.

197. The representative of the European Community noted with satisfaction that, after a long process, the phase-out of CFCs for metered-dose inhalers in non-Article 5 Parties was close to being achieved and confirmed that the European Community would phase out production of CFCs for that purpose by 1 January 2010. She expressed the hope that the United States of America would not submit an essential use nomination for 2011. The representative of the United States clarified that his country had made significant progress and had recently established an end date for one active ingredient for CFC-based metered-dose inhalers, epinephrine, but he stressed that that was not the only active ingredient on the United States market and that his country might seek an exemption for 2011.

198. Two representatives of Article 5 Parties observed that the Doha Declaration represented an important milestone in the history of the Montreal Protocol.

199. The representative of the United Republic of Tanzania, speaking on behalf of the group of African countries, noted that Article 5 Parties faced significant challenges in phasing out ozone-depleting substances, including a severe lack of financial and technological capacity – challenges that had been magnified by the acceleration of the phase-out of HCFCs which the Parties had agreed in 2007. She noted further that the Montreal Protocol was one of the most important multilateral environmental agreements encouraging the transfer of environmentally sensitive technology to developing countries and needed to be supported. They were, however, concerned about the level of funding allocated for the institutional strengthening projects and compliance assistance programmes for the next triennium 2009–2011, which represented the major support areas from the Multilateral Fund in promoting compliance with the Montreal Protocol by Article 5 Parties. She said that reinforcement of those programmes should be given high priority in the replenished Multilateral Fund to enhance capacity-building. She called upon non-Article 5 Parties to accelerate their phase-out of ozone-depleting substances currently covered by essential- and critical-use exemptions by adopting suitable and effective environmentally friendly alternatives. The African group remained dedicated to the aims of the Montreal Protocol and fully committed to meeting their obligations. With the joint efforts of all Parties behind it, the Protocol could look forward to another twenty years of success.

XI. Adoption of the report of the eighth meeting of the Conference of the Parties to the Vienna Convention and the Twentieth Meeting of the Parties to the Montreal Protocol

200. The present report was adopted on Thursday, 20 November 2008, on the basis of the draft report submitted to the Parties.

XI. Closure of the meeting

201. Following the customary exchange of courtesies, the President declared the meeting closed at 7.30 p.m. on Thursday, 20 November 2008.

Annex I

Trust Fund for the Vienna Convention for the Protection of the Ozone Layer

Revised 2008 and approved 2009, 2010 and 2011 budgets

			w/m	2008 (US\$)	w/m	2009 (US\$)	w/m	2010 (US\$)	w/m	2011 (US\$)
10	PROJECT PERSONNEL COMPONENT									
	<i>1100 Project personnel</i>									
	1101	Executive Secretary (D-2) (shared with the Montreal Protocol, MP)	6	132 227	6	135 664	6	139 192	6	142 811
	1104	Scientific Affairs Officer (P-5) (shared with MP)	6	99 000	6	101 574	6	104 215	6	106 925
	1105	Administrative Officer (P-5) (paid by UNEP)		0		0		0		0
	1107	Programme Officer (Communication and Information) (P3)	12	122 500	12	125 685	12	128 953	12	132 306
1199	Subtotal			353 727		362 923		372 360		382 042
	<i>1300 Administrative Support</i>									
	1301	Administrative Assistant (G-7) (Shared with MP)	6	20 000	6	21 250	6	22 631	6	23 220
	1303	Programme Assistant (G-6)	12	21 100		22 472		23 932		25 488
	1304	Programme Assistant (G-6) (shared with MP)	6	16 500	6	17 573	6	18 715	6	19 931
	1305	Information Assistant (G-6) (Shared with MP)	6	15 300	6	16 295	6	17 354	6	18 482
	1310	Bilingual Senior Secretary (G-6)	12	21 000	12	22 365	12	23 819	12	25 367
	1322	Preparatory and Parties meeting (shared with MP every 3 years, it applies to 2008 and 2011)		210 000		0		0		210 000
	1324	Meetings of the Bureau		20 000		0		0		20 000
	1326	Promotion activities for the protection of the Ozone Layer		10 000		10 000		10 000		10 000
	1327	Meeting of the Ozone Research Managers		31 950		0		0		34 027
1399	Subtotal			365 850		109 955		116 451		386 515
	<i>1600 Travel on Official Business</i>									

		w/m	2008 (US\$)	w/m	2009 (US\$)	w/m	2010 (US\$)	w/m	2011 (US\$)
	1601		30 000		30 000		30 000		30 000
	1699	Subtotal	30 000		30 000		30 000		30 000
1999	COMPONENT TOTAL		749 577		502 878		518 811		798 557
	3300	<i>Participation Costs of Developing Countries</i>							
	3302	Preparatory and Parties meetings	0		0		0		0
	3304	Bureau meetings	20 000		0		0		20 000
	3307	Meeting of Ozone Research Managers	175 000		0		0		175 000
	3399	Subtotal	195 000		0		0		195 000
3999	COMPONENT TOTAL		195 000		0		0		195 000
40	EQUIPMENT AND PREMISES COMPONENT								
	4100	<i>Expendable Equipment (items under \$1,500)</i>							
	4101	Miscellaneous expendables (shared with MP)	9 000		9 000		9 000		9 000
	4199	Sub-total	9 000		9 000		9 000		9 000
	4200	<i>Non-Expendable Equipment</i>							
	4201	Personal computers and accessories	0		2 500		2 500		0
	4202	Portable computers	5 000		5 000		5 000		5 000
	4203	Other office equipment (server, fax, scanner, furniture, etc.)	5 000		5 000		5 000		5 000
	4204	Photocopiers	0		10 000		10 000		0
	4299	Sub-total	10 000		22 500		22 500		10 000
	4300	<i>Premises</i>							
	4301	Rental of office premises (shared with MP)	17 500		17 500		17 500		17 500
	4399	Subtotal	17 500		17 500		17 500		17 500
4999	COMPONENT TOTAL		36 500		49 000		49 000		36 500
50	MISCELLANEOUS COMPONENT								
	5100	<i>Operation and Maintenance of Equipment</i>							
	5101	Maintenance of equipment and others (shared with MP)	10 000		10 000		10 000		10 000
	5199	Sub-total	10 000		10 000		10 000		10 000
	5200	<i>Reporting Costs</i>							
	5201	Reporting	7 500		7 500		7 500		7 500

		w/m	2008 (US\$)	w/m	2009 (US\$)	w/m	2010 (US\$)	w/m	2011 (US\$)
	Reporting (Ozone Research Managers meeting report)		15 000		0		0		15 000
5202									
5299	Subtotal		22 500		7 500		7 500		22 500
5300	<i>Sundry</i>								
5301	Communications		25 000		25 000		25 000		25 000
5302	Freight charges (documents)		20 000		20 000		20 000		20 000
5304	Others (Ozone layer protection public awareness campaign)		5 000		5 000		5 000		5 000
5399	Subtotal		50 000		50 000		50 000		50 000
5400	<i>Hospitality</i>								
5401	Hospitality		10 000		0		0		10 000
5499	Sub-total		10 000		0		0		10 000
5999	COMPONENT TOTAL		92,500		67 500		67 500		92 500
99	TOTAL DIRECT PROJECT COST		1,073,577		619 378		635 311		1 122 557
	Programme support costs (13%)		139,565		80 519		82 590		145 932
	GRAND TOTAL (inclusive of programme support costs)		1,213,142		699 897		717 901		1 268 489
	Draw down from Trust Fund balance*		609,288		96 897		114 901		665 489
	Contribution to be paid by the Parties		603,000		603 000		603 000		603 000

* The contribution of the Parties for 2008 is set at 603,000 in accordance with paragraph 5 of decision VII/3. The draw down levels in 2008, 2009, 2010 and 2011 have been set with a view to maintaining the level of Parties' contributions constant through to 2011.

Explanatory notes for the revised 2008 and approved 2009, 2010 and 2011 budgets of the Trust Fund for the Vienna Convention for the Protection of the Ozone Layer

Budget line	Comment
Personnel component	Indicative professional salary costs applicable to the Nairobi duty station for 2008–2009 and 2010–2011 have been used for the budget proposals. Where information on actual staff costs is available, however, the figures have been adjusted accordingly. Unspent commitments normally revert to the Trust Fund for the Montreal Protocol.
1101, 1104 and 1107	A minimal adjustment has been made to budget lines 1101, 1104 and 1107 to cover changes in salaries and entitlements of staff in the Professional category and above.
1105	The post of Administrative Officer continues to be paid from the 13 per cent programme support costs based on actual expenditures.
Administrative support/personnel 1301–1310	Standard General Service salary costs applicable to the Nairobi duty station have been used for the 2008, 2009, 2010 and 2011 budget proposals. The salary levels for 2008 have been revised to reflect an increase in General Service staff salaries effective November 2007.
Administrative support/conference services	Necessary funds may be transferred from the conference servicing budget lines should such services be required to be rendered, either by individual consultancies or under corporate contracts.
1322, 1324, 1326, 1327	The current conference servicing costs have been based on the following reasons and assumptions: 1322: The conferencing costs of the eighth and ninth meetings of the Conference of the Parties to the Vienna Convention are shared with the Twentieth and Twenty-First Meetings of the Parties to the Montreal Protocol in 2008 and 2011; 1324: Two Bureau meetings are scheduled for 2008 and 2011. The first meeting is to be held back-to-back with the Ozone Research Managers' meeting and the second, back-to-back with the meeting of the Conference of the Parties. The meetings have provision for interpretation and document translation into the appropriate languages based on the membership of the Bureau; 1326: A minimum amount is proposed every year to cover activities in connection with the celebration of the International Day for the Protection of the Ozone Layer; 1327: A small increase has is been proposed to cover conference costs related to the organization of the seventh and eighth Ozone Research Managers meetings in 2008 and 2011;
Travel on official business – 1601	The budgets for 2008 and 2011 include travel of Secretariat officers in connection with the organization of the Ozone Research Managers' meetings and the meetings of the Conference of the Parties.

- 3302 The participation of representatives of Parties operating under paragraph 1 of Article 5 in the various Convention meetings is assumed at \$5,000 per representative per meeting, taking into account not more than one person's travel costs per country, using the most appropriate and advantageous economy-class fare and United Nations daily subsistence allowances.
- Considering that the meeting of the Conference of the Parties to the Vienna Convention is normally held jointly with the Meeting of the Parties to the Montreal Protocol, the participation costs are borne by the Montreal Protocol.
- 3304 The participation costs are based on two Bureau meetings respectively in 2008 and 2011 for four participants from developing countries or countries with economies in transition, being held back-to-back with the Ozone Research Managers' meeting and the meeting of the Conference of the Parties. To reduce costs, the participation of Bureau members at the Bureau meeting and the meeting of the Conference of the Parties to the Vienna Convention will be covered by funds already allocated for the Meeting of the Parties to the Montreal Protocol.
- 3307 One Ozone Research Managers' meeting was held in 2008. The next meeting will be held in 2011. Funding has been reserved for participation by 35 experts from qualifying developing countries that submit national reports.
- 4201-4204 The Secretariat is maintaining its electronic data processing systems to make the documentation of the Protocol and the Convention available electronically to Parties. This requires periodic procurement of necessary peripherals and software licenses, together with updating of the existing computer servers.
- A minimum provision has been made to enable the Secretariat to replace some equipment each year.
- 5100-5400 Provisions under these budget lines contain minimal increases based on inflation rates recommended by the United Nations.
- 5304 The amount set aside against this budget line in 2008 will be used for some public awareness reporting on ozone layer protection.

Annex II

Scale of contributions by the Parties for 2008 to 2011 based on the United Nations scale of assessments

(General Assembly resolution 61/237 of 13 February 2007 with a maximum assessment rate of 22 per cent)
(in United States dollars)

	Name of Party	UN scale of assessment for years 2007-2009	Adjusted UN scale to exclude non-contributors	Adjusted UN scale with 22% maximum assessment rate considered	2008 CONTRIBUTIONS BY PARTIES	2009 CONTRIBUTIONS BY PARTIES	2010 CONTRIBUTIONS BY PARTIES	2011 CONTRIBUTIONS BY PARTIES
1	Afghanistan	0.001	0.000	0.000	0	0	0	0
2	Albania	0.006	0.000	0.000	0	0	0	0
3	Algeria	0.085	0.000	0.000	0	0	0	0
4	Angola	0.003	0.000	0.000	0	0	0	0
5	Antigua and Barbuda	0.002	0.000	0.000	0	0	0	0
6	Argentina	0.325	0.325	0.324	1 953	1 953	1 953	1 953
7	Armenia	0.002	0.000	0.000	0	0	0	0
8	Australia	1.787	1.787	1.781	10 739	10 739	10 739	10 739
9	Austria	0.887	0.887	0.884	5 331	5 331	5 331	5 331
10	Azerbaijan	0.005	0.000	0.000	0	0	0	0
11	Bahamas	0.016	0.000	0.000	0	0	0	0
12	Bahrain	0.033	0.000	0.000	0	0	0	0
13	Bangladesh	0.010	0.000	0.000	0	0	0	0
14	Barbados	0.009	0.000	0.000	0	0	0	0
15	Belarus	0.020	0.000	0.000	0	0	0	0
16	Belgium	1.102	1.102	1.098	6 623	6 623	6 623	6 623
17	Belize	0.001	0.000	0.000	0	0	0	0

	Name of Party	UN scale of assessment for years 2007-2009	Adjusted UN scale to exclude non-contributors	Adjusted UN scale with 22% maximum assessment rate considered	2008 CONTRIBUTIONS BY PARTIES	2009 CONTRIBUTIONS BY PARTIES	2010 CONTRIBUTIONS BY PARTIES	2011 CONTRIBUTIONS BY PARTIES
18	Benin	0.001	0.000	0.000	0	0	0	0
19	Bhutan	0.001	0.000	0.000	0	0	0	0
20	Bolivia	0.006	0.000	0.000	0	0	0	0
21	Bosnia and Herzegovina	0.006	0.000	0.000	0	0	0	0
22	Botswana	0.014	0.000	0.000	0	0	0	0
23	Brazil	0.876	0.876	0.873	5 264	5 264	5 264	5 264
24	Brunei Darussalam	0.026	0.000	0.000	0	0	0	0
25	Bulgaria	0.020	0.000	0.000	0	0	0	0
26	Burkina Faso	0.002	0.000	0.000	0	0	0	0
27	Burundi	0.001	0.000	0.000	0	0	0	0
28	Cambodia	0.001	0.000	0.000	0	0	0	0
29	Cameroon	0.009	0.000	0.000	0	0	0	0
30	Canada	2.977	2.977	2.967	17 891	17 891	17 891	17 891
31	Cape Verde	0.001	0.000	0.000	0	0	0	0
32	Central African Republic	0.001	0.000	0.000	0	0	0	0
33	Chad	0.001	0.000	0.000	0	0	0	0
34	Chile	0.161	0.161	0.160	968	968	968	968
35	China	2.667	2.667	2.658	16 028	16 028	16 028	16 028
36	Colombia	0.105	0.105	0.105	631	631	631	631
37	Comoros	0.001	0.000	0.000	0	0	0	0
38	Congo	0.001	0.000	0.000	0	0	0	0
39	Cook Islands	-	0.000	0.000	0	0	0	0
40	Costa Rica	0.032	0.000	0.000	0	0	0	0
41	Cote d' Ivoire	0.009	0.000	0.000	0	0	0	0

	Name of Party	UN scale of assessment for years 2007-2009	Adjusted UN scale to exclude non-contributors	Adjusted UN scale with 22% maximum assessment rate considered	2008 CONTRIBUTIONS BY PARTIES	2009 CONTRIBUTIONS BY PARTIES	2010 CONTRIBUTIONS BY PARTIES	2011 CONTRIBUTIONS BY PARTIES
42	Croatia	0.050	0.000	0.000	0	0	0	0
43	Cuba	0.054	0.000	0.000	0	0	0	0
44	Cyprus	0.044	0.000	0.000	0	0	0	0
45	Czech Republic	0.281	0.281	0.280	1 689	1 689	1 689	1 689
46	Democratic People's Republic of Korea	0.007	0.000	0.000	0	0	0	0
47	Democratic Republic of Congo	0.003	0.000	0.000	0	0	0	0
48	Denmark	0.739	0.739	0.737	4 441	4 441	4 441	4 441
49	Djibouti	0.001	0.000	0.000	0	0	0	0
50	Dominica	0.001	0.000	0.000	0	0	0	0
51	Dominican Republic	0.024	0.000	0.000	0	0	0	0
52	Ecuador	0.021	0.000	0.000	0	0	0	0
53	Egypt	0.088	0.000	0.000	0	0	0	0
54	El Salvador	0.020	0.000	0.000	0	0	0	0
55	Equatorial Guinea	0.002	0.000	0.000	0	0	0	0
56	Eritrea	0.001	0.000	0.000	0	0	0	0
57	Estonia	0.016	0.000	0.000	0	0	0	0
58	Ethiopia	0.003	0.000	0.000	0	0	0	0
59	European Community	2.500	2.500	2.492	15 024	15 024	15 024	15 024
60	Fiji	0.003	0.000	0.000	0	0	0	0
61	Finland	0.564	0.564	0.562	3 389	3 389	3 389	3 389
62	France	6.301	6.301	6.280	37 867	37 867	37 867	37 867
63	Gabon	0.008	0.000	0.000	0	0	0	0
64	Gambia	0.001	0.000	0.000	0	0	0	0

	Name of Party	UN scale of assessment for years 2007-2009	Adjusted UN scale to exclude non-contributors	Adjusted UN scale with 22% maximum assessment rate considered	2008 CONTRIBUTIONS BY PARTIES	2009 CONTRIBUTIONS BY PARTIES	2010 CONTRIBUTIONS BY PARTIES	2011 CONTRIBUTIONS BY PARTIES
65	Georgia	0.003	0.000	0.000	0	0	0	0
66	Germany	8.577	8.577	8.548	51 545	51 545	51 545	51 545
67	Ghana	0.004	0.000	0.000	0	0	0	0
68	Greece	0.596	0.596	0.594	3 582	3 582	3 582	3 582
69	Grenada	0.001	0.000	0.000	0	0	0	0
70	Guatemala	0.032	0.000	0.000	0	0	0	0
71	Guinea	0.001	0.000	0.000	0	0	0	0
72	Guinea-Bissau	0.001	0.000	0.000	0	0	0	0
73	Guyana	0.001	0.000	0.000	0	0	0	0
74	Haiti	0.002	0.000	0.000	0	0	0	0
75	Holy See	0.001	0.000	0.000	0	0	0	0
76	Honduras	0.005	0.000	0.000	0	0	0	0
77	Hungary	0.244	0.244	0.243	1 466	1 466	1 466	1 466
78	Iceland	0.037	0.000	0.000	0	0	0	0
79	India	0.450	0.450	0.448	2 704	2 704	2 704	2 704
80	Indonesia	0.161	0.161	0.160	968	968	968	968
81	Iran (Islamic Republic of)	0.180	0.180	0.179	1 082	1 082	1 082	1 082
82	Iraq	0.015	0.000	0.000	0	0	0	0
83	Ireland	0.445	0.445	0.443	2 674	2 674	2 674	2 674
84	Israel	0.419	0.419	0.418	2 518	2 518	2 518	2 518
85	Italy	5.079	5.079	5.062	30 523	30 523	30 523	30 523
86	Jamaica	0.010	0.000	0.000	0	0	0	0
87	Japan	16.624	16.624	16.568	99 904	99 904	99 904	99 904
88	Jordan	0.012	0.000	0.000	0	0	0	0

	Name of Party	UN scale of assessment for years 2007-2009	Adjusted UN scale to exclude non-contributors	Adjusted UN scale with 22% maximum assessment rate considered	2008 CONTRIBUTIONS BY PARTIES	2009 CONTRIBUTIONS BY PARTIES	2010 CONTRIBUTIONS BY PARTIES	2011 CONTRIBUTIONS BY PARTIES
89	Kazakhstan	0.029	0.000	0.000	0	0	0	0
90	Kenya	0.010	0.000	0.000	0	0	0	0
91	Kiribati	0.001	0.000	0.000	0	0	0	0
92	Kuwait	0.182	0.182	0.181	1 094	1 094	1 094	1 094
93	Kyrgyzstan	0.001	0.000	0.000	0	0	0	0
94	Lao People's Democratic Republic	0.001	0.000	0.000	0	0	0	0
95	Latvia	0.018	0.000	0.000	0	0	0	0
96	Lebanon	0.034	0.000	0.000	0	0	0	0
97	Lesotho	0.001	0.000	0.000	0	0	0	0
98	Liberia	0.001	0.000	0.000	0	0	0	0
99	Libyan Arab Jamahiriya	0.062	0.000	0.000	0	0	0	0
100	Liechtenstein	0.010	0.000	0.000	0	0	0	0
101	Lithuania	0.031	0.000	0.000	0	0	0	0
102	Luxembourg	0.085	0.000	0.000	0	0	0	0
103	Madagascar	0.002	0.000	0.000	0	0	0	0
104	Malawi	0.001	0.000	0.000	0	0	0	0
105	Malaysia	0.190	0.190	0.189	1 142	1 142	1 142	1 142
106	Maldives	0.001	0.000	0.000	0	0	0	0
107	Mali	0.001	0.000	0.000	0	0	0	0
108	Malta	0.017	0.000	0.000	0	0	0	0
109	Marshall Islands	0.001	0.000	0.000	0	0	0	0
110	Mauritania	0.001	0.000	0.000	0	0	0	0
111	Mauritius	0.011	0.000	0.000	0	0	0	0

	Name of Party	UN scale of assessment for years 2007-2009	Adjusted UN scale to exclude non-contributors	Adjusted UN scale with 22% maximum assessment rate considered	2008 CONTRIBUTIONS BY PARTIES	2009 CONTRIBUTIONS BY PARTIES	2010 CONTRIBUTIONS BY PARTIES	2011 CONTRIBUTIONS BY PARTIES
112	Mexico	2.257	2.257	2.249	13 564	13 564	13 564	13 564
113	Micronesia (Federated State of)	0.001	0.000	0.000	0	0	0	0
114	Monaco	0.003	0.000	0.000	0	0	0	0
115	Mongolia	0.001	0.000	0.000	0	0	0	0
116	Montenegro	0.001	0.000	0.000	0	0	0	0
117	Morocco	0.042	0.000	0.000	0	0	0	0
118	Mozambique	0.001	0.000	0.000	0	0	0	0
119	Myanmar	0.005	0.000	0.000	0	0	0	0
120	Namibia	0.006	0.000	0.000	0	0	0	0
121	Nauru	0.001	0.000	0.000	0	0	0	0
122	Nepal	0.003	0.000	0.000	0	0	0	0
123	Netherlands	1.873	1.873	1.867	11 256	11 256	11 256	11 256
124	New Zealand	0.256	0.256	0.255	1 538	1 538	1 538	1 538
125	Nicaragua	0.002	0.000	0.000	0	0	0	0
126	Niger	0.001	0.000	0.000	0	0	0	0
127	Nigeria	0.048	0.000	0.000	0	0	0	0
128	Niue	-	0.000	0.000	0	0	0	0
129	Norway	0.782	0.782	0.779	4 700	4 700	4 700	4 700
130	Oman	0.073	0.000	0.000	0	0	0	0
131	Pakistan	0.059	0.000	0.000	0	0	0	0
132	Palau	0.001	0.000	0.000	0	0	0	0
133	Panama	0.023	0.000	0.000	0	0	0	0
134	Papua New Guinea	0.002	0.000	0.000	0	0	0	0

	Name of Party	UN scale of assessment for years 2007-2009	Adjusted UN scale to exclude non-contributors	Adjusted UN scale with 22% maximum assessment rate considered	2008 CONTRIBUTIONS BY PARTIES	2009 CONTRIBUTIONS BY PARTIES	2010 CONTRIBUTIONS BY PARTIES	2011 CONTRIBUTIONS BY PARTIES
135	Paraguay	0.005	0.000	0.000	0	0	0	0
136	Peru	0.078	0.000	0.000	0	0	0	0
137	Philippines	0.078	0.000	0.000	0	0	0	0
138	Poland	0.501	0.501	0.499	3 011	3 011	3 011	3 011
139	Portugal	0.527	0.527	0.525	3 167	3 167	3 167	3 167
140	Qatar	0.085	0.000	0.000	0	0	0	0
141	Republic of Korea	2.173	2.173	2.166	13 059	13 059	13 059	13 059
142	Republic of Moldova	0.001	0.000	0.000	0	0	0	0
143	Romania	0.070	0.000	0.000	0	0	0	0
144	Russian Federation	1.200	1.200	1.196	7 212	7 212	7 212	7 212
145	Rwanda	0.001	0.000	0.000	0	0	0	0
146	Saint Kitts and Nevis	0.001	0.000	0.000	0	0	0	0
147	Saint Lucia	0.001	0.000	0.000	0	0	0	0
148	Saint Vincent and the Grenadines	0.001	0.000	0.000	0	0	0	0
149	Samoa	0.001	0.000	0.000	0	0	0	0
150	Sao Tome and Principe	0.001	0.000	0.000	0	0	0	0
151	Saudi Arabia	0.748	0.748	0.745	4 495	4 495	4 495	4 495
152	Senegal	0.004	0.000	0.000	0	0	0	0
153	Serbia	0.021	0.000	0.000	0	0	0	0
154	Seychelles	0.002	0.000	0.000	0	0	0	0
155	Sierra Leone	0.001	0.000	0.000	0	0	0	0
156	Singapore	0.347	0.347	0.346	2 085	2 085	2 085	2 085
157	Slovakia	0.063	0.000	0.000	0	0	0	0

	Name of Party	UN scale of assessment for years 2007-2009	Adjusted UN scale to exclude non-contributors	Adjusted UN scale with 22% maximum assessment rate considered	2008 CONTRIBUTIONS BY PARTIES	2009 CONTRIBUTIONS BY PARTIES	2010 CONTRIBUTIONS BY PARTIES	2011 CONTRIBUTIONS BY PARTIES
158	Slovenia	0.096	0.000	0.000	0	0	0	0
159	Solomon Islands	0.001	0.000	0.000	0	0	0	0
160	Somalia	0.001	0.000	0.000	0	0	0	0
161	South Africa	0.290	0.290	0.289	1 743	1 743	1 743	1 743
162	Spain	2.968	2.968	2.958	17 837	17 837	17 837	17 837
163	Sri Lanka	0.016	0.000	0.000	0	0	0	0
164	Sudan	0.010	0.000	0.000	0	0	0	0
165	Suriname	0.001	0.000	0.000	0	0	0	0
166	Swaziland	0.002	0.000	0.000	0	0	0	0
167	Sweden	1.071	1.071	1.067	6 436	6 436	6 436	6 436
168	Switzerland	1.216	1.216	1.212	7 308	7 308	7 308	7 308
169	Syrian Arab Republic	0.016	0.000	0.000	0	0	0	0
170	Tajikistan	0.001	0.000	0.000	0	0	0	0
171	Thailand	0.186	0.186	0.185	1 118	1 118	1 118	1 118
172	The former Yugoslav Republic of Macedonia	0.005	0.000	0.000	0	0	0	0
173	Togo	0.001	0.000	0.000	0	0	0	0
174	Tonga	0.001	0.000	0.000	0	0	0	0
175	Trinidad and Tobago	0.027	0.000	0.000	0	0	0	0
176	Tunisia	0.031	0.000	0.000	0	0	0	0
177	Turkey	0.381	0.381	0.380	2 290	2 290	2 290	2 290
178	Turkmenistan	0.006	0.000	0.000	0	0	0	0
179	Tuvalu	0.001	0.000	0.000	0	0	0	0
180	Uganda	0.003	0.000	0.000	0	0	0	0

	Name of Party	UN scale of assessment for years 2007-2009	Adjusted UN scale to exclude non-contributors	Adjusted UN scale with 22% maximum assessment rate considered	2008 CONTRIBUTIONS BY PARTIES	2009 CONTRIBUTIONS BY PARTIES	2010 CONTRIBUTIONS BY PARTIES	2011 CONTRIBUTIONS BY PARTIES
181	Ukraine	0.045	0.000	0.000	0	0	0	0
182	United Arab Emirates	0.302	0.302	0.301	1 815	1 815	1 815	1 815
183	United Kingdom	6.642	6.642	6.620	39 916	39 916	39 916	39 916
184	United Republic of Tanzania	0.006	0.000	0.000	0	0	0	0
185	United States of America	22.000	22.000	21.926	132 212	132 212	132 212	132 212
186	Uruguay	0.027	0.000	0.000	0	0	0	0
187	Uzbekistan	0.008	0.000	0.000	0	0	0	0
188	Vanuatu	0.001	0.000	0.000	0	0	0	0
189	Venezuela (Bolivarian Republic of)	0.200	0.200	0.199	1 202	1 202	1 202	1 202
190	Vietnam	0.024	0.000	0.000	0	0	0	0
191	Yemen	0.007	0.000	0.000	0	0	0	0
192	Zambia	0.001	0.000	0.000	0	0	0	0
193	Zimbabwe	0.008	0.000	0.000	0	0	0	0
	Total	102.489	100.339	100.000	603 000	603 000	603 000	603 000

Annex III

Scale of contributions for the 2009–2011 replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol

No.	Country	United Nations scale of assessment for the years 2007-2009	Adjusted United Nations scale of assessment with no Party contributing more than 22%	Annual contributions (in United States dollars) for years 2009, 2010 and 2011	Average inflation rate for the period 2006 - 2008	Qualifying FERM use YES=1 NO=0	FERM users' currencies' rates of exchange	FERM users' national currencies	FERM users' payments in national currencies
1	Australia	1.787	2.169533208	2 892 710.94	3.49%	1	1.0883	Australian dollar	3 148 137.32
2	Austria	0.887	1.076875185	1 435 833.58	2.45%	1	0.6570	Euro	943 342.66
3	Azerbaijan	0.005	0.006070322	8 093.76	15.79%	0	0.0000		
4	Belarus	0.020	0.024281289	32 375.05	10.25%	0	0.0000		
5	Belgium	1.102	1.337899046	1 783 865.39	2.93%	1	0.6570	Euro	1 171 999.56
6	Bulgaria	0.020	0.024281289	32 375.05	9.07%	1	1.2852	Lev	41 608.42
7	Canada	2.977	3.614269927	4 819 026.57	2.23%	1	0.9945	Canadian dollar	4 792 521.92
8	Cyprus	0.044	0.053418837	71 225.12	3.02%	1	0.6570	Euro	46 794.90
9	Czech Republic	0.281	0.341152116	454 869.49	4.01%	1	16.7833	Czech koruna	7 634 211.08
10	Denmark	0.739	0.897193643	1 196 258.19	2.34%	1	4.8983	Danish krone	5 859 631.50
11	Estonia	0.016	0.019425032	25 900.04	7.06%	1	10.2798	Estonia kroon	266 247.25
12	Finland	0.564	0.684732361	912 976.48	2.25%	1	0.6570	Euro	599 825.55
13	France	6.301	7.649820225	10 199 760.30	2.31%	1	0.6570	Euro	6 701 242.52
14	Germany	8.577	10.413030959	13 884 041.28	2.33%	1	0.657	Euro	9 121 815.12
15	Greece	0.596	0.723582424	964 776.57	3.57%	1	0.657	Euro	633 858.20
16	Hungary	0.244	0.296231731	394 975.64	6.04%	1	166.500	Forint	65 763 444.21
17	Iceland	0.037	0.044920385	59 893.85	7.98%	1	69.750	Icelandic krona	4 177 595.84
18	Ireland	0.445	0.540258689	720 344.92	3.02%	1	0.657	Euro	473 266.61
19	Israel	0.419	0.508693013	678 257.35	2.48%	1	3.567	Shekel	2 419 140.49
20	Italy	5.079	6.166233443	8 221 644.59	2.57%	1	0.657	Euro	5 401 620.50
21	Japan	16.624	20.182607748	26 910 143.66	0.62%	1	106.000	Yen	2 852 475 228.42
22	Latvia	0.018	0.021853160	29 137.55	10.85%	0	0.000		

No.	Country	United Nations scale of assessment for the years 2007-2009	Adjusted United Nations scale of assessment with no Party contributing more than 22%	Annual contributions (in United States dollars) for years 2009, 2010 and 2011	Average inflation rate for the period 2006 - 2008	Qualifying FERM use YES=1 NO=0	FERM users' currencies' rates of exchange	FERM users' national currencies	FERM users' payments in national currencies
23	Liechtenstein	0.010	0.012140645	16 187.53	1.46%	1	1.070	Swiss franc	17 320.65
24	Lithuania	0.031	0.037635999	50 181.33	6.97%	1	2.268	Litas	113 821.30
25	Luxembourg	0.085	0.103195480	137 593.97	2.89%	1	0.657	Euro	90 399.24
26	Malta	0.017	0.020639096	27 518.79	2.32%	1	0.657	Euro	18 079.85
27	Monaco	0.003	0.003642193	4 856.26	2.31%	1	0.657	Euro	3 190.56
28	Netherlands	1.873	2.273942752	3 031 923.67	2.06%	1	0.657	Euro	1 991 973.85
29	New Zealand	0.256	0.310800504	414 400.67	3.33%	1	1.272	New Zealand dollar	526 910.45
30	Norway	0.782	0.949398415	1 265 864.55	2.09%	1	5.235	Norwegian krone	6 626 800.94
31	Poland	0.501	0.608246299	810 995.07	2.51%	1	2.278	Zloty	1 847 690.06
32	Portugal	0.527	0.639811976	853 082.63	2.87%	1	0.657	Euro	560 475.29
33	Romania	0.070	0.084984513	113 312.68	6.54%	1	2.397	Leu	271 576.51
34	Russian Federation	1.200	1.456877364	1 942 503.15	10.90%	0	0.000		
35	Slovakia	0.063	0.076486062	101 981.42	3.37%	1	21.430	Slovak koruna	2 185 461.73
36	Slovenia	0.096	0.116550189	155 400.25	4.00%	1	0.657	Tolar	102 097.97
37	Spain	2.968	3.603343347	4 804 457.80	3.64%	1	0.657	Euro	3 156 528.77
38	Sweden	1.071	1.300263047	1 733 684.06	2.19%	1	6.173	Swedish krona	10 702 551.83
39	Switzerland	1.216	1.476302395	1 968 403.19	1.46%	1	1.047	Swiss franc	2 060 918.14
40	Tajikistan	0.001	0.001214064	1 618.75	14.93%	0	0.000		
41	Ukraine	0.045	0.054632901	72 843.87	15.73%	0	0.000		
42	United Kingdom	6.642	8.063816209	10 751 754.95	2.81%	1	0.504	Pound sterling	5 413 508.62
43	United States of America	22.000	22.000000000	29 333 333.33	3.44%	1	1.000	United States dollar	29 333 333.33
44	Uzbekistan	0.008	0.009712516	12 950.02	12.54%	0	0.000		
	Total	86.247	100.000000000	133 333 333					

Annex IV

Trust Fund for the Montreal Protocol on Substances that Deplete the Ozone Layer

Revised 2008 and approved 2009 and 2010 budgets

		w/m	2008 (US\$)	w/m	2009 (US\$)	w/m	2010 (US\$)
10	Project personnel component						
1100	Project personnel						
	1101 Executive Secretary (D-2) (shared with the Vienna Convention, VC)	6	132 226	6	135 664	6	139 192
	1102 Deputy Executive Secretary (D-1)	12	264 600	12	240 000	12	246 240
	1103 Senior Legal Officer (P-5)	12	178 300	12	182 936	12	187 692
	1104 Senior Scientific Affairs Officer (P-5) (shared with VC)	6	99 000	6	101 574	6	104 215
	1105 Administrative Officer (P-5) (paid by UNEP)	12	0	0		0	
	1106 Database Manager (Information System & Technology - P4) ¹	12	130 000	12	142 050	12	145 743
	1107 Programme Officer (Communication & Information - P3) (paid from VC)	12		12	0	12	
	1108 Programme Officer (Monitoring and Compliance - P4) ¹	12	135 000	12	147 513	12	151 348
1199	Subtotal		939,126		949 737		974 430
1200	Consultants						
	1201 Assistance in data-reporting, analysis and promotion of the implementation of the Protocol		40 000		40 000		40 000
1299	Subtotal		40,000		40 000		40 000
1300	Administrative Support						
	1301 Administrative Assistant (G-7) (shared with VC)	6	20 000	6	21 250	6	22 631
	1302 Personal Assistant (G-6)	12	25 000	12	26 625	12	28 356
	1303 Programme Assistant (G-6) (paid from VC)	12	0	12	0	12	0

		w/m	2008 (US\$)	w/m	2009 (US\$)	w/m	2010 (US\$)
1304	Programme Assistant (G-6) (shared with VC)	6	16 500	6	17 573	6	18 715
1305	Information Assistant (G-6) (shared with VC)	6	15 300	6	16 295	6	17 354
1306	Documentation Clerk (G-4)	12	24 000	12	25 560	12	27 221
1307	Data Assistant (G-6)	12	39 600	12	42 174	12	44 915
1308	Programme Assistant - Fund (G-6) (paid by UNEP)	12	0	12	0	12	0
1309	Logistics Assistant (G-3) (paid by UNEP)	12	0	12	0	12	0
1310	Bilingual Senior Secretary (G-6) (paid from VC)	12	0	12	0	12	0
1320	Temporary Assistance	12	20 000		21 300		22 685
1321	Open-ended Working Group Meetings ²		450 000		539 455		473 704
1322	Preparatory and Parties Meetings (shared with VC every three years, applies to the twentieth Meeting of the Parties to the Montreal Protocol and Eighth Conference of the Parties to the Vienna Convention in 2008) ²		350 000		577 755		500 000
1323	Assessment Panel Meetings		100 000		100 000		100 000
1324	Bureau Meeting		20 000		20 000		20 000
1325	Implementation Committee Meetings		111 200		111 200		111 200
1326	MP informal consultation meetings		5 000		10 000		10 000
1399	Subtotal		1 196 600		1 529 187		1 396 781
1600	Travel on Official Business						
1601	Staff travel on official business		210 000		210 000		210 000
1602	Conference Services staff travel on official business		15 000		15 000		15 000
1699	Subtotal		225 000		225 000		225 000
1999	Component total		2 400 726		2 743 924		2 636 211

		w/m	2008 (US\$)	w/m	2009 (US\$)	w/m	2010 (US\$)
30	Meeting/participation component						
3300	Support for Participation						
3301	Assessment Panel Meetings		500 000		500 000		500 000
3302	Preparatory and Parties Meetings ²		400 000		387 000		350 000
3303	Open-ended Working Group Meetings ²		300 000		337 000		300 000
3304	Bureau Meeting		20 000		20 000		20 000
3305	Implementation Committee Meetings		125 000		125 000		125 000
3306	Consultations in an informal meeting		10 000		10 000		10 000
3399	Subtotal		1 355 000		1 379 000		1 305 000
3999	Component total		1 355 000		1 379 000		1 305 000
40	Equipment and premises component						
4100	Expendable Equipment (items under \$1,500)						
4101	Miscellaneous expendables (shared with VC)		17 000		22 000		22 000
4199	Subtotal		17 000		22 000		22 000
4200	Non-Expendable Equipment						
4201	Personal computers and accessories		5 000		10 000		10 000
4202	Portable computers		0		5 000		5 000
4203	Other office equipment (server, fax, scanner, furniture etc.)		5 000		10 000		10 000
4204	Photocopiers		10 000		10 000		10 000
4299	Subtotal		20 000		35 000		35 000
4300	Premises						
4301	Rental of office premises (shared with VC)		33 600		42 000		42 000
4399	Subtotal		33 600		42 000		42 000
4999	Component total		70 600		99 000		99 000
50	Miscellaneous component						
5100	Operation and Maintenance of Equipment						
5101	Maintenance of equipment and others (shared with VC)		20 000		25 000		25 000
5199	Subtotal		20 000		25 000		25 000
5200	Reporting Costs						

		w/m	2008 (US\$)	w/m	2009 (US\$)	w/m	2010 (US\$)
	5201	Reporting	50 000		55 000		55 000
	5202	Reporting (Assessment Panels)	15 000		15 000		15 000
	5203	Reporting (Protocol Awareness)	5 000		5 000		5 000
5299		Subtotal	70 000		75 000		75 000
5300		Sundry					
	5301	Communications	40 000		46 000		46 000
	5302	Freight charges	50 000		60 000		60 000
	5303	Training	6 500		7 000		10 500
	5304	Others (International Ozone Day)	10 000		10 000		10 000
5399		Subtotal	106 500		123 000		126 500
5400		Hospitality					
	5401	Hospitality	15 000		20 000		20 000
5499		Subtotal	15 000		20 000		20 000
5999		Component total	211 500		243 000		246 500
99		Total direct project cost	4 037 826		4 464 924		4 286 711
		<i>Programme support costs (13%)</i>	<i>524 916</i>		<i>580 439</i>		<i>557 272</i>
		Grand total (inclusive of programme support costs)	4 562 742		5 045 363		4 843 983
		Operating cash reserve exclusive of PSC³	116 915		231 465		0
		Total budget	4 679 658		5 258 828		4 843 983
		Draw down⁴	402 725		981 895		567 050
		Contribution from the Parties	4 276 933		4 276 933		4 276 933

¹ The Parties approved the Secretariat's request for the upgrade of the following posts: Database Manager (1106), and Monitoring and Compliance Officer (1108).

² In decisions XX/7, XX/8, the Parties requested the Secretariat to convene the following workshops preceding the twenty-ninth meeting of the Open-ended Working Group: Workshop on environmentally sound management of banks of ozone-depleting substances and workshop for a dialogue on high-global warming potential alternatives to ozone-depleting substances. The cost of conducting one of these workshops has been included in budget lines 1321 (administrative and conference support) and 3303 (meeting participation component). The second workshop will be funded within the budget allocation originally proposed for the twenty-ninth meeting of the Open-ended Working Group.

In decision XX/6, the Parties also requested the Secretariat to organize in the margins of the Twenty-First Meeting of the Parties a workshop on reduction of methyl bromide use for quarantine and pre-shipment purposes and related emissions. The cost of conducting this workshop has been included in budget lines 1322 (administrative and conference support and 3302 (meeting participation component).

³ By decisions XVIII/5 and XIX/5, paragraph 5, the Parties agreed to increase the operating cash reserve for 2008 to 11.3 per cent and an additional 3.7 per cent for 2009, after which the Parties will maintain the reserve at 15 per cent. The operating cash reserve will have reached the 15 per cent mark in 2009.

⁴ Draw-down levels in 2008, 2009 and 2010 have been set with a view to maintaining the level of contributions constant through 2010.

Explanatory notes for the revised 2008 and approved 2009 and 2010 budgets of the Trust Fund for the Montreal Protocol on Substances that Deplete the Ozone Layer

Budget line	Comment
Personnel component 1101–1108	Indicative professional salary costs applicable to the Nairobi duty station for 2008–2009 and 2010–2011 have been used for the 2008–2010 budget proposals. Unspent commitments normally revert to the Trust Fund for the Montreal Protocol.
1106 and 1108	An adjustment has been made in these budget lines to cover changes in the salaries and entitlements of staff in the Professional category and above.
1105	The Parties approved the requested upgrade of the following posts: Database Manager from P-3 to P-4 and Programme Officer (Monitoring and Compliance) from P-3 to P-4.
Consultants – 1201	The post of the Administrative Officer continues to be paid by UNEP from the 13 per cent programme support costs. As discussed at the Nineteenth Meeting of the Parties, this post was upgraded from P-4 to P-5 at no cost to the Parties.
Administrative support/personnel 1301–1307	Assistance in data reporting, updating of publications and translation of essential features of the Ozone Secretariat website, as well as in the development of a fully interlinked digital system at the Secretariat, will continue to be required. Funds under this line may be transferred to line 1100 to create or support short-term Professional posts if necessary.
1308 and 1309	Standard General Service salary costs applicable to the Nairobi duty station for 2008–2009 have been used for the 2008, 2009 and 2010 budget proposals. An adjustment has been made in these budget lines in 2008 to cover an increase in salaries that took effect in November 2007.
1310	The posts of Programme Assistant (Fund) and Logistics Assistant continue to be paid from the 13 per cent programme support costs.
1320	The post of bilingual secretary is funded from the Vienna Convention Trust Fund.
Administrative support/conference services – 1321–1326	The Secretariat continues to require funding for general temporary assistance, particularly in the area of documents preparation for meetings, regular website development and maintenance, archiving and arrangements for participants' attendance at meetings.
	Necessary funds may be transferred from the conference servicing budget lines (1321–1326) should such services be required to be rendered, either by individual consultancies or under corporate contracts.
	The current conference servicing costs have been based on the following reasons and assumptions:

1321: The budget proposed is for one meeting of the Open-ended Working Group to be held each year in 2009 and 2010 in Nairobi or at another United Nations venue, in the six official United Nations languages.

1322: The budget for 2008 is lower than in 2009 and 2010 as the cost of the Twentieth Meeting of the Parties to the Montreal Protocol in 2008 is shared with the eighth meeting of the Conference of the Parties to the Vienna Convention.

It is assumed that the Meeting of the Parties and its preparatory meeting will be held in Nairobi in 2009 and 2010, in the six official United Nations languages. When meetings are not held in Nairobi, the additional costs that that entails will be borne by the Government hosting the meetings.

1323: The budget allocation in 2009 and 2010 will cover the costs of organizing annual meetings of the assessment panels and the Technology and Economic Assessment Panel's technical options committees, together with communication and other sundry costs related to the work of Panel members from developing countries and countries with economies in transition.

1324: One Bureau meeting is scheduled for each of the years 2009 and 2010, with provision for interpretation and document translation into the appropriate languages based on the membership of the Bureau.

1325: At least two Implementation Committee meetings of three days' duration are scheduled for each of the years 2009 and 2010 with interpretation and document translation as required, to be held back-to-back with the Open-ended Working Group meetings and the Meetings of the Parties in those years.

1326: At least one informal consultation meeting per year, expected to take place in Nairobi, is envisaged for 2009 and 2010 to facilitate the work of assisting the Parties and also in promoting ratification of and compliance with the Montreal Protocol and its amendments.

Travel on official business – 1601–1602

Travel on official business for 2009 and 2010 is being maintained at the 2007 level.

Meetings/Participation component – 3300

Participation of representatives of developing countries

3301

The participation of representatives of Parties operating under paragraph 1 of Article 5 in the various Protocol meetings is assumed at \$5,000 per meeting per representative, taking into account not more than one person's travel costs per country, using the most appropriate and advantageous economy-class fare and United Nations daily subsistence allowances.

The budget provision requested in 2009 and 2010 for members and experts of the assessment panels and the technical options committees attending assessment panel meetings is being maintained at 2008 levels.

3302	In 2008, the total participation costs, based on some 80 participants attending the combined eighth meeting of the Conference of the Parties to the Vienna Convention and the Twentieth Meeting of the Parties to the Montreal Protocol, is borne fully by the Trust Fund for the Montreal Protocol. In 2009 and 2010, the budget allocation reverts to 2007 levels.
3303	Participation costs are based on some 60 participants attending the Open-ended Working Group meetings in both 2009 and 2010.
3304	Participation costs are based on one Bureau meeting a year for four Bureau members from developing countries or countries with economies in transition at each meeting.
3305	The participation costs for the two Implementation Committee meetings per year are based on eight members from developing countries and countries with economies in transition at each meeting and one representative each from three or four countries invited by the Implementation Committee at each meeting. Provision has also been made for travel by the Implementation Committee President or Vice-President from a country operating under paragraph 1 of Article 5 to attend three Executive Committee meetings a year.
3306	Funds have been allocated to finance the participation of two participants from developing countries and countries with economies in transition as part of informal consultations in 2009 and 2010 on critical issues relating to the Montreal Protocol, which, it is expected, will be held in Nairobi.
Equipment and premises component	The cost of miscellaneous expendables is being increased minimally in 2009 and 2010 to take into account inflation. Resource use is being monitored constantly to maintain low expenditure levels.
Expendable equipment – 4101	
Non-expendable equipment – 4200	A minimal provision in 2009 and 2010 has been made to provide for increased server capacity and to enable the Secretariat to replace equipment as and when required.
Premises (rent) – 4300	The allocation for rental of premises in 2008 has been increased by 19.3 per cent, as an interim measure advised by the United Nations Controller, pending review of current rental rates in Nairobi. A rise of 25 per cent has been proposed by the Secretariat for 2009 and 2010 to cover envisaged increases.
Miscellaneous component	The provision for operation and maintenance of equipment is being increased minimally in 2008, 2009 and 2010 to cover increased maintenance costs for constantly increasing server capacity and additional computing requirements for staff.
Operation and maintenance of equipment – 5101	
Reporting costs (including editing, translation, duplication, publication and printing) – 5201–5203	General reporting costs for the Secretariat are provided for under these lines. Line 5202 is reserved for reporting of assessment panels. A small amount is allocated in line 5203 for any editing, translation, duplication, publication and printing related to Protocol awareness campaigns.

Sundry – Communications – 5301	Careful monitoring of telecommunications resources and the use of electronic mail instead of facsimile communications enable the Secretariat to maintain a relatively low budget provision under this line.
Freight and post – 5302	This line has been reduced by \$10,000 in 2008 to signal the Secretariat's and the Parties' commitment to the use of electronic mail for disseminating correspondence and meeting documentation. This budget line will be monitored closely over the next two years with a view to reducing the costs of posting and shipping of correspondence and meeting documentation in keeping with maximizing the benefits of global electronic communication media.
Training – 5303	The provision for training is being maintained to meet evolving training needs and to cater for training schemes introduced by the United Nations as a result of the continuing human resources reform programme.
Others (International Ozone Day) – 5304	The Ozone Secretariat will continue to provide assistance to specific countries during 2009 and 2010 to assist in their preparations for the celebration of the International Day for the Preservation of the Ozone Layer.
Hospitality – 5401	<p>Hospitality arrangements follow the usual procurement procedures of the United Nations.</p> <p>In 2008, the cost of the official hospitality reception is being shared between the Montreal Protocol and the Vienna Convention because the Twentieth Meeting of the Parties and the eighth meeting of the Conference of the Parties are combined. An additional amount of \$5,000 each for 2009 and 2010 is being requested as the cost for those years will not be shared with the Vienna Convention.</p>

Annex V

Scale of contributions by the Parties for 2008, 2009 and 2010 based on the United Nations scale of assessments

**(General Assembly resolution 61/237 of 13 February 2007 with a maximum assessment rate of 22 per cent)
(in United States dollars)**

Name of Party	UN scale of assessment for years 2007-2009	Adjusted UN scale to exclude non-contributors	Adjusted UN scale: 22 per cent maximum assessment rate considered	2008 Contributions by Parties	2009 Contributions by Parties	Indicative 2010 contributions by Parties
Afghanistan	0.001	0.000	0.000	0	0	0
Albania	0.006	0.000	0.000	0	0	0
Algeria	0.085	0.000	0.000	0	0	0
Angola	0.003	0.000	0.000	0	0	0
Antigua and Barbuda	0.002	0.000	0.000	0	0	0
Argentina	0.325	0.325	0.324	13 853	13 853	13 853
Armenia	0.002	0.000	0.000	0	0	0
Australia	1.787	1.787	1.781	76 171	76 171	76 171
Austria	0.887	0.887	0.884	37 808	37 808	37 808
Azerbaijan	0.005	0.000	0.000	0	0	0
Bahamas	0.016	0.000	0.000	0	0	0
Bahrain	0.033	0.000	0.000	0	0	0
Bangladesh	0.010	0.000	0.000	0	0	0
Barbados	0.009	0.000	0.000	0	0	0
Belarus	0.020	0.000	0.000	0	0	0
Belgium	1.102	1.102	1.098	46 973	46 973	46 973
Belize	0.001	0.000	0.000	0	0	0
Benin	0.001	0.000	0.000	0	0	0
Bhutan	0.001	0.000	0.000	0	0	0
Bolivia	0.006	0.000	0.000	0	0	0

Name of Party	UN scale of assessment for years 2007-2009	Adjusted UN scale to exclude non-contributors	Adjusted UN scale: 22 per cent maximum assessment rate considered	2008 Contributions by Parties	2009 Contributions by Parties	Indicative 2010 contributions by Parties
Bosnia and Herzegovina	0.006	0.000	0.000	0	0	0
Botswana	0.014	0.000	0.000	0	0	0
Brazil	0.876	0.876	0.873	37 339	37 339	37 339
Brunei Darussalam	0.026	0.000	0.000	0	0	0
Bulgaria	0.020	0.000	0.000	0	0	0
Burkina Faso	0.002	0.000	0.000	0	0	0
Burundi	0.001	0.000	0.000	0	0	0
Cambodia	0.001	0.000	0.000	0	0	0
Cameroon	0.009	0.000	0.000	0	0	0
Canada	2.977	2.977	2.967	126 894	126 894	126 894
Cape Verde	0.001	0.000	0.000	0	0	0
Central African Republic	0.001	0.000	0.000	0	0	0
Chad	0.001	0.000	0.000	0	0	0
Chile	0.161	0.161	0.160	6 863	6 863	6 863
China	2.667	2.667	2.658	113 680	113 680	113 680
Colombia	0.105	0.105	0.105	4 476	4 476	4 476
Comoros	0.001	0.000	0.000	0	0	0
Congo	0.001	0.000	0.000	0	0	0
Cook Islands		0.000	0.000	0	0	0
Costa Rica	0.032	0.000	0.000	0	0	0
Côte d'Ivoire	0.009	0.000	0.000	0	0	0
Croatia	0.050	0.000	0.000	0	0	0
Cuba	0.054	0.000	0.000	0	0	0
Cyprus	0.044	0.000	0.000	0	0	0
Czech Republic	0.281	0.281	0.280	11 978	11 978	11 978
Democratic People's Republic of Korea	0.007	0.000	0.000	0	0	0
Democratic Republic of Congo	0.003	0.000	0.000	0	0	0

Name of Party	UN scale of assessment for years 2007-2009	Adjusted UN scale to exclude non-contributors	Adjusted UN scale: 22 per cent maximum assessment rate considered	2008 Contributions by Parties	2009 Contributions by Parties	Indicative 2010 contributions by Parties
Denmark	0.739	0.739	0.737	31 500	31 500	31 500
Djibouti	0.001	0.000	0.000	0	0	0
Dominica	0.001	0.000	0.000	0	0	0
Dominican Republic	0.024	0.000	0.000	0	0	0
Ecuador	0.021	0.000	0.000	0	0	0
Egypt	0.088	0.000	0.000	0	0	0
El Salvador	0.020	0.000	0.000	0	0	0
Equatorial Guinea	0.002	0.000	0.000	0	0	0
Eritrea	0.001	0.000	0.000	0	0	0
Estonia	0.016	0.000	0.000	0	0	0
Ethiopia	0.003	0.000	0.000	0	0	0
European Community	2.500	2.500	2.492	106 562	106 562	106 562
Fiji	0.003	0.000	0.000	0	0	0
Finland	0.564	0.564	0.562	24 040	24 040	24 040
France	6.301	6.301	6.280	268 579	268 579	268 579
Gabon	0.008	0.000	0.000	0	0	0
Gambia	0.001	0.000	0.000	0	0	0
Georgia	0.003	0.000	0.000	0	0	0
Germany	8.577	8.577	8.548	365 593	365 593	365 593
Ghana	0.004	0.000	0.000	0	0	0
Greece	0.596	0.596	0.594	25 404	25 404	25 404
Grenada	0.001	0.000	0.000	0	0	0
Guatemala	0.032	0.000	0.000	0	0	0
Guinea	0.001	0.000	0.000	0	0	0
Guinea-Bissau	0.001	0.000	0.000	0	0	0
Guyana	0.001	0.000	0.000	0	0	0
Haiti	0.002	0.000	0.000	0	0	0

Name of Party	UN scale of assessment for years 2007-2009	Adjusted UN scale to exclude non-contributors	Adjusted UN scale: 22 per cent maximum assessment rate considered	2008 Contributions by Parties	2009 Contributions by Parties	Indicative 2010 contributions by Parties
Holy See	0.001	0.000	0.000	0	0	0
Honduras	0.005	0.000	0.000	0	0	0
Hungary	0.244	0.244	0.243	10 400	10 400	10 400
Iceland	0.037	0.000	0.000	0	0	0
India	0.450	0.450	0.448	19 181	19 181	19 181
Indonesia	0.161	0.161	0.160	6 863	6 863	6 863
Iran (Islamic Republic of)	0.180	0.180	0.179	7 672	7 672	7 672
Iraq	0.015	0.000	0.000	0	0	0
Ireland	0.445	0.445	0.443	18 968	18 968	18 968
Israel	0.419	0.419	0.418	17 860	17 860	17 860
Italy	5.079	5.079	5.062	216 492	216 492	216 492
Jamaica	0.010	0.000	0.000	0	0	0
Japan	16.624	16.624	16.568	708 595	708 595	708 595
Jordan	0.012	0.000	0.000	0	0	0
Kazakhstan	0.029	0.000	0.000	0	0	0
Kenya	0.010	0.000	0.000	0	0	0
Kiribati	0.001	0.000	0.000	0	0	0
Kuwait	0.182	0.182	0.181	7 758	7 758	7 758
Kyrgyzstan	0.001	0.000	0.000	0	0	0
Lao People's Democratic Republic	0.001	0.000	0.000	0	0	0
Latvia	0.018	0.000	0.000	0	0	0
Lebanon	0.034	0.000	0.000	0	0	0
Lesotho	0.001	0.000	0.000	0	0	0
Liberia	0.001	0.000	0.000	0	0	0
Libyan Arab Jamahiriya	0.062	0.000	0.000	0	0	0
Liechtenstein	0.010	0.000	0.000	0	0	0
Lithuania	0.031	0.000	0.000	0	0	0

Name of Party	UN scale of assessment for years 2007-2009	Adjusted UN scale to exclude non-contributors	Adjusted UN scale: 22 per cent maximum assessment rate considered	2008 Contributions by Parties	2009 Contributions by Parties	Indicative 2010 contributions by Parties
Luxembourg	0.085	0.000	0.000	0	0	0
Madagascar	0.002	0.000	0.000	0	0	0
Malawi	0.001	0.000	0.000	0	0	0
Malaysia	0.190	0.190	0.189	8 099	8 099	8 099
Maldives	0.001	0.000	0.000	0	0	0
Mali	0.001	0.000	0.000	0	0	0
Malta	0.017	0.000	0.000	0	0	0
Marshall Islands	0.001	0.000	0.000	0	0	0
Mauritania	0.001	0.000	0.000	0	0	0
Mauritius	0.011	0.000	0.000	0	0	0
Mexico	2.257	2.257	2.249	96 204	96 204	96 204
Micronesia (Federated State of)	0.001	0.000	0.000	0	0	0
Monaco	0.003	0.000	0.000	0	0	0
Mongolia	0.001	0.000	0.000	0	0	0
Montenegro	0.001	0.000	0.000	0	0	0
Morocco	0.042	0.000	0.000	0	0	0
Mozambique	0.001	0.000	0.000	0	0	0
Myanmar	0.005	0.000	0.000	0	0	0
Namibia	0.006	0.000	0.000	0	0	0
Nauru	0.001	0.000	0.000	0	0	0
Nepal	0.003	0.000	0.000	0	0	0
Netherlands	1.873	1.873	1.867	79 836	79 836	79 836
New Zealand	0.256	0.256	0.255	10 912	10 912	10 912
Nicaragua	0.002	0.000	0.000	0	0	0
Niger	0.001	0.000	0.000	0	0	0
Nigeria	0.048	0.000	0.000	0	0	0
Niue	-	0.000	0.000	0	0	0

Name of Party	UN scale of assessment for years 2007-2009	Adjusted UN scale to exclude non-contributors	Adjusted UN scale: 22 per cent maximum assessment rate considered	2008 Contributions by Parties	2009 Contributions by Parties	Indicative 2010 contributions by Parties
Norway	0.782	0.782	0.779	33 333	33 333	33 333
Oman	0.073	0.000	0.000	0	0	0
Pakistan	0.059	0.000	0.000	0	0	0
Palau	0.001	0.000	0.000	0	0	0
Panama	0.023	0.000	0.000	0	0	0
Papua New Guinea	0.002	0.000	0.000	0	0	0
Paraguay	0.005	0.000	0.000	0	0	0
Peru	0.078	0.000	0.000	0	0	0
Philippines	0.078	0.000	0.000	0	0	0
Poland	0.501	0.501	0.499	21 355	21 355	21 355
Portugal	0.527	0.527	0.525	22 463	22 463	22 463
Qatar	0.085	0.000	0.000	0	0	0
Republic of Korea	2.173	2.173	2.166	92 624	92 624	92 624
Republic of Moldova	0.001	0.000	0.000	0	0	0
Romania	0.070	0.000	0.000	0	0	0
Russian Federation	1.200	1.200	1.196	51 150	51 150	51 150
Rwanda	0.001	0.000	0.000	0	0	0
Saint Kitts and Nevis	0.001	0.000	0.000	0	0	0
Saint Lucia	0.001	0.000	0.000	0	0	0
Saint Vincent and the Grenadines	0.001	0.000	0.000	0	0	0
Samoa	0.001	0.000	0.000	0	0	0
Sao Tome and Principe	0.001	0.000	0.000	0	0	0
Saudi Arabia	0.748	0.748	0.745	31 883	31 883	31 883
Senegal	0.004	0.000	0.000	0	0	0
Serbia	0.021	0.000	0.000	0	0	0
Seychelles	0.002	0.000	0.000	0	0	0
Sierra Leone	0.001	0.000	0.000	0	0	0

Name of Party	UN scale of assessment for years 2007-2009	Adjusted UN scale to exclude non-contributors	Adjusted UN scale: 22 per cent maximum assessment rate considered	2008 Contributions by Parties	2009 Contributions by Parties	Indicative 2010 contributions by Parties
Singapore	0.347	0.347	0.346	14 791	14 791	14 791
Slovakia	0.063	0.000	0.000	0	0	0
Slovenia	0.096	0.000	0.000	0	0	0
Solomon Islands	0.001	0.000	0.000	0	0	0
Somalia	0.001	0.000	0.000	0	0	0
South Africa	0.290	0.290	0.289	12 361	12 361	12 361
Spain	2.968	2.968	2.958	126 511	126 511	126 511
Sri Lanka	0.016	0.000	0.000	0	0	0
Sudan	0.010	0.000	0.000	0	0	0
Suriname	0.001	0.000	0.000	0	0	0
Swaziland	0.002	0.000	0.000	0	0	0
Sweden	1.071	1.071	1.067	45 651	45 651	45 651
Switzerland	1.216	1.216	1.212	51 832	51 832	51 832
Syrian Arab Republic	0.016	0.000	0.000	0	0	0
Tajikistan	0.001	0.000	0.000	0	0	0
Thailand	0.186	0.186	0.185	7 928	7 928	7 928
The former Yugoslav Republic of Macedonia	0.005	0.000	0.000	0	0	0
Togo	0.001	0.000	0.000	0	0	0
Tonga	0.001	0.000	0.000	0	0	0
Trinidad and Tobago	0.027	0.000	0.000	0	0	0
Tunisia	0.031	0.000	0.000	0	0	0
Turkey	0.381	0.381	0.380	16 240	16 240	16 240
Turkmenistan	0.006	0.000	0.000	0	0	0
Tuvalu	0.001	0.000	0.000	0	0	0
Uganda	0.003	0.000	0.000	0	0	0
Ukraine	0.045	0.000	0.000	0	0	0
United Arab Emirates	0.302	0.302	0.301	12 873	12 873	12 873

Name of Party	UN scale of assessment for years 2007-2009	Adjusted UN scale to exclude non-contributors	Adjusted UN scale: 22 per cent maximum assessment rate considered	2008 Contributions by Parties	2009 Contributions by Parties	Indicative 2010 contributions by Parties
United Kingdom	6.642	6.642	6.620	283 114	283 114	283 114
United Republic of Tanzania	0.006	0.000	0.000	0	0	0
United States of America	22.000	22.000	21.926	937 746	937 746	937 746
Uruguay	0.027	0.000	0.000	0	0	0
Uzbekistan	0.008	0.000	0.000	0	0	0
Vanuatu	0.001	0.000	0.000	0	0	0
Venezuela (Bolivarian Republic of)	0.200	0.200	0.199	8 525	8 525	8 525
Vietnam	0.024	0.000	0.000	0	0	0
Yemen	0.007	0.000	0.000	0	0	0
Zambia	0.001	0.000	0.000	0	0	0
Zimbabwe	0.008	0.000	0.000	0	0	0
Total	102.489	100.339	100.000	4 276 933	4 276 933	4 276 933

Annex VI

Doha Declaration

We the ministers of the environment and heads of delegation of the 143 Parties attending the eighth meeting of the Conference of the Parties to the Vienna Convention on the Protection of the Ozone Layer and the Twentieth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer,

Acknowledging the progress that has been made to address the problem of depletion of the ozone layer through the global elimination of production of over 96 per cent of historic levels of ozone-depleting substances between 1987 and 2007,

Recognizing that this progress was achieved through:

(a) Cooperation between developed and developing countries, including provision being made to meet the needs of developing countries, as manifested by: the near universal participation in the Protocol by all countries; efficiency and transparency of the Protocol bodies, including the Multilateral Fund and its Executive Committee, the Implementation Committee; the assessment panels of the Protocol, and the Ozone and Multilateral Fund secretariats;

(b) Triennial replenishments of the Multilateral Fund amounting to over \$2.4 billion from 1991-2008; excellent compliance by all Parties with the Protocol's provisions; capacity building in all developing country Parties' to the Protocol through funding of over 140 national ozone units;

(c) Phase-out of more than 80 per cent of the production and consumption of ozone-depleting substances by the developing countries; agreement by all Parties to accelerate the phase-out of their production and consumption of hydrochlorofluorocarbons; the extraordinary efforts and adaptability of the staff of the international and national implementing agencies to respond to the evolving needs of the Parties; the enormous and generous contributions of industry, non-governmental organizations and academia in supporting the Protocol's efforts;

(d) A firm commitment to maximizing and exploring the broad-reaching benefits of the Protocol, in particular to deterring climate change in addition to ozone layer protection,

Taking account of the remaining work that needs to be done to protect the ozone layer, including the obligations of developing countries to reduce their production and consumption of chlorofluorocarbons, halons and carbon tetrachloride to zero by 1 January 2010, and methyl bromide and methyl chloroform by 2015, and eventually eliminate their global production and consumption of hydrochlorofluorocarbons,

Recognizing the generosity of past, present and future contributions of Parties to the Multilateral Fund and its essential role in securing the objectives of the Montreal Protocol,

Cognizant of the fact that safeguarding the ozone layer will require continued global commitment, a sustained level of scientific research and monitoring and the taking of precautionary measures to control equitably total global emissions of substances that deplete the ozone layer,

Acknowledging that phasing out ozone depleting substances has a positive impact on the climate system and human health, and that many of the actions that can still be taken by the Protocol Parties to investigate and reduce the impact of ozone depleting substances can have significant benefits in the efforts to address climate change including the need for urgent and effective action,

Wishing to highlight the operational leadership of the Montreal Protocol in addressing environmental issues in a holistic fashion that takes into account relationships with other institutions,

A. On the issue of destruction of ozone-depleting substances

1. *Resolve* to undertake an initial effort to destroy banks of ozone-depleting substances in order urgently to address their ozone and climate impact, and through a process that is consistent with the requirements of other international legal regimes;
2. *Commit ourselves* to undertaking further studies to assess the technical and economic feasibility of destroying ozone-depleting substances, taking into account their ozone and climate impact;
3. *Commit ourselves also* to undertaking pilot projects to generate practical data and experience on management and financing modalities, achieving climate benefits, and exploring opportunities to leverage co-financing in order to maximize environmental benefits;

B. On the issue of replenishment

4. *Underline* the commitment to a replenishment of the Multilateral Fund of \$490 million for the period 2009–2011 with the understanding that these funds will be used to enable developing countries to meet their obligations under the Protocol;

C. On atmospheric measurements

5. *Urge* the Governments of the world to seek to ensure full coverage of the relevant data gathering programmes, in order to ensure that the atmosphere including its stratospheric ozone and its interrelation with climatic change is kept under continuous observation;

D. On the Government of Qatar initiatives

6. *Applaud* the two initiatives announced by the Government of Qatar to establish:
 - (a) A monitoring station in Qatar, for monitoring the Ozone Layer and the Earth's stratosphere in collaboration with the National Aeronautics and Space Administration of the United States of America;
 - (b) An Ozone Layer and Climate Change Research Centre, within Qatar's Science and Technology Park and in collaboration with the United Nations Environment Programme, for conducting scientific research on ozone-depleting substance alternatives and developing environmentally friendly applications;

E. On this and future paperless meetings

7. *Recognize* the outstanding contribution of the Government of Qatar in embracing and conducting, for the first time in the history of the United Nations, a very successful paperless meeting, a practice which we hope will be extended to the conduct of future United Nations meetings; note, once again, the innovative contributions that Parties to the Vienna Convention and the Montreal Protocol can make; and express great hope that the success achieved in Doha will serve as a model and pave the way to holding virtually paperless meetings in other United Nations forums and elsewhere;
8. *Express* great appreciation to the Government of Qatar for the donation of the computers and paperless system, which will enable future United Nations meetings to be held in a paperless manner.

附件五

Earth Negotiation Bulletin:
COP8 & MOP20

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TWENTIETH MEETING OF THE PARTIES TO THE MONTREAL PROTOCOL ON SUBSTANCES THAT DEplete THE OZONE LAYER: 16 – 20 NOVEMBER 2008

This twentieth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer (MOP-20) begins Sunday in Doha, Qatar, and continues until Thursday, 20 November, in conjunction with the eighth Conference of the Parties to the Vienna Convention. A preparatory segment will take place from Sunday to Tuesday, and the high-level segment will convene on Wednesday and Thursday.

Delegates will consider decisions on a range of issues, *inter alia*: the status of the General Trust Fund for Financing Activities on Research and Systematic Observations Relevant to the Vienna Convention; replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol; environmentally sound disposal of ozone-depleting substances (ODS); issues related to essential uses; methyl bromide-related issues; and the application of trade provisions for hydrochlorofluorocarbons (HCFCs).

During the meeting, delegates will also consider presentations by the assessment panels on the status of their work and a presentation by the Chair of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol on the work of the Executive Committee.

A BRIEF HISTORY OF THE OZONE REGIME

Concerns that the Earth's stratospheric ozone layer could be at risk from CFCs and other anthropogenic substances were first raised in the early 1970s. At that time, scientists warned that the release of these substances into the atmosphere could deplete the ozone layer, hindering its ability to prevent harmful ultraviolet rays from reaching the Earth. This would adversely affect ocean ecosystems, agricultural productivity and animal populations, and harm humans through higher rates of skin cancers, cataracts and weakened immune systems. In response to this growing concern, the United Nations Environment Programme (UNEP) convened a conference in March 1977 that adopted a World Plan of Action on the Ozone Layer and established a Coordinating Committee to guide future international action on ozone protection.

VIENNA CONVENTION: In May 1981, the UNEP Governing Council launched negotiations on an international agreement to protect the ozone layer and, in March 1985, the Vienna Convention for the Protection of the Ozone Layer was

adopted. The Convention called for cooperation on monitoring, research and data exchange, but did not impose obligations to reduce the use of ODS. The Convention now has 193 parties.

MONTREAL PROTOCOL: In September 1987, efforts to negotiate binding obligations to reduce the use of ODS led to the adoption of the Montreal Protocol on Substances that Deplete the Ozone Layer. The Protocol introduced control measures for some CFCs and halons for developed countries (non-Article 5 parties). Developing countries (Article 5 parties) were granted a grace period allowing them to increase their use of these ODS before taking on commitments. The Protocol currently has 193 parties.

Since 1987, several amendments and adjustments to the Protocol have been adopted, adding new obligations and additional ODS, and adjusting existing control schedules. Amendments require ratification by a defined number of parties before they enter into force, while adjustments enter into force automatically.

LONDON AMENDMENT AND ADJUSTMENTS: Delegates to the second Meeting of the Parties (MOP-2), which took place in London, UK, in 1990, tightened control schedules and agreed to add ten more CFCs to the list of ODS, as well as carbon tetrachloride (CTC) and methyl chloroform. To date, 189 parties have ratified the London Amendment. MOP-2 also established the Multilateral Fund, which meets the incremental costs incurred by Article 5 parties in implementing the Protocol's control measures and finances clearinghouse functions, including technical assistance, information, training, and the costs of the Multilateral Fund Secretariat. The Fund is replenished every three years, and has received pledges of over US\$2 billion since its inception.

COPENHAGEN AMENDMENT AND ADJUSTMENTS: At MOP-4, held in Copenhagen, Denmark, in 1992, delegates tightened existing control schedules and added controls on methyl bromide, hydrobromofluorocarbons and HCFCs. MOP-4 also agreed to enact non-compliance procedures and to establish an Implementation Committee. The Implementation Committee examines cases of possible non-compliance by parties, and makes recommendations to the MOP aimed at securing full compliance. To date, 184 parties have ratified the Copenhagen Amendment.

MONTREAL AMENDMENT AND ADJUSTMENTS: At MOP-9, held in Montreal, Canada, in 1997, delegates agreed to a new licensing system for the import and export of ODS, in addition to tightening existing control schedules. They also agreed to a ban on trade in methyl bromide with non-parties to the Copenhagen Amendment. To date, 167 parties have ratified the Montreal Amendment.

BEIJING AMENDMENT AND ADJUSTMENTS: At MOP-11, held in Beijing, China, in 1999, delegates agreed to controls on bromochloromethane and additional controls on HCFCs, and to reporting on methyl bromide for quarantine and pre-shipment (QPS) applications. At present, 144 parties have ratified the Beijing Amendment.

MOPs 14-15: At MOP-14, held in Rome, Italy, in 2002, the MOP's decisions covered such matters as compliance, interaction with the World Trade Organization, and replenishment of the Multilateral Fund with US\$474 million for 2003-2005. MOP-15, held in Nairobi, Kenya, in 2003, resulted in decisions on issues including the implications of the entry into force of the Beijing Amendment. However, disagreements surfaced over exemptions allowing the use of methyl bromide beyond 2004 for "critical" uses where no technically or economically feasible alternatives are available. Delegates could not reach agreement and took the unprecedented step of calling for an "extraordinary" MOP.

FIRST EXTRAORDINARY MOP: The first Extraordinary Meeting of the Parties to the Montreal Protocol (ExMOP-1) took place in March 2004, in Montreal, Canada. Parties agreed to critical-use exemptions (CUEs) for methyl bromide for 2005 only. The introduction of a "double-cap" concept distinguishing between old and new production of methyl bromide was central to this compromise. Parties agreed to a cap for new production of 30% of parties' 1991 baseline levels, meaning that where the capped amount was insufficient for approved critical uses in 2005, parties were required to use existing stockpiles.

MOP-16: MOP-16 took place in Prague, Czech Republic, in November 2004. The parties adopted decisions on the Multilateral Fund, ratification, compliance, trade in ODS and other matters, but work on methyl bromide exemptions for 2006 was not completed. For the second time, parties decided to hold an extraordinary MOP.

SECOND EXTRAORDINARY MOP: ExMOP-2 was held in July 2005, in Montreal, Canada. Parties agreed to supplementary levels of CUEs for 2006 left unresolved at MOP-16. Under this decision, parties also agreed that: CUEs allocated domestically that exceed levels permitted by the MOP must be drawn from existing stocks; methyl bromide stocks must be reported; and parties must "endeavor" to allocate CUEs to the particular use categories specified in the decision.

COP-7/MOP-17: MOP-17 was held jointly with the seventh Conference of the Parties to the Vienna Convention in Dakar, Senegal, in December 2005. Parties approved essential-use exemptions for 2006 and 2007, supplemental CUEs for 2006 and CUEs for 2007, and production and consumption of methyl bromide in non-Article 5 parties for laboratory and analytical critical uses. Other decisions concerned, *inter alia*: submission of information on methyl bromide in space fumigation; replenishment of the Multilateral Fund with US\$470.4 million for 2006-2008; and the terms of reference for a feasibility study on developing a monitoring system for the transboundary movement of controlled ODS.

MOP-18: MOP-18 took place in New Delhi, India, from 30 October - 3 November 2006. Parties adopted decisions on: essential-use exemptions; future work following the Secretariat's workshop on the Special Report of the Intergovernmental Panel on Climate Change and the Technology and Economic Assessment Panel (TEAP); CUEs; difficulties faced by some Article 5 parties manufacturing CFC-based metered-dose inhalers (MDIs); treatment of stockpiled ODS relative to compliance; a feasibility study on developing a system for monitoring the transboundary movement of ODS; and key challenges to be faced by parties in protecting the ozone layer over the next

decade. Parties deferred consideration, until OEWG-27, of multi-year exemptions for CUEs and options for preventing harmful trade in methyl bromide stocks.

MOP-19: MOP-19 took place in Montreal, Canada, from 17-21 September 2007. Delegates adopted 29 decisions, including on: an accelerated phase-out of HCFCs; essential-use nominations and other issues arising out of the 2006 reports of the TEAP; critical-use nominations for methyl bromide; and monitoring transboundary movements and illegal trade in ODS. A Montreal Declaration was also adopted, which acknowledges the historic global cooperation achieved during the last 20 years under the Montreal Protocol, and reaffirms parties' commitment to phase out consumption and production of ODS through a range of actions.

CURRENT ODS CONTROL SCHEDULES: Under the amendments to the Montreal Protocol, non-Article 5 parties were required to phase out production and consumption of: halons by 1994; CFCs, CTC, hydrobromochlorofluorocarbons and methyl chloroform by 1996; bromochloromethane by 2002; and methyl bromide by 2005. The phase-out of HCFC production and consumption by Article 2 countries is set for 2020 and 2030 for Article 5 parties (with interim targets prior to those dates). Production was to be stabilized by 2004 and is to be frozen in 2013. Article 5 parties were required to phase out production and consumption of bromochloromethane by 2002. These parties must still phase out: production and consumption of CFCs, halons and CTC by 2010, and methyl chloroform and methyl bromide by 2015. There are exemptions to these phase-outs to allow for certain uses lacking feasible alternatives or in particular circumstances.

INTERSESSIONAL HIGHLIGHTS

IMPLEMENTATION COMMITTEE: The 40th meeting of the Implementation Committee under the Non-Compliance Procedure convened in Bangkok, Thailand, from 2-4 July 2008. The Implementation Committee considered, information provided by the Secretariat of the Multilateral Fund on relevant decisions of the Executive Committee of the Fund and on activities carried out by implementing agencies, non-compliance related issues, a plan of action for the establishment, and operation of licensing systems for ODS. Its recommendations will be considered at MOP-20.

OPEN-ENDED WORKING GROUP: The 28th meeting of the Montreal Protocol's Open-ended Working Group (OEWG-28) was held at the United Nations Conference Centre in Bangkok, Thailand, from 7-11 July 2008. Delegates agreed to forward eleven draft decisions to MOP-20, including on: HCFCs; reducing stocks and related emissions of ODS; actions to reduce methyl bromide for quarantine; extension of the fixed exchange rate mechanism of the Replenishment Fund; and administrative matters.

TEAP AND TOCs: The TEAP and several of the Technical Options Committees (TOCs) met between January and September 2008 to further their work in the lead-up to MOP-20. These included: the Halons TOC convened from 21-23 January 2008, in Manchester, United Kingdom; the Chemicals TOC convened from 19-21 February 2008, in Shanghai, China; the Medical TOC convened from 1-4 April 2008, in Tokushima, Japan; the Methyl Bromide TOC convened from 14-18 April 2008, in Rehovot, Israel; the TEAP convened from 21-25 April 2008, in Paris, France; and the Refrigeration TOC convened on 7 September 2008, in Copenhagen, Denmark. The work of the TOCs are included in the TEAP's 2008 reports, which will be considered at MOP-20.

COP-8/MOP-20 HIGHLIGHTS: SUNDAY, 16 NOVEMBER 2008

The preparatory segment of the eighth Conference of the Parties (COP-8) to the Vienna Convention and the twentieth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer (MOP-20) opened in Doha, Qatar on Sunday 16 November, 2008.

In the morning, delegates heard opening addresses and considered issues related to the Vienna Convention and the Montreal Protocol. During the afternoon, delegates discussed the replenishment of the Multilateral Fund, reports by the TEAP and issues related to essential uses.

OPENING OF THE PREPARATORY SEGMENT

Preparatory Segment Co-Chair Mikkel Sørensen (Denmark) opened the session. Abdullah bin Mubarak bin Aaboud al-Midhadi, Minister of Environment, Qatar, welcomed participants and announced his country's decision to donate all the computers used at the meeting to UNEP so it can continue to hold environmentally conscious, paper-free meetings.

Marco González, Executive Secretary of the Ozone Secretariat, thanked the Government of Qatar for helping pioneer the use of electronic documentation in the UN system. González also urged support for: parties that have yet to phase out CFCs, halons and carbon tetrachloride (CTC) by 2010; a robust replenishment of Multilateral Fund; a decision on ODS destruction; and working to close the gap in satellite monitoring programmes.

ORGANIZATIONAL MATTERS

Preparatory Segment Co-Chair Judy Beaumont (South Africa) addressed organizational matters. She also highlighted the importance of the replenishment task force, the fixed-exchange-rate mechanism, environmentally-sound disposal of ODS, the election of new office bearers for several committees, and the need for transparency. The agenda for the Preparatory Segment was adopted with the inclusion of proposals by Iraq, Nepal, Mexico, the US and a Qatari proposal to develop a Doha Declaration.

CONSIDERATION OF VIENNA CONVENTION AND COMBINED VIENNA CONVENTION AND MONTREAL PROTOCOL ISSUES

REPORT OF THE SEVENTH MEETING OF THE OZONE RESEARCH MANAGERS (ORM) OF THE PARTIES TO THE VIENNA CONVENTION: Michael Kurylo, Chairman of the Seventh ORM Meeting, stressed that

ozone depletion and climate change are highly interconnected and that the complexities of ozone and climate science demand new measurement activities. He highlighted several recommendations from the report, including those on: increased research on ozone evolution and monitoring; emissions; banks; and evolution of ODS and substitutes, particularly in developing countries.

STATUS OF THE GENERAL TRUST FUND FOR FINANCING ACTIVITIES ON RESEARCH AND SYSTEMATIC OBSERVATIONS RELEVANT TO THE VIENNA CONVENTION: Megumi Seki, Ozone Secretariat, presented a report on the Vienna Convention Trust Fund, explaining that the Trust Fund, established in 2003, provides support to maintain existing World Meteorological Organization-Global Atmosphere Watch (WMO-GAW) satellites. She said the fund had received contributions of US\$179,135.

Geir Braathen, WMO, reported on the Trust Fund activities outlining the ozone observing system of the WMO-GAW and WMO's planned activities for 2009.

In the ensuing discussion, KUWAIT, questioned WMO regarding the possibility of installing an ozone monitoring system covering the Arab Gulf region. INDONESIA requested more support to increase its ozone monitoring capabilities.

CANADA reported on its continued support for ozone monitoring and expressed concern about the upcoming decommissioning of satellites, which might result in a gap in observation of the ozone layer, and called for funding to maintain a strong global monitoring system.

JORDAN requested funding for comprehensive monitoring to cover all regions, especially Western Asia which faces severe risks in regards to ozone depletion. SAUDI ARABIA noted that some Gulf countries still lack monitoring tools and supported increased monitoring at stratospheric and tropospheric levels. Noting several impacts of climate change on the southern hemisphere, ARGENTINA suggested building on synergies between work to protect the ozone layer and combating climate change.

FINANCIAL REPORTS AND BUDGETS OF THE TRUST FUNDS FOR THE VIENNA CONVENTION AND THE MONTREAL PROTOCOL: Co-Chair Sørensen introduced the agenda item, and delegates agreed to follow the established practice of setting up a subcommittee to prepare a draft recommendation for consideration by parties. France, for the EUROPEAN UNION (EU), called on parties to pay contributions in full and on time.

STATUS OF RATIFICATION OF THE VIENNA CONVENTION, THE MONTREAL PROTOCOL AND THE AMENDMENTS TO THE MONTREAL PROTOCOL:

Co-Chair Beaumont reported on the ratification status of the Vienna Convention, the Montreal Protocol and the Amendments to the Montreal Protocol. Delegates agreed to amend the respective draft decision VIII/AA and XX/AA (UNEP/OzL.Conv.8/3 and UNEP/OzL.Pro.20/3) and forward it to the high level segment.

DISCUSSION OF MONTREAL PROTOCOL-RELATED ISSUES

REPLENISHMENT OF THE MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL: Presentation and consideration of the supplemental report of the TEAP Replenishment Task Force: TEAP members presented the report, and explained the total funding requirements for the period of 2009-2012 were in the range of US\$399 million to US\$630 million. The presenters outlined issues and costs related to inflation, cut-off dates, institutional strengthening, second conversions, cost-effectiveness factors, climate benefits and demonstration projects.

In the ensuing discussion delegates debated replenishment and the fixed-exchange-rate mechanism.

URUGUAY urged that when considering the Fund's replenishment, delegates also consider synergies with the Kyoto Protocol in order not to "misstep" the goal of mitigating climate change.

The US noted its concern with, *inter alia*, unconstrained production and consumption of HCFC in Article 5 countries until the freeze year of 2013, and instead suggested balanced funding to ensure a steady decline in HCFCs.

CHINA underscored the need for sufficient financial support for institution building and for Article 5 countries to meet their HCFC phase-out schedules.

JAPAN suggested more focused discussion about the replenishment of the Fund. JORDAN highlighted the importance of financial strategies enabling parties to meet cut-off dates, and strengthening institutions. COLOMBIA urged that cut-off dates be flexible and take into account the interests and concerns of Article 5 countries. MOROCCO urged making sufficient funding available to Article 5 countries for destruction, conversion and re-conversion.

ARGENTINA emphasized the importance of financial support for Article 5 countries and of assuring that replacements have the least global warming potential. MALAYSIA said that the total funding estimated by TEAP may be insufficient for the costs of HCFC phase-out. The EU said discussions on whether to make the fixed-exchange-rate mechanism permanent would be useful.

Co-Chair Sørensen suggested, and delegates agreed, that the issue of replenishment be continued in a contact group co-chaired by Laura Berón (Argentina) and Jozef Buys (Belgium). In response to the high degree of interest, delegates agreed the contact group would begin its work as an open-ended group.

ENVIRONMENTALLY SOUND DISPOSAL OF OZONE-DEPLETING SUBSTANCES: Delegates heard a report from the OEWG-28 contact group on ODS disposal explaining the group received comments from seven parties, which included a suggestion to take a step-by-step approach for destruction of ODS banks.

In the ensuing discussion, MEXICO highlighted its conference room paper (CRP) (UNEP/OzL.Pro.20/CRP.3) proposing to finance pilot projects for the destruction of contaminated CFC banks that have been accumulated and which cannot fit into existing banks. The US said it would put forward a CRP proposing a workshop to convene in 2009, for clarifying the goals of the process. The EC noted that they support a step-by-step approach, where the first goal would be to build on

the ongoing work of the implementing agencies or Multilateral Fund, to develop practical experience with the bank management process.

UPDATE REPORTS BY THE TEAP: Delegates heard update reports by TEAP members. Regarding nominations for essential use exemptions for metered-dose inhalers (MDIs) requested by the Russian Federation and the EC for 2009, and the US for 2010, TEAP reluctantly agreed to recommend such essential use exemptions for the EC and the US with the understanding that no further nominations would be forthcoming from them. Regarding the Russian Federation's request for an exemption for the use of CFC-113 for certain aerospace applications, a TEAP member reported that the amounts requested are declining as alternatives are being pursued.

TEAP members explained delays in the TEAP report on regional imbalances in availability of halon due to the limited availability of data and the scoping study on alternatives to HCFCs for mines and very high temperature conditions due to difficulties in collecting actual commercial product data.

Regarding the task force on CTC emissions, a TEAP member reported that although total production had been slowly declining, recent atmospheric measurements have remained high, resulting in the conclusion that there is a rapidly growing new source that has to be investigated further.

A TEAP member requested US\$100,000 for TEAP's 2008 budget for travel and meeting expenses; proposed Sergey Kopylov as the Co-Chair of the Halons Technical Options Committee (HTOC); and noted that positions are available for the Methyl Bromide Technical Options (MBTOC) Committee, HTOC and the Refrigeration, Air conditioning and Heat Pumps Technical Options Committee (RTOC).

ISSUES RELATED TO ESSENTIAL USES: Use of CFC-113 in the aerospace industry in the Russian Federation: Co-Chair Sørensen noted that TEAP authorized the use of 130 tons of CFC-113 in the aerospace industry in the Russian Federation for 2009. The Russian Federation thanked TEAP for its work. The EC and the US requested further details about the TEAP visit to Russia, and a TEAP member explained how they determined the essential use exemption for CFC-113.

2009 and 2010 essential use nominations: Co-Chair Beaumont noted that the EC had reduced its request for MDI essential use exemptions from 38 to 22 tons of CFCs for 2009. The US reduced its request from 182 to 92 tons of CFCs for 2010. The US thanked the MTOC for its work, noted concerns over the MTOC's suggestion of transitioning from epinephrine inhalers to an alternative in 2010, and looked forward to working with the EC on a joint CRP. The EC noted its support for working with the US.

IN THE CORRIDORS

As delegates gathered in the sun-baked city of Doha on Sunday, many drew parallels between the Montreal Protocol's history as a trail-blazer in the world of multilateral environmental agreements and the new "paperless" nature of COP-8/MOP-20. While many were thrilled at the availability of laptops for the duration of the meeting – 900 in total – others seemed perplexed by the challenge of accessing the meeting's dedicated Internet portal. The meeting's IT service was in hot demand, but difficulties seemed to be ironed out by the afternoon.

As participants delved into the agenda, several commended the fast pace of progress on non-controversial issues. While other participants pointed to the negotiations on the Multilateral Fund's replenishment as potentially sticky, a few said there was potential for delegates to meet in the middle. Others said that the next issue on the horizon was the future of HFCs. As countries move away from HCFCs, HFCs are an easy substitute—but existing HFCs have a high global warming potential.

COP-8/MOP-20 HIGHLIGHTS:

MONDAY, 17 NOVEMBER 2008

COP-8 to the Vienna Convention and MOP-20 to the Montreal Protocol convened for its second day in Doha, Qatar, on Monday 17 November, 2008.

In the morning plenary, delegates considered methyl bromide-related issues and essential uses. During the afternoon plenary delegates turned their attention to decisions on TEAP reports and compliance and reporting issues. Contact groups also convened throughout the day.

DISCUSSION OF MONTREAL PROTOCOL-RELATED ISSUES

REPLENISHMENT OF THE MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL: Proposal on extension of the fixed-exchange-rate mechanism: Co-Chair Beaumont opened the floor to comments on a proposed extension of the fixed-exchange-rate mechanism, the US said it only provisionally supported the mechanism, since it remains to be seen how it operates in a weak economy. This issue was referred to the replenishment contact group.

ISSUES RELATED TO ESSENTIAL USES: Essential uses and campaign production of CFCs for MDIs: The OEWG-28 campaign production and essential uses contact group provided an update on its work since OEWG-28, noting, *inter alia*, that the group is still considering final campaign production of CFCs to supply requirements for MDI manufacturing after 2009. Further work was referred to a contact group on the issue.

CONSIDERATION OF METHYL BROMIDE-RELATED ISSUES: Nominations for 2009 and 2010 for critical-use exemptions: Mohamed Besri, Co-Chair MBTOC, discussed global consumption of methyl bromide in Article 5 and non-Article 5 parties from 1991 to 2007, and provided an update on the meta-analysis of methyl bromide critical-use exemptions (CUEs) for the US.

Marta Pizano, Co-Chair MBTOC, provided an overview of the critical use nominations (CUNs) for methyl bromide, noting a general downward trend.

Ian Porter, Co-Chair MBTOC, discussed CUNs for methyl bromide's use for soil fumigation, saying that: Australia and Canada could reduce CUNs if they adopted regulatory changes that lower methyl bromide dose rates, or adopt barrier films for strawberry runners; Israel is considering registration of chloropicrin; and Israel, Japan and the US continue to increase the use of barrier films to reduce dose rates.

Michelle Marcotte, Co-Chair MBTOC, presented the MBTOC's Report on Quarantine, Structures and Commodities. She highlighted that the development of alternatives for high

moisture date crops is being conducted under the aegis of UNIDO. She also noted that applicants with CUNs continue to support research efforts on alternatives in commercial scale trials and adaptations, and make necessary contributions to register alternatives.

In the ensuing discussion, JAPAN, highlighted its decision to eliminate the use of methyl bromide by 2013. The EC proposed a draft decision on increasing the rate with which methyl bromide alternatives are used.

Adjustment to the Montreal Protocol on allowances for production of methyl bromide to meet basic domestic needs: Citing successes already achieved, KENYA, with MAURITIUS, proposed a draft decision reducing the maximum production allowance for methyl bromide by half, beginning January 1, 2010. JORDAN stated that date farmers in particular need to continue using methyl bromide, and opposed the proposal, supported by MOROCCO, citing the economic value of agriculture. MAURITIUS, opposed by TUNISIA, stressed that alternatives to methyl bromide may be available. The US described recent successes and expressed optimism about further reductions in its use of methyl bromide. The EU supported the proposal, saying that alternatives are available.

Quarantine and pre-shipment (QPS) uses of methyl bromide: The EU reiterated its optimism about the availability of alternatives to methyl bromide and the potential for consensus on this issue.

Co-Chair Sørensen concluded the discussion on methyl bromide, stating that due to divergent views, the Kenyan proposal would not be considered further at MOP-20. Delegates agreed to convene a contact group on methyl bromide to address CUNs and QPS.

APPLICATION OF TRADE PROVISIONS TO HCFCs: Delegates agreed to forward the draft decision, proposed by Australia, on application of trade provisions to HCFCs (UNEP/OzL.Conv.8/3-UNEP/OzL.Conv.8 20/3) to the high level segment.

PROCESS AGENTS: Delegates considered the TEAP's recommendation on process agents, including that, three of the ten submitted uses, could be added. CHINA suggested, and delegates agreed, that the issue would be revisited at MOP-21.

UPDATE REPORTS BY TEAP: CTC emissions and opportunities for reduction: The final TEAP report on CTC emissions and opportunities for reduction

Responding to a question by Sweden concerning the rapid growth of CTC emissions, TEAP said they would discuss the issue bilaterally. The US requested to participate, hoping that TEAP's work would be included in its ongoing progress reports.

Regional imbalances of halons: Delegates considered TEAP's assessment that there may be regional imbalances in the availability of halons and that TEAP may wish to revisit the issue in 2009.

Scoping study on alternatives to HCFCs for mines and very high temperature conditions: Co-Chair Beaumont requested TEAP to complete the study by OEWG-29 in 2009. KUWAIT, SAUDI ARABIA, JORDAN, BAHRAIN and OMAN reminded parties of the decision to support the study; highlighted the importance of finding alternatives to HCFCs especially in countries with very high temperatures; requested country-specific field visits to determine alternatives; and urged TEAP to complete the study as soon as possible.

The US stressed the importance of the study, in light of the accelerated HCFC phase-out schedule. SOUTH AFRICA supported TEAP field visits, saying it uses HCFCs in mines and is seeking alternatives.

TEAP confirmed that the study will be available for review by January, 2009, and will be discussed at the OEWG-29.

COMPLIANCE AND REPORTING ISSUES CONSIDERED BY THE IMPLEMENTATION COMMITTEE (IMPCOM):

Implementation Committee President Hassan Hannachi (Tunisia) presented the report of the 41st Implementation Committee. He described a series of recommendations and seven decisions from the report, covering every stage of the compliance system of the Montreal Protocol. He indicated that the data reporting rate has improved significantly, with 188 parties reporting.

In the ensuing discussion, BANGLADESH described steps it has taken to phase out ODS and asked delegates to make an exception so it would not face potential non compliance from 2007 to 2009. PAKISTAN supported Bangladesh and proposed following the transition strategy approved by the Executive Committee. AUSTRALIA, supported by SWITZERLAND, the US and the EC, suggested that the Implementation Committee reconsider the case of Bangladesh, during its next meeting in 2009, noting concern about the lack of a work plan or monitoring. The President of the Implementation Committee said the matter had already been considered in detail, but did not oppose delaying the decision to allow further consideration.

EGYPT noted that developing countries generally face difficulties replacing CFCs since alternative technologies are often controlled by multinational corporations and hard to access for national companies.

OTHER MATTERS

Regarding the proposal to hold a workshop on high-GWP substitutes for ODS (UNEP/OzL.Pro.20/CRP.7), the US elaborated that the CRP contained, *inter alia*, a request for TEAP to update its 2005 Supplement to the Special Report on the Ozone Layer and Climate, and convene a half-day open-ended dialogue on high-GWP substitutes to ODS at OEWG-29. The EU, supported by AUSTRALIA, requested more time for discussion and delegates agreed to continue discussions informally.

Regarding Iraq's proposed draft decision on difficulties in implementing the Protocol (UNEP/OzL.Pro.20/CRP.1), IRAQ suggested that while it has acceded to the Vienna Convention and the Montreal Protocol, it requires technical and financial assistance to control the entry of ODS into Iraq and urged other countries to control exports. Many countries supported Iraq's request, while others wanted to consider it further informally.

CONTACT GROUPS

DESTRUCTION: The contact group, co-chaired by Martin Sirois (Canada) and Agustín Sánchez (Mexico), worked towards a draft decision. Several delegates stressed the need for rapid action. Proposals were made to move in two or three stages: beginning with the most accessible banks, followed by medium-

and high-effort banks. Much discussion covered potential use of the Multilateral Fund to assist Article 5 countries. Delegates also discussed the need for additional data about banks.

REPLENISHMENT OF THE MULTILATERAL FUND: The contact group on replenishment began its morning session by hearing general statements, and delegates commented on the two scenarios set out by the TEAP Replenishment Task Force. Many Article 2 countries preferred to start negotiations from the baseline scenario, while several Article 5 countries expressed their support for the 2012 funding scenario.

Delegates then considered the issues as set out in the executive summary of the supplemental report of the TEAP Replenishment Task Force (UNEP/OzL.Pro.20/6). Regarding taking into account inflation, Article 2 countries pointed to the financial crisis and prospects of deflation and said it was not the time to start accounting for inflation; while Article 5 countries pointed to the preponderance of inflation in their countries. On cut-off dates for HCFCs, many Article 5 countries preferred a later cut-off date while some Article 2 countries noted that an earlier cut-off date would mean that subsequent increases would not be eligible for funding and others suggested spreading eligible funding over more than one triennium. In the afternoon the contact group was closed to allow twelve negotiators each from Article 5 and Article 2 countries to negotiate replenishment details.

METHYL BROMIDE: Barry Reville (Australia) chaired the contact group which convened in the evening. Participants discussed the draft decision on actions by parties to reduce methyl bromide use for QPS purposes and related emissions, submitted by the EC, Mexico and Switzerland. Initial discussions stalled on the language around the updated definition of pre-shipment, the scope of the data being presented, and requesting the Implementation Committee to consider the reporting of methyl bromide used for QPS applications. As delegates moved through the document, larger concerns about the proposed text emerged, especially on how much of the data that the TEAP is being requested to analyze is actually available. These included: QPS applications for which no alternatives are available to date; regulations mandating or promoting the use of methyl bromide for QPS treatment; and regulations banning the use of methyl bromide. Participants agreed to meet bilaterally to discuss the availability of the information before convening tomorrow.

MDI ESSENTIAL USE/CAMPAIGN PRODUCTION: This contact group convened in the afternoon and was chaired by Paul Krajnik (Austria). Participants deliberated on deleting references to non-applicability of a number of decisions affecting Article 5 parties vis-à-vis essential-use nominations for the years 1997-2002, 2000 and 2001 and for 2006 and 2007 (Decisions VIII/9, XI/14, XVII/5 respectively), and agreeing on deadlines for promoting industry participation for a smooth and efficient transition away from CFC-based MDIs (Dec VIII/10). Several parties objected to the inclusion of deadlines, suggesting that they did not have appropriate technology, and debated the time required for transition and whether phase-out could be assisted by regulation.

IN THE CORRIDORS

Contact group negotiations began in earnest on Monday. On replenishment, positions were made plainly obvious as Article 5 and Article 2 countries literally aligned themselves along opposite sides of the negotiating table. In the initial exchange of views it was evident that the groups' starting points for negotiations were similarly opposed. Some delegates commented that this represented initial strategic positioning, necessary to allow enough room for reshuffling of positions and players throughout the week. On destruction, the initial contact group meeting was so well attended that delegates could not fit into the conference room. But with a larger room for its second and third gatherings, delegates physically had ample room and time to air their views, and appeared to be moving toward a draft decision.

COP-8/MOP-20 HIGHLIGHTS: TUESDAY, 18 NOVEMBER 2008

COP-8 to the Vienna Convention and MOP-20 to the Montreal Protocol convened for its third day in Doha, Qatar, on Tuesday, 18 November, 2008.

In the morning, delegates convened briefly in plenary, and for the remainder of the morning, and the afternoon, work continued in contact groups on replenishment, methyl bromide, destruction, budget and MDI essential use and campaign production. Delegates reconvened in plenary for an evening session, and the conclusion of the preparatory segment.

CONSIDERATION OF VIENNA CONVENTION AND COMBINED VIENNA CONVENTION AND MONTREAL PROTOCOL ISSUES

REPORT OF THE SEVENTH MEETING OF THE OZONE RESEARCH MANAGERS (ORM) OF THE PARTIES TO THE VIENNA CONVENTION: SENEGAL reported on the 7th meeting of the ORM, and urged space agencies and governments to coordinate work on long-term time-series satellite data, citing gaps in monitoring that are likely to occur. The EU expressed general support for research activities and requested time to review draft decisions to ensure all necessary additional details were included. The US expressed surprise at the existence of gaps in satellite data, and urged that attention be directed toward this problem. TEAP responded, saying that a statement has been issued calling attention to the problem, and invited additional discussion.

During the evening plenary, SENEGAL and the US proposed minor amendments to draft decisions on recommendations of the ORM (UNEP/OzL.Conv.8/CRP.1/Rev.1) and on the Trust Fund of the Vienna Convention (UNEP/OzL.Conv.8/CRP.2/Rev.1) respectively. Delegates agreed to forward both draft decisions to the high level segment.

DISCUSSION OF MONTREAL PROTOCOL-RELATED ISSUES

ISSUES RELATED TO ESSENTIAL USES: Essential uses and campaign production of CFCs for MDIs: Co-Chair Sørensen suggested, and delegates agreed to forward the draft decision on essential use exemptions of CFCs for MDIs (UNEP/OzL.Pro.20/CRP.10) to the high level segment.

UPDATE REPORTS BY TEAP: CTC emissions and opportunities for reduction: Delegates briefly discussed the issue of CTC. TEAP stated that it had discussed the issues with SWEDEN and the US, and decided that further study was required on CTC. He said these issues would be taken up by TEAP in 2009, and include consultations with the Multilateral Fund and implementing agencies, on destroying CTC.

OTHER MATTERS

Regarding the draft decision on the workshop for a dialog on high-GWP substitutes for ODS (UNEP/OzL.Conv.8/CRP.7), the US said it had received comments and that discussion on the issue would continue informally.

During the evening plenary, the US explained informal discussions had occurred and several minor issues had been resolved. He explained that the one outstanding issue was whether the Montreal Protocol would convene this workshop alone, or in collaboration with the UNFCCC.

On the draft decision on difficulties faced by Iraq as a new party (UNEP/OzL.Conv.8/CRP.1), IRAQ noted that comments had been received and would be incorporated into a revised CRP. In the evening plenary, IRAQ confirmed that after further consideration, it would not pursue the draft decision at COP-8/MOP-20.

Regarding the draft decision on Nepal's compliance with the Protocol (UNEP/OzL.Conv.8/CRP.2), NEPAL explained that it faced an ongoing challenge of addressing poverty, but said it was aiming to eliminate CFCs by 2010, with the exception of essential uses. In the evening plenary, NEPAL announced its withdrawal of the draft decision, but said it may reintroduce it at OEWG-29.

CONTACT GROUPS

DESTRUCTION: The contact group on destruction responded to plenary in the morning and met in closed session during the afternoon. Co-Chair Agustín Sánchez (Mexico) informed plenary of the group's agenda, including addressing: the importance of short term actions; incentives towards destruction of ODS, and exceptions; illicit trade of ODS; amendments to the indicative list of incremental costs; development of workshops and working groups for future activities; work on national strategies for national legislation on banks and destruction; and the relationship between these

destruction activities and other conventions. He explained that the contact group had covered all of these issues and prepared a draft proposal, to be presented when the group reconvened. Shortly after the beginning of the afternoon session, the contact group was closed to observers, although an exception was made for a representative of the Basel Convention Secretariat.

REPLENISHMENT OF THE MULTILATERAL FUND:

This contact group met throughout the day in a closed-door session. Jozef Buys (Belgium), the Co-Chair of the contact group on replenishment provided an update to the evening plenary on the group's work. He noted progress in analyzing the different components of the replenishment, including the overall level of replenishment. Although the Article 5 and Article 2 countries had not yet agreed on the level of replenishment, Buys said the divergence in views was narrowing. In response to being asked how much more time the group needed, Buys said, "Can I borrow your crystal ball?"

METHYL BROMIDE: The contact group on methyl bromide, co-chaired by Barry Reville (Australia) and Gabriel Hakizimana (Burundi), discussed the proposed draft decision on actions by parties to reduce methyl bromide use for QPS. The main contention within the draft was a request to TEAP to update its analysis of methyl bromide consumption for QPS use. While many parties agreed on the usefulness of more detailed information on the major uses of methyl bromide in QPS, one country opposed additional information collection from parties, when much of the information was already available. Another party questioned whether gathering further information was possible within the required time period. The decision's sponsor maintained that the survey on where, and how, methyl bromide is used for QPS is vital to identifying alternatives. One Article 5 country said it would be unable to undertake a survey unless it received support from the Multilateral Fund, while others insisted that the Multilateral Fund cannot fund such an effort since methyl bromide use for QPS is exempt and not covered by the Montreal Protocol. Although consensus was not reached on whether a survey would be included in the draft decision, no other aspects of the decision proved contentious.

In the late afternoon, delegates considered alternative proposals for a draft decision on the evaluation of methyl bromide critical use nominations (CUNs). The proposal submitted by the EC (UNEP/OzL.Pro.20/CRP.9) built on the original draft decision, and added, *inter alia*, evaluation of efforts to approve alternatives and substitutes. The US proposal contained a more streamlined decision, including a suggestion that MBTOC develop its recommendations as a single entity in a consensus process. Delegates did not agree on which proposal to work with. Some delegates raised concerns regarding transparency of MBTOC decision making in general, and the need for MBTOC to provide additional information regarding its decisions in a timely manner, while others stressed the need to ensure that parties provide appropriate guidance to MBTOC.

MDI ESSENTIAL USE/CAMPAIGN PRODUCTION: The contact group discussed inclusion of Article 5 parties under a number of past decisions on essential use to extend applicability to their essential use nominations. Decisions considered included those on: measures to facilitate a transition from CFC-based

MDIs; promoting the closure of essential-use nominations for MDIs; essential-use exemptions for controlled substances for 2007 and 2008; and essential-use nominations for controlled substances for 2008 and 2009. Following a lengthy debate, delegates agreed that any MDI approved after December 31, 2008, will not constitute an essential use. The group discussed the dates of the submission of essential-use nominations for CFCs for MDIs for the treatment of asthma and chronic obstructive pulmonary disease and agreed to a 2010 date. An Article 2 party noted that there are difficulties in reducing the exports of CFC-based MDIs from Article 5 parties, and that Article 5 parties should take steps to prevent exports. Parties debated the December, 2000 deadline for considering any CFC MDI products for treatment of asthma as an essential use; a transition strategy and plan of action for the CFC-metered dose inhalers; and Salbutomal phase-out, including the availability of alternative options in different countries. Delegates discussed revising the Handbook for Essential Use Nominations, including the role TEAP would play in the process and whether such a revision would pose an additional burden on Article 5 parties. The group then considered the US proposal for a potential draft decision on campaign financing, including a request that the TEAP: assess and report to the parties concerning the potential timing for final campaign production; consider options for long-term storage, distribution and management of produced quantities of pharmaceutical-grade CFCs before they are needed by parties; and options for minimizing the potential for too much or too little CFCs as part of final campaign production. Pointing to medical needs in its population, an Article 5 party expressed concerns about the availability of CFC-based MDIs after 2010. The contact group agreed that two separate CRPs would be prepared, one on campaign production and another on essential uses.

BUDGET: Alessandro Peru (Italy), Co-Chair of the budget contact group, noted that the group had approved the budget for the Montreal Protocol Trust Fund for 2009 and 2010, which is US\$4,276,933 per year. The budget for the Vienna Convention Trust Fund had also been approved and amounts to US\$603,000 for 2009-2011.

IN THE CORRIDORS

While the destruction contact group focused on eliminating banks of ODS stored in relatively accessible refrigerators and air conditioners, buzz in the corridors centered on the potential importance of including HCFCs in destruction activities and the resulting potential contribution to combating climate change. When observers and NGOs were asked to leave the afternoon session of the ODS contact group, those left in the corridors speculated on the nature of sensitive issues. One opinion was that delegates were concerned about perverse incentives for HCFCs, which could conceivably lead producers to produce more, and then receive funds to destroy the new chemicals. Others considered this unfounded, and speculated that key delegations were seeking to prevent a domino effect of cascading chemical regulation, as CFC regulation could give way to HCFC over-regulation, which could give way to HFC regulation, and so forth. Others contended that behind closed doors some parties would pursue agendas to micromanage the Multilateral Fund.

COP-8/MOP-20 HIGHLIGHTS: WEDNESDAY, 19 NOVEMBER 2008

COP-8 to the Vienna Convention and MOP-20 to the Montreal Protocol convened for its fourth day in Doha, Qatar, on Wednesday, 19 November 2008.

In the morning, delegates attended the opening of the high level segment. Delegates then convened in plenary throughout the day where they heard presentations by the assessment panels, the Multilateral Fund, and made country statements. Contact groups on methyl bromide, MDI essential use and campaign production, destruction, replenishment met in parallel throughout the day, the latter two in closed sessions.

OPENING OF THE HIGH LEVEL SEGMENT

Abdullah bin Mubarak bin Aaboud al-Midhadi, Minister of Environment, Qatar, and MOP-19 President, highlighted activities undertaken in Qatar on ozone protection, including launching a stratospheric ozone monitoring station along with National Aeronautics and Space Administration, and a center for applied research for creating ozone alternatives in cooperation with United Nations Environment Programme.

Djibo Leity Ka, Minister of Environment, Senegal, and President of the Bureau, explained that the Bureau had undertaken major activities since its last meeting three years ago in Dakar, Senegal, including strengthening of ozone monitoring and research networks.

Congratulating the Government of Qatar on a groundbreaking meeting, Marco González, Executive Secretary, Ozone Secretariat, underscored the importance of the paperless initiative, and the need for its extension to the global environmental system starting with the upcoming climate change negotiations in Poznan, Poland in December 2008.

ORGANIZATIONAL MATTERS

Abdullah bin Mubarak bin Aaboud al-Midhadi introduced nominations for officers, and delegates elected Róbert Tóth, Hungary, as MOP-20 President and Patali Ranawaka, Minister of Environment, Sri Lanka, as COP-8 President, by acclamation. Delegates adopted the agenda of the COP-8/MOP-20 high level segment without amendment.

PRESENTATIONS BY ASSESSMENT PANELS

A.R. Ravishankara (US), Co-Chair Scientific Assessment Panel, discussed levels and trends of ODS, with an emphasis on HCFCs.

Jan van der Leun (Netherlands), Co-Chair Environmental Assessment Panel, recounted the interactions between ozone depletion and climate change, and discussed ultraviolet radiation and skin cancer as some of the side effects of the ozone hole.

Lambert Kuijpers (Netherlands), Co-Chair of the Technology and Economic Assessment Panel, updated the timelines for the Panel's work including on halons, QPS and methyl bromide.

PRESENTATION BY THE MULTILATERAL FUND

Albert Rombonot (Gabon), Chair, Executive Committee of the Multilateral Fund, described the Multilateral Fund's work to phase out ODS and recognized several implementation agencies, including UNDP and UNIDO, for their in-country work. He enumerated that the Multilateral Fund has 50 agreements with national governments and has disbursed US\$140 million to phase out ODS.

STATEMENTS BY HEADS OF DELEGATIONS

EGYPT highlighted the development of its halon bank, and announced that Egypt will host MOP-21, in Sharm el-Sheikh. Noting the accelerated phase-out of HCFCs, INDIA said that one of the challenges in meeting the freeze by 2013 is that alternatives without a high-GWP remain elusive.

BOSNIA AND HERZEGOVINA noted his country's effort since 2000 to reduce ODS, saying it is now on track to reach zero consumption of CFCs by 2010. SRI LANKA explained that its next challenge was to phase out HCFCs, especially since consumption is increasing.

Highlighting its efforts towards ozone protection, UGANDA described the challenge of containing illegal trade in ODS where countries have porous borders, and advocated for transfer of technology to Article 5 countries for phasing out ODS.

MAURITIUS highlighted the urgent need to make bold decisions on destruction of ODS banks and replenishment of the Multilateral Fund. IRAQ described its project to phase out HCFCs and its establishment of a national ozone committee. DJIBOUTI noted the need for availability of HCFC substitutes and for financial assistance from the Multilateral Fund.

The DOMINICAN REPUBLIC highlighted specific activities in his country including training of refrigeration technicians. Noting that the Montreal Protocol benefits both ozone layer and climate system, the US stressed the need to destroy ODS banks and to find ways of replacing HCFCs with substances with low, or neutral, GWP.

SOUTH AFRICA suggested that Basel Convention Regional Coordinating Centers should also undertake work on implementation of the Montreal Protocol.

The EU urged delegates to avoid resting on past achievements, and said the Multilateral Fund should avoid indirectly funding production of HCFCs and avoid products with high GWP. JORDAN said it had eliminated 70 percent of ODS and that it was initiating a renewable energy fund. LEBANON

informed delegates it had exceeded the requirements of the Vienna Convention and Montreal Protocol, and advocated for the establishment of a pan-Arab body to address ozone issues.

TANZANIA said it has phased out 80 percent of its CFC consumption, and that training of professionals to organize recovery and recycling programs is necessary. LAO PEOPLE'S DEMOCRATIC REPUBLIC stated that it has established an import/export licensing system to regulate trade in ODS.

CAMEROON described its awareness campaign to inform the public about ozone issues and its capacity-building workshops for phytosanitary specialists who use ODS, but stated that illicit trafficking of ODS remains a problem. YEMEN recounted its successful phase-out of CFCs from aerosols and fire extinguishers. MACEDONIA described its elimination of CFCs in government departments. BURUNDI described its efforts to phase out CFCs. UNITED ARAB EMIRATES outlined work to combat illegal trade in ODS including enacting laws on importing and licensing of ODS. BURKINA FASO highlighted its need for technical and financial support for the development of an HCFC management plan.

JAPAN said there is a need to focus on facilitating the phase-out of HCFC in Article 5 countries and said it would assist through technology transfer. BANGLADESH explained that the transition to non-CFC based MDIs is a time consuming process and that a CFC free MDI is not yet available.

A representative of FINLAND, on behalf of Expert Group of Technology Transfer of the UNFCCC, said that if HCFCs increase as a result of the Montreal Protocol, it will contribute to climate change and urged cooperation between the Montreal Protocol and the UNFCCC.

MOZAMBIQUE explained it has reduced CFC and methyl bromide imports, but was seeking further partnerships in technology transfer, institutional capacity building and financial support. CROATIA highlighted its efforts to phase out ODS, but said an efficient system for recovery, recycling and destruction of ODS was required. INDONESIA urged ODS producers to do more to prevent the export of banned ODS. In response to the historic agreement on HCFCs at MOP-19, SERBIA announced that it is convening a high level briefing on the HCFC phase out, scheduled to convene in Belgrade, in March, 2009.

BRUNEI DARUSSALAM informed delegates that it is on-track to meet its commitments, and thanked implementing agencies. CAMBODIA stressed that capacity building of personnel in the national ozone unit was a priority. IRAN said it had established a national ozone network, including comprehensive training on appreciation of the data and ODS tracking.

ARMENIA stated it has achieved an 85 percent reduction in CFC consumption, and is working toward a total phase out of CFCs by 2010. MALAYSIA reported its CFC consumption in 2007 was well below its commitments under the Montreal Protocol. KENYA described how most remaining ODS are contained in functioning and still-needed refrigerators and air conditioners, which will make them difficult to collect.

VENEZUELA noted the need to fight illicit trade in ODS, and for clear and specific actions regarding methyl bromide regulation. KUWAIT called for regulations and a schedule for the phase out of HCFCs.

CHINA said that there is a lack of mature and feasible alternatives to HCFCs, and thus total HCFC phase out would be a long process. BRAZIL reported that it has eliminated about 90 percent of ODS, and noted the value of programmes to collect, transport, and store ODS. TRINIDAD and TOBAGO said they have a multi-sectoral policy approach for phasing out ODS, which includes the implementation of the freeze and quota systems for CFCs. CUBA noted that it was leading an energy revolution in phasing out CFCs in domestic refrigerators.

AFGHANISTAN requested the Multilateral Fund to consider the difficulties faced by Afghanistan and Iraq to achieve targets set out for the ODS phase out. PHILIPPINES noted its work to reduce CFCs and phase out of HCFCs. PAKISTAN explained that with support from the Multilateral Fund, refrigeration and foam based industries in Pakistan have switched from use of CFCs to ozone friendly technologies. TURKEY stated that it does not produce ODS, has banned all CFC imports, and is ready to implement an accelerated phase-out schedule for HCFCs.

CONTACT GROUPS

METHYL BROMIDE: The contact group on methyl bromide met throughout Wednesday and discussed the draft decision on actions by Parties to reduce methyl bromide use for QPS (UNEP/OZL.PRO.20/CRP.5), and the proposals by the US and the EC for a draft decision on methyl bromide critical use exemptions for 2009-2010 (UNEP/OzL.Pro.20/CRP.9 and UNEP/OzL.Pro.20/CRP.12). After days of circular discussion around how TEAP would approach a study of methyl bromide uses in QPS, participants gravitated towards a multi-stage approach, beginning with TEAP reviewing all information on volumes and uses of methyl bromide for QPS, to establish if it could be used to adequately report specific methyl bromide QPS uses. Regarding CUEs, participants agreed to merge the US and EC documents into one, which has been provisionally approved.

MDI ESSENTIAL USE/CAMPAIGN PRODUCTION:

The contact group first discussed the remaining preambular paragraphs in the draft decision on campaign financing proposed by the US. Delegates agreed to acknowledge that while CFC production and consumption in Article 5 countries will cease in 2010, essential use exemptions will be possible. Delegates also clarified that campaign production constitutes a one-time essential use exemption for the multi-year period determined by a party to phase out CFC-based MDIs. Delegates then returned to the draft decision on amendment of the terms used in past decisions on essential uses to extend their applicability to Article 5 parties' nominations for essential use exemptions. They agreed to a deadline of MOP-21, after which no essential uses shall be approved for Article 5 parties, unless they have submitted at least a preliminary plan of action regarding phase out of MDIs for consideration by OEWG-29. While many Article 5 parties insisted on a December 31, 2009, deadline for approval of MDI inhalers in Article 5 countries to be eligible for consideration for essential use exemptions, many Article 2 countries preferred December 31, 2008, arguing that it was counterproductive to approve new products up to the final phase-out date. Delegates could not reach agreement and the meeting was suspended until Thursday to allow time for informal consultations.

IN THE CORRIDORS

Delegates attending the first day of the high level segment listened to repetitious calls for adequate financial assistance from the Multilateral Fund to phase out HCFCs and destroy ODS. Those sipping coffee in the corridors were heard muttering that their fingers were crossed for a good outcome on replenishment of the Multilateral Fund. The twenty four members of the replenishment contact group and the two Co-Chairs, however, remained behind closed doors and suffice it to say that by the time they broke for the gala dinner, the Article 5 and Article 2 group positions stood at US\$580 million versus US\$400 million.

ENB SUMMARY AND ANALYSIS: The *Earth Negotiations Bulletin* summary and analysis of COP 8 and MOP 20 will be available on Sunday, 23 November 2008, online at: <http://www.iisd.ca/ozone/mop20/>

**SUMMARY OF THE TWENTIETH MEETING OF THE PARTIES TO THE MONTREAL PROTOCOL AND EIGHTH MEETING OF THE CONFERENCE OF THE PARTIES TO THE VIENNA CONVENTION:
16-20 NOVEMBER 2008**

The eighth Conference of the Parties to the Vienna Convention for the Protection of the Ozone Layer and the twentieth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer (COP-8/MOP-20) took place in Doha, Qatar, from 16-20 November 2008. The joint meeting was attended by over 500 participants representing governments, UN agencies, intergovernmental and non-governmental organizations, academia, industry and the agricultural sector.

COP-8/MOP-20 opened with a preparatory segment from Sunday to Tuesday, 16-18 November, that addressed the COP/MOP's substantive agenda items and related draft decisions. This was followed by a high-level segment, which convened from Wednesday to Thursday, 19-20 November, and adopted the decisions forwarded to it by the preparatory segment. As the preparatory segment did not conclude its work on a number of contentious issues by Tuesday, it reconvened several times during the high-level segment to address outstanding issues, including replenishment of the Multilateral Fund, destruction of ozone depleting substances (ODS), and essential uses of metered dose inhalers.

COP-8/MOP-20 adopted a Doha Declaration and 29 decisions, including: replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol; ratification; compliance; methyl bromide; destruction of ODS; essential- and critical-use exemptions; process agents; and financial and administrative matters. Despite an extensive agenda, the hard work of delegates in plenary, contact groups and informal bilateral discussions, led to the resolution of all items, and enabled the meeting to conclude, as scheduled, on Thursday evening.

A BRIEF HISTORY OF THE OZONE REGIME

Concerns that the Earth's stratospheric ozone layer could be at risk from CFCs and other anthropogenic substances were first raised in the early 1970s. At that time, scientists warned that the release of these substances into the atmosphere could deplete the ozone layer, hindering its ability to prevent harmful ultraviolet rays from reaching the Earth. This would adversely affect ocean ecosystems, agricultural productivity and animal populations, and harm humans through higher rates of skin cancers, cataracts and weakened immune systems. In response to this growing concern, the United Nations Environment Programme (UNEP) convened a conference in March 1977 that adopted a World Plan of Action on the Ozone Layer and established a Coordinating Committee to guide future international action on ozone protection.

VIENNA CONVENTION: In May 1981, the UNEP Governing Council launched negotiations on an international agreement to protect the ozone layer and, in March 1985, the Vienna Convention for the Protection of the Ozone Layer was adopted. The Convention called for cooperation on monitoring, research and data exchange, but did not impose obligations to reduce the use of ODS. The Convention now has 193 parties.

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MONTREAL PROTOCOL: In September 1987, efforts to negotiate binding obligations to reduce the use of ODS led to the adoption of the Montreal Protocol on Substances that Deplete the Ozone Layer. The Protocol introduced control measures for some CFCs and halons for developed countries (non-Article 5 parties). Developing countries (Article 5 parties) were granted a grace period allowing them to increase their use of these ODS before taking on commitments. The Protocol currently has 193 parties.

Since 1987, several amendments and adjustments to the Protocol have been adopted, adding new obligations and additional ODS, and adjusting existing control schedules. Amendments require ratification by a defined number of parties before they enter into force, while adjustments enter into force automatically.

LONDON AMENDMENT AND ADJUSTMENTS:

Delegates to the second Meeting of the Parties (MOP-2), which took place in London, UK, in 1990, tightened control schedules and agreed to add ten more CFCs to the list of ODS, as well as carbon tetrachloride (CTC) and methyl chloroform. To date, 189 parties have ratified the London Amendment. MOP-2 also established the Multilateral Fund, which meets the incremental costs incurred by Article 5 parties in implementing the Protocol's control measures and finances clearinghouse functions, including technical assistance, information, training, and the costs of the Multilateral Fund Secretariat. The Fund is replenished every three years, and has received pledges of over US\$2 billion since its inception.

COPENHAGEN AMENDMENT AND ADJUSTMENTS:

At MOP-4, held in Copenhagen, Denmark, in 1992, delegates tightened existing control schedules and added controls on methyl bromide, hydrobromofluorocarbons and hydrochlorofluorocarbons (HCFCs). MOP-4 also agreed to enact non-compliance procedures and to establish an Implementation Committee. The Implementation Committee examines cases of possible non-compliance by parties, and makes recommendations to the MOP aimed at securing full compliance. To date, 184 parties have ratified the Copenhagen Amendment.

MONTREAL AMENDMENT AND ADJUSTMENTS: At MOP-9, held in Montreal, Canada, in 1997, delegates agreed to a new licensing system for the import and export of ODS, in addition to tightening existing control schedules. They also agreed to a ban on trade in methyl bromide with non-parties to the Copenhagen Amendment. To date, 167 parties have ratified the Montreal Amendment.

BEIJING AMENDMENT AND ADJUSTMENTS: At MOP-11, held in Beijing, China, in 1999, delegates agreed to controls on bromochloromethane and additional controls on HCFCs, and to reporting on methyl bromide for quarantine and pre-shipment (QPS) applications. At present, 144 parties have ratified the Beijing Amendment.

MOPs 14-15: At MOP-14, held in Rome, Italy, in 2002, the MOP's decisions covered such matters as compliance, interaction with the World Trade Organization, and replenishment of the Multilateral Fund with US\$474 million for 2003-2005. MOP-15, held in Nairobi, Kenya, in 2003, resulted in decisions on issues including the implications of the entry into force of the Beijing Amendment. However, disagreements surfaced over exemptions allowing the use of methyl bromide beyond 2004 for critical

uses where no technically or economically feasible alternatives are available. Delegates could not reach agreement and took the unprecedented step of calling for an "extraordinary" MOP.

FIRST EXTRAORDINARY MOP: The first Extraordinary Meeting of the Parties to the Montreal Protocol (ExMOP-1) took place in March 2004, in Montreal, Canada. Parties agreed to critical-use exemptions (CUEs) for methyl bromide for 2005 only. The introduction of a "double-cap" concept distinguishing between old and new production of methyl bromide was central to this compromise. Parties agreed to a cap for new production of 30% of parties' 1991 baseline levels, meaning that where the capped amount was insufficient for approved critical uses in 2005, parties were required to use existing stockpiles.

MOP-16: MOP-16 took place in Prague, Czech Republic, in November 2004. The parties adopted decisions on the Multilateral Fund, ratification, compliance, trade in ODS and other matters, but work on methyl bromide exemptions for 2006 was not completed. For the second time, parties decided to hold an extraordinary MOP.

SECOND EXTRAORDINARY MOP: ExMOP-2 was held in July 2005, in Montreal, Canada. Parties agreed to supplementary levels of CUEs for 2006 left unresolved at MOP-16. Under this decision, parties also agreed that: CUEs allocated domestically that exceed levels permitted by the MOP must be drawn from existing stocks; methyl bromide stocks must be reported; and parties must "endeavor" to allocate CUEs to the particular use categories specified in the decision.

COP-7/MOP-17: MOP-17 was held jointly with the seventh Conference of the Parties to the Vienna Convention in Dakar, Senegal, in December 2005. Parties approved essential-use exemptions for 2006 and 2007, supplemental CUEs for 2006 and CUEs for 2007, and production and consumption of methyl bromide in non-Article 5 parties for laboratory and analytical critical uses. Other decisions concerned, *inter alia*: submission of information on methyl bromide in space fumigation; replenishment of the Multilateral Fund with US\$470.4 million for 2006-2008; and the terms of reference for a feasibility study on developing a monitoring system for the transboundary movement of controlled ODS.

MOP-18: MOP-18 took place in New Delhi, India, from 30 October - 3 November 2006. Parties adopted decisions on: essential-use exemptions; future work following the Secretariat's workshop on the Special Report of the Intergovernmental Panel on Climate Change and the Technology and Economic Assessment Panel (TEAP); CUEs; difficulties faced by some Article 5 parties manufacturing CFC-based metered-dose inhalers (MDIs); treatment of stockpiled ODS relative to compliance; a feasibility study on developing a system for monitoring the transboundary movement of ODS; and key challenges to be faced by parties in protecting the ozone layer over the next decade. Parties deferred consideration, until the 27th meeting of the Open-ended Working Group (OEWG) of the Parties to the Montreal Protocol, of multi-year exemptions for CUEs and options for preventing harmful trade in methyl bromide stocks.

MOP-19: MOP-19 took place in Montreal, Canada, from 17-21 September 2007. Delegates adopted 29 decisions, including on: an accelerated phase-out of HCFCs; essential-use nominations and other issues arising out of the 2006 reports of

the TEAP; critical-use nominations for methyl bromide; and monitoring transboundary movements and illegal trade in ODS. A Montreal Declaration was also adopted, which acknowledges the historic global cooperation achieved during the last 20 years under the Montreal Protocol, and reaffirms parties' commitment to phase out consumption and production of ODS through a range of actions.

CURRENT ODS CONTROL SCHEDULES: Under the amendments to the Montreal Protocol, non-Article 5 parties were required to phase out production and consumption of: halons by 1994; CFCs, CTC, hydrobromochlorofluorocarbons and methyl chloroform by 1996; bromochloromethane by 2002; and methyl bromide by 2005. The phase-out of HCFC production and consumption by Article 2 countries is set for 2020 and 2030 for Article 5 parties (with interim targets prior to those dates). Production was to be stabilized by 2004 and is to be frozen in 2013. Article 5 parties were required to phase out production and consumption of bromochloromethane by 2002. These parties must still phase out: production and consumption of CFCs, halons and CTC by 2010, and methyl chloroform and methyl bromide by 2015. There are exemptions to these phase-outs to allow for certain uses lacking feasible alternatives or in particular circumstances.

COP-8/MOP-20 REPORT

PREPARATORY SEGMENT

On Sunday morning, 16 November 2008, the eighth Conference of the Parties to the Vienna Convention for the Protection of the Ozone Layer and the twentieth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer (COP-8/MOP-20) preparatory segment was opened by preparatory segment Co-Chair Mikkel Sørensen (Denmark). Preparatory segment Co-Chair Judy Beaumont (South Africa) highlighted the importance of the Replenishment Task Force, the fixed-exchange-rate mechanism, environmentally-sound disposal of ozone depleting substances (ODS), the election of new officers for several committees, and the need for transparency.

MOP-19 President Abdullah bin Mubarak bin Aaboud al-Midhadi, Minister of Environment, Qatar, welcomed participants and announced that this was the first paper-free meeting of the Montreal Protocol and the UN system, and that his country had decided to donate all the computers used at this meeting to UNEP so it can continue to hold environmentally conscious, paper-free meetings.

Marco González, Executive Secretary of the Ozone Secretariat, thanked the Government of Qatar for helping pioneer the use of electronic documentation in the UN system. He also urged support for: parties that have yet to phase out chlorofluorocarbons (CFCs), halons and carbon tetrachloride (CTC) by 2010; a robust replenishment of Multilateral Fund; a decision on ODS destruction; and working to close the gap in satellite monitoring programmes.

Co-Chair Beaumont introduced the agenda for the preparatory segment (UNEP/OzL.Conv.8/1-UNEP/OzL.Pro.20/1), and delegates adopted it with the inclusion of proposals by Iraq, Nepal, Mexico and the US, as well as a Qatari proposal to develop a Doha Declaration. Parties also agreed to the organization of work.

Throughout COP-8/MOP-20, delegates discussed agenda items and corresponding draft decisions in plenary, contact groups and bilateral consultations. Rather than addressing agenda items in numerical order, issues likely to lead to the establishment of contact groups were addressed first, in an effort to ensure as little overlap between contact groups as possible. Draft decisions were approved by the preparatory segment and forwarded to the high-level segment for adoption on Thursday afternoon. The description of the negotiations, the summary of the decisions and other outcomes can be found below.

HIGH-LEVEL SEGMENT

On Wednesday morning, delegates attended the opening of the high-level segment. MOP-19 President Abdullah bin Mubarak bin Aaboud al-Midhadi, Minister of Environment, Qatar, highlighted activities undertaken in Qatar on ozone protection, including launching a stratospheric ozone monitoring station along with the US National Aeronautics and Space Administration (NASA), and a center for applied research for creating ozone alternatives in cooperation with United Nations Environment Programme (UNEP).

Djibo Leity Ka, Minister of Environment, Senegal, and President of the Bureau of the Vienna Convention, explained that the Bureau had undertaken major activities since its last meeting three years ago in Dakar, Senegal, including strengthening of ozone monitoring and research networks.

Congratulating the Government of Qatar on a groundbreaking meeting, Executive Secretary Marco González underscored the importance of the paperless initiative, and the need for its extension to the global environmental system, including at the UNEP Governing Council meeting in February 2009.

Abdullah bin Mubarak bin Aaboud al-Midhadi introduced nominations for officers, and delegates elected Róbert Tóth (Hungary) as MOP-20 President and Patali Ranawaka (Sri Lanka) as COP-8 President by acclamation. Delegates adopted the agenda of the COP-8/MOP-20 high-level segment (UNEP/OzL.Conv.8/1-UNEP/OzL.Pro.20/1) without amendment.

PRESENTATIONS BY THE ASSESSMENT PANELS: Delegates heard presentations from the assessment panels on Wednesday.

Scientific Assessment Panel: A.R. Ravishankara (US), Co-Chair of the Scientific Assessment Panel, discussed levels and trends of ODS, with an emphasis on HCFCs. He also gave a bird's eye view of the Panel's coming 2010 assessment and a timeline of its planned work through 2011, and discussed the current level of atmospheric ozone and its trends and the current understanding of atmospheric science.

Environmental Effects Assessment Panel: Jan van der Leun (Netherlands), Co-Chair of the Environmental Effects Assessment Panel, recounted the interactions between ozone depletion and climate change, and discussed ultraviolet radiation and skin cancer as some of the side effects of the ozone hole. He discussed several studies documenting these issues and showing their highly interconnected nature. He said that a progress report on the Panel's work will appear soon.

Technology and Economic Assessment Panel (TEAP): Lambert Kuijpers (Netherlands), Co-Chair of the TEAP, updated the timelines for the Panel's work including on halons, quarantine and preshipment (QPS) and methyl bromide. He

recounted timelines for the Panel's work up to 2010, and listed many of the issues it will cover in its six technical options committees, which produce several series of reports. He discussed halons, supply and demand, and remaining challenges for total phase out of CFC-based metered-dose inhalers (MDIs).

PRESENTATION BY THE MULTILATERAL FUND ON THE WORK OF THE EXECUTIVE COMMITTEE:

On Wednesday, Albert Rombonot (Gabon), Chair of the Executive Committee of the Multilateral Fund, described the Multilateral Fund's work to phase out ODS and recognized several implementation agencies, including the United Nations Development Programme (UNDP) and the United Nations Industrial Development Organization (UNIDO), for their in-country work. He enumerated that the Multilateral Fund has 50 agreements with national governments and has disbursed US\$140 million to phase out ODS. He analyzed the capacity of countries to honor their commitments, and success towards the phase-out of CFCs by 2010. He said that 2008 is a transition year for moving on the issue of HCFCs and helping Article 5 countries stay on schedule.

COUNTRY STATEMENTS: On Wednesday and Thursday, delegates heard statements from senior officials and heads of delegations. Egypt announced that it will host MOP-21 in Sharm el-Sheikh, Egypt. Many countries spoke regarding their efforts and challenges in phasing out HCFCs. India said that one of the challenges in meeting, the freeze by 2013 is that HCFC alternatives without a high-global warming potential (GWP) remain elusive. Sri Lanka explained that its next challenge was to phase out HCFCs, especially since consumption is increasing. Iraq described its project to phase out HCFCs and its establishment of a national ozone committee. Djibouti noted the need for availability of HCFC substitutes and for financial assistance from the Multilateral Fund. Noting that the Montreal Protocol benefits both the ozone layer and climate system, the US stressed the need to destroy ODS banks and to find ways of replacing HCFCs with substances with low, or neutral, GWP.

Burkina Faso highlighted its need for technical and financial support for the development of an HCFC management plan. Japan said there is a need to focus on facilitating the phase-out of HCFCs in Article 5 countries and said it would assist through technology transfer. Venezuela noted the need to fight illicit trade in ODS, and for clear and specific actions regarding methyl bromide regulation. Kuwait called for regulations and a schedule for the phase-out of HCFCs. China said that there is a lack of mature and feasible alternatives to HCFCs, and thus total HCFC phase-out would be a long process. Syria said that they have removed 90% of the halons and are looking forward towards accelerated HCFC phase-out. A representative of Finland, on behalf of the Expert Group on Technology Transfer of the United Nations Framework Convention on Climate Change (UNFCCC), said that if HCFCs increase as a result of the Montreal Protocol it will contribute to climate change, and urged cooperation between the Montreal Protocol and the UNFCCC. In response to the historic agreement on HCFCs at MOP-19, Serbia announced that it is convening a high-level briefing on the HCFC phase-out, scheduled to convene in Belgrade in March 2009. The Philippines noted its work to reduce CFCs and phase out HCFCs.

Many countries highlighted activities towards ozone protection. Bosnia and Herzegovina noted his country's effort since 2000 to reduce ODS, saying it is now on track to reach zero consumption of CFCs by 2010. Highlighting its efforts towards ozone protection, Uganda described the challenge of containing illegal trade in ODS, and advocated for technology transfer to Article 5 countries for phasing out ODS. The Dominican Republic highlighted training of refrigeration technicians. South Africa suggested that Basel Regional and Coordinating Centers should also undertake work on implementation of the Montreal Protocol. The EU urged delegates to avoid resting on past achievements and said the Multilateral Fund should avoid indirectly funding production of HCFCs and avoid products with high GWP. Jordan said it had eliminated 70% of ODS and that it was initiating a renewable energy fund. Lebanon informed delegates it had exceeded the requirements of the Vienna Convention and Montreal Protocol, and advocated for the establishment of a pan-Arab body to address ozone issues. Tanzania said it has phased out 80% of its CFC consumption, and that training of professionals to organize recovery and recycling programmes is necessary.

The Lao People's Democratic Republic stated that it has established an import/export licensing system to regulate trade in ODS. Cameroon described its awareness-raising campaign to inform the public about ozone issues and its capacity-building workshops for phytosanitary specialists who use ODS, but stated that illicit trafficking of ODS remains a problem. Yemen recounted its successful phase-out of CFCs from aerosols and halons from fire extinguishers. Macedonia described its elimination of CFCs in government departments. Burundi described its efforts to phase out CFCs. The United Arab Emirates outlined work to combat illegal trade in ODS, including enacting laws on importing and licensing of ODS. Bangladesh explained that the transition to non-CFC based MDIs is a time consuming process and that CFC-free MDIs are not yet available in his country. Mozambique explained it has reduced CFC and methyl bromide imports, but was seeking further partnerships in technology transfer, institutional capacity building and financial support. Croatia highlighted its efforts to phase out ODS, but said an efficient system for recovery, recycling and destruction of ODS was required. Indonesia urged ODS producers to do more to prevent the export of banned ODS.

Brunei Darussalam informed delegates that it is on-track to meet its commitments, and thanked the implementing agencies. Cambodia stressed that capacity building of personnel in the national ozone unit was a priority. Iran said it had established a national ozone network, including comprehensive training on appreciation of ozone-related data and ODS tracking. Armenia stated it has achieved an 85% reduction in CFC consumption, and is working towards a total phase-out of CFCs by 2010. Malaysia reported its CFC consumption in 2007 was well below its commitments under the Montreal Protocol. Kenya described how most remaining ODS are contained in functioning and still-needed refrigerators and air conditioners, which will make them difficult to collect. Brazil reported that it has eliminated about 90% of ODS, and acknowledged the value of programmes to collect, transport and store ODS. Trinidad and Tobago said they have a multi-sectoral policy approach for phasing out

ODS, which includes the implementation of the freeze and quota systems for CFCs. Cuba noted that it was leading an energy revolution in phasing out CFCs in domestic refrigerators. Afghanistan requested the Multilateral Fund to consider the difficulties faced by Afghanistan in achieving the targets for ODS phase-out. Pakistan explained that with support from the Multilateral Fund, refrigeration and foam-based industries in Pakistan have switched from use of CFCs to ozone-friendly technologies. Turkey stated that it does not produce ODS, has banned all CFC imports, and is ready to implement an accelerated phase-out schedule for HCFCs.

Sudan suggested that there is a need to expand ozone monitoring stations, ground monitoring and observation stations, and deal with stockpiles. Myanmar said environmental protection is a high priority, and that they are implementing a country programme for phasing out CFCs with the help of UNIDO. Malawi noted that while the consumption of CFCs is decreasing, big challenges remain, including lack of capacity for destroying stockpiles of ODS. The Federated States of Micronesia welcomed discussion on the decision for destruction of ODS banks. The Basel Convention highlighted the importance of synergies between chemicals and waste-related conventions and the need for greater participation of the Basel Convention in the Montreal Protocol. Mauritius highlighted the urgent need to make bold decisions on the destruction of ODS banks and replenishment of the Multilateral Fund.

Greenpeace said the growth of the ozone hole is a stark reminder of the need to eliminate ODS, and that parties need to phase out HCFCs utilizing safe destruction methods. The International Institute of Refrigeration noted efforts must continue to eliminate CFCs in refrigerators and said that alternatives such as solar or magnetic refrigeration are now available. The Institute for Governance and Sustainable Development supported consideration of destruction of ODS banks and addressing HCFC phase-out.

COP-8/MOP-20 OUTCOMES AND DECISIONS

OZONE RESEARCH MANAGERS REPORT: Participants discussed the report of the 7th meeting of the Ozone Research Managers (ORM) on Sunday and Tuesday.

Michael Kurylo, Chair of the 7th ORM meeting, said ozone depletion and climate change are highly interconnected and the complexities of ozone and climate science demand new measurement activities. He highlighted several recommendations from the report, including those on increased research on ozone evolution and monitoring. Senegal urged space agencies and governments to coordinate work on long-term time-series satellite data, citing gaps in monitoring ozone that are likely to occur.

The EU expressed general support for research activities and requested time to review the draft decisions to ensure all necessary additional details were included. The US expressed surprise at the existence of gaps in satellite data, and urged that attention be directed towards this problem. TEAP responded, saying that a statement has been issued calling attention to the problem, and invited additional discussion. On Thursday, during the evening plenary, Senegal proposed minor amendments to the draft decision. The preparatory segment forwarded the decision to the high-level segment, where the decision was adopted.

Final Decision: The decision on the report of seventh meeting of the ORM (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, COP Decision XX/A) takes note of the report of the seventh meeting of the ORM and endorses the recommendations adopted by the ORM at its meeting. The decision requests all parties to make a renewed effort to implement the actions recommended by the ORM, particularly those adopted at its seventh meeting, with a view to:

- address uncertainties and new questions, including actual quantification of the extent to which chemical and dynamical processes are responsible for ozone production, loss, transport and distribution;
- maintain and expand surface observation networks where gaps in geographical coverage result in data deficiencies in order to ensure the continuity and improvement of ground-based *in situ* observations of ozone depleting substances, their substitutes and greenhouse gases as well as the networks that provide altitude profile information for ozone and climate related species;
- ensure that data acquired through observation are of the highest possible quality and include the metadata necessary to make them valuable to users today and in the future; and
- strengthen the capacity of developing countries and countries with economies in transition to enable them to maintain existing instruments and networks, acquire new observational capabilities and increase their participation in scientific research and assessments.

STATUS OF THE GENERAL TRUST FUND FOR FINANCING ACTIVITIES ON RESEARCH AND SYSTEMATIC OBSERVATIONS:

On Sunday, Megumi Seki, Ozone Secretariat, presented a report on the Vienna Convention Trust Fund, explaining that the Trust Fund provides support to maintain existing World Meteorological Organization-Global Atmosphere Watch (WMO-GAW) satellites. She said the Fund had received contributions of US\$179,135. Geir Braathen, WMO, reported on the Trust Fund's activities outlining the ozone observing system of the WMO-GAW and WMO's planned activities for 2009.

In the ensuing discussion, Kuwait questioned WMO regarding the possibility of installing an ozone monitoring system covering the Arab Gulf region. Indonesia requested more support to increase its ozone monitoring capabilities. Canada reported on its continued support for ozone monitoring and expressed concern about the upcoming decommissioning of satellites, which might result in a gap in observation of the ozone layer, and called for funding to maintain a strong global monitoring system.

Jordan requested funding for comprehensive monitoring to cover all regions, especially Western Asia, which faces severe risks from ozone depletion. Saudi Arabia noted that some Gulf countries still lack monitoring tools and supported increased monitoring at stratospheric and tropospheric levels. Noting several impacts of climate change on the southern hemisphere, Argentina suggested building on synergies between efforts to protect the ozone layer and to combat climate change.

On Wednesday, delegates agreed to minor amendments to the draft decision and forwarded it to the high-level segment, where the decision was adopted Thursday afternoon.

Final Decision: In the decision on the trust fund for research and observations relevant to the Convention (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, COP Decision XX/B), the COP, *inter alia*:

- urges all parties and relevant international organizations to make voluntary financial contributions to the Trust Fund to enable the continuation and enhancement of monitoring and research activities in developing countries, taking into account the need for balanced global coverage;
- requests the Secretariat to continue to invite parties and relevant international organizations annually to make voluntary contributions to the Fund and with each successive invitation to the parties to report on the prior years' contributions, funded activities and planned future activities;
- requests the Secretariat and the WMO to continue their cooperation in respect of the Trust Fund pursuant to the terms of the memorandum of understanding between the two bodies and to alert the parties to amend the memorandum of understanding to take into consideration evolving needs and conditions; and
- reminds the Secretariat and the WMO of the request that they strive for regional balance in the activities supported by the Fund and to make an effort to leverage other sources of funding.

FINANCIAL REPORTS AND BUDGETS OF THE TRUST FUNDS FOR THE VIENNA CONVENTION AND THE MONTREAL PROTOCOL: Preparatory Segment Co-Chair Sørensen introduced the agenda item (UNEP/OzL.Conv.8/4-UNEP/OzL.Pro.20/4) on Sunday and delegates agreed to follow the established practice of setting up a subcommittee to prepare a draft recommendation for consideration by parties. France, for the European Community and its member states (EU), called on parties to pay contributions in full and on time.

The budget group discussed the trust funds further on Wednesday, and it was decided that the budget would require no increase and budget levels would remain level for at least two years for the Montreal Protocol and at least three years for the Vienna Convention. The decision was forwarded to the high-level segment and adopted Thursday.

Final Decision: In the decision on the financial reports and budgets of the trust funds for the Vienna Convention and the Montreal Protocol (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, COP Decision XX/C), the COP, *inter alia*:

- takes note with appreciation of the financial statement of the Trust Fund for the biennium 2006-2007 and the report on the actual expenditures for 2007 as compared to the approvals for that year;
- approves the revised 2008 budget for the Trust Fund in the amount of US\$1,213,142, the amount of US\$699,897 for 2009, the amount of US\$717,901 for 2010, and the amount of US\$1,268,489 for 2011;
- authorizes the Secretariat to draw down an amount of US\$96,897, US\$114,901 and US\$665,489 in years 2009, 2010 and 2011, respectively, from the Fund's balance;
- ensures, as a consequence of the draw-downs, that the contributions to be paid by the parties amount to US\$603,000 for the years 2009, 2010 and 2011;
- urges all parties to pay their outstanding contributions as well

- as their future contributions promptly and in full; and
- requests the Executive Director to extend the Vienna Convention Trust Fund until 31 December 2015.

The budget tables are contained in an annex to the decision document.

STATUS OF RATIFICATIONS: Preparatory Segment Co-Chair Beaumont reported on the ratification status of the Vienna Convention, the Montreal Protocol and the Amendments to the Montreal Protocol on Monday. Delegates agreed to amend the respective draft decisions, VIII/AA and XX/AA (UNEP/OzL.Conv.8/3 and UNEP/OzL.Pro.20/3), and forward them to the high-level segment, where they were adopted on Thursday.

Final Decision: In the decision on ratification of the Montreal Protocol and Vienna Convention (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, COP/MOP Decision VIII/E and XX/E), the COP/MOP agrees to:

- note with satisfaction the number of countries that have ratified the Vienna Convention and the Montreal Protocol;
- note that, as of 15 November 2008, 189 parties had ratified the London Amendment to the Montreal Protocol, 184 parties had ratified the Copenhagen Amendment to the Montreal Protocol, 167 parties had ratified the Montreal Amendment to the Montreal Protocol and 144 parties had ratified the Beijing Amendment to the Montreal Protocol; and
- urge all states that have not yet done so to ratify, approve or accede to the Vienna Convention and the Montreal Protocol and its amendments, taking into account that universal participation is necessary to ensure the protection of the ozone layer.

REPLENISHMENT OF THE MULTILATERAL FUND: This issue was discussed in plenary on Sunday through Thursday and negotiations took place in a contact group from Sunday evening until Thursday at noon.

The plenary discussion on replenishment started off with a presentation by TEAP members on the basis of the reports of the TEAP Replenishment Task Force on Assessment of the Funding Requirement for the Replenishment of the Multilateral Fund 2009-2011. TEAP members explained that the total funding requirements for the period were in the range of US\$399 million to US\$630 million. The presenters outlined issues and costs related to inflation, cut-off dates, institutional strengthening, second conversions, cost-effectiveness factors, climate benefits and demonstration projects.

In the ensuing discussion, delegates debated replenishment and the fixed-exchange-rate mechanism. Uruguay urged that when considering the Fund's replenishment, delegates also consider synergies with the Kyoto Protocol in order not to "misstep" the goal of mitigating climate change. The US noted its concern with, *inter alia*, unconstrained production and consumption of HCFC in Article 5 countries until the freeze year of 2013, and instead suggested balanced funding to ensure a steady decline in HCFCs. China underscored the need for sufficient financial support for institution building and for Article 5 countries to meet their HCFC phase-out schedules. Japan suggested more focused discussion about the replenishment of the Fund. Jordan highlighted the importance of financial strategies enabling parties to meet cut-off dates, and strengthening institutions. Colombia urged that cut-off dates

be flexible and take into account the interests and concerns of Article 5 countries. Morocco urged making sufficient funding available to Article 5 countries for destruction, conversion and re-conversion. Argentina emphasized the importance of financial support for Article 5 countries and of assuring that replacements have the least GWP. Malaysia said that the total funding estimated by TEAP may be insufficient for the costs of HCFC phase-out.

Regarding the fixed-exchange-rate mechanism, the US said that it only provisionally supported the mechanism, since it remains to be seen how it operates in a weak economy. The EU said discussions on whether to make the fixed-exchange-rate mechanism permanent would be useful.

In plenary on Wednesday, Albert Rombonot (Gabon), Chair, Executive Committee of the Multilateral Fund, described the Multilateral Fund's work to phase out ODS. He enumerated that the Multilateral Fund has 50 agreements with national governments and has disbursed US\$140 million to phase out ODS.

The contact group was co-chaired by Laura Berón (Argentina) and Jozef Buys (Belgium). In response to the high degree of interest, delegates agreed the contact group would begin its work as an open-ended group. Delegates first discussed whether the contact group should return to the previously used working modality of only having 12 members from Article 2 countries and 12 members from Article 5 countries negotiate. They agreed to return to this working modality on Monday afternoon and closed the meeting to observers.

On Monday morning, delegates gave general opening statements, focusing mainly on two scenarios for HCFC-related activities set out by the TEAP Replenishment Task Force, namely: the baseline or lowest cost scenario, assuming modest quantities of HCFCs will be phased out during the triennium; and the 2012 consumption level scenario, assuming larger quantities will have to be phased out due to increased production. Many Article 2 countries preferred to start negotiations from the baseline scenario, while several Article 5 countries expressed their support for the 2012 funding scenario.

Delegates then considered the issues as set out in the executive summary of the supplemental report of the TEAP Replenishment Task Force (UNEP/OzL.Pro.20/6). Regarding taking inflation into account, Article 2 countries pointed to the financial crisis and prospects of deflation and said it was not the time to start accounting for inflation; while Article 5 countries pointed to the preponderance of inflation in their countries. On cut-off dates for HCFCs, many Article 5 countries preferred a later cut-off date while some Article 2 countries noted that an earlier cut-off date would mean that subsequent increases would not be eligible for funding and others suggested spreading eligible funding over more than one triennium.

In the closed session Monday afternoon, the contact group considered all budget items proposed by the TEAP, except those relating to HCFCs and destruction of ODS. They considered those items line by line, asking for additional clarification by the TEAP, and agreed to a total amount of US\$158 million for compliance-related activities.

The contact group then considered HCFC-related activities, which were to be included in the replenishment for the first time and were likely to make up nearly two-thirds of the overall allocation. Delegates agreed not to consider this item line by line, due to the wide range in funding estimates and uncertainties with regard to inclusion of second conversions and cut-off dates. They agreed instead to negotiate the overall allocation, based on the TEAP scenarios and the total funding for the 2009-2011 replenishment. They agreed that the required range of funding for the baseline scenario was US\$338.7 - 387.2 million, and for the 2012 funding scenario was US\$510.6 - US\$629.8 million. Negotiations started off with one Article 2 party commenting that "the lowest allocation was too high" and Article 5 parties countering that "the highest allocation was too low," suggesting an overall allocation of over US\$700 million. By Wednesday evening, Article 2 parties were suggesting a total allocation of US\$400 million and Article 5 countries were insisting on a minimum of US\$580 million. The contact group concluded its negotiations on Thursday at noon agreeing to a total allocation of US\$490 million.

In plenary on Thursday, Contact Group Co-Chair Buys reported that the group agreed to a replenishment of US\$490 million, including a US\$73 million carry over and US\$17 million in interest earned over the past triennium. As a result, the new contributions amount to US\$400 million. Co-Chairs Buys and Béron thanked delegates for their willingness to cooperate and said the decision was historic, especially in a time of financial crisis.

Delegates considered the draft decision on the 2009-2011 replenishment of the Multilateral Fund with an annex containing the contributions by parties to the Seventh Replenishment of the Multilateral Fund according to the UN scale of assessments (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, MOP Decision XX/A). Germany agreed to this decision, noting that as a formality it still had to seek parliamentary ratification, which could be done after the decision was adopted. Delegates sought some clarification about the scale of assessments for the contributions, and Contact Group Co-Chair Béron explained that the numbers in the annex would be checked and corrected if necessary. Japan thanked delegates for their cooperation in resolving this difficult issue. The US clarified that it could not use the fixed-exchange-rate system, since it made its contribution in US dollars. The decision was amended and forwarded to the high-level segment where it was adopted on Thursday evening.

Delegates also considered the decision on the fixed-exchange-rate system (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, COP Decision XX/D), which was forwarded to the high-level segment and adopted on Thursday evening.

Final Decisions: In the decision on the 2009-2011 replenishment of the Multilateral Fund (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, MOP Decision XX/A), parties agreed to adopt a budget for the Multilateral Fund for the Implementation of the Montreal Protocol for 2009-2011 of US\$490,000,000. Parties noted outstanding contributions from some parties with economies in transition in the period 2006-2008 stand at US\$5,604,438. Parties further adopted the scale of contributions based on a replenishment of US\$133,333,334 for 2009, US\$133,333,333 for 2010, and US\$133,333,333 for 2011. Parties

also requested the Executive Committee of the Multilateral Fund to take action to ensure that the entire budget for 2009-2011 is committed by the end of 2011, and that parties not operating under paragraph 1 of Article 5 should make timely payments. An annex contains the contributions by parties to the seventh replenishment of the Multilateral Fund, according to the UN scale of assessments.

The decision on the extension of the fixed-exchange-rate mechanism to the 2009-2011 replenishment of the Multilateral Fund (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2 MOP Decision XX/D) agrees to: direct the Treasurer to extend the fixed-exchange-rate mechanism to the period 2009-2011; and urge parties to pay their contributions to the Multilateral Fund in full and as early as possible.

The MOP further agreed that: parties choosing to pay their contributions to the Multilateral Fund in national currencies will calculate their contributions based on the average UN exchange rate for the six-month period commencing 1 January 2008; parties not choosing to pay in national currencies pursuant to the fixed-exchange-rate mechanism will continue to pay in US dollars; only parties with inflation rate fluctuations of less than 10% for the preceding triennium will be eligible to utilize the fixed-exchange-rate mechanism; and if the fixed-exchange-rate mechanism is to be used for the replenishment period 2012-2014, parties choosing to pay their contributions in national currencies will calculate their contributions based on the average UN exchange rate for the six-month period commencing 1 January 2011.

ENVIRONMENTALLY SOUND DISPOSAL OF ODS:

This issue was introduced in plenary on Sunday, and then discussed in a contact group co-chaired by Martin Sirois (Canada) and Agustín Sánchez (Mexico) throughout the week, and in closed session beginning on Tuesday. In plenary, delegates initiated discussion on this issue and heard a report from the OEWG-28 contact group on ODS disposal (UNEP/OzL.Conv.8/3-UNEP/OzL.Pro.20/3) explaining the group received comments from seven parties, which included a suggestion to take a step-by-step approach for destruction of ODS banks. Mexico highlighted its CRP (UNEP/OzL.Pro.20/CRP.3) proposing to finance pilot projects for the destruction of contaminated CFC banks that have been accumulated and that cannot fit into existing banks. The European Commission (EC) noted that they support a step-by-step approach, where the first goal would be to build upon the ongoing work of the implementing agencies or the Multilateral Fund to develop practical experience with the ODS bank management process.

Several delegates stressed the need for rapid action on environmentally sound disposal of ODS. Proposals were made to move in two or three stages: beginning with the most accessible banks, followed by medium and high-effort banks. Much discussion covered potential use of the Multilateral Fund to assist Article 5 countries. Delegates also discussed the need for additional data about banks.

The contact group completed its work on Wednesday and announced it had reached consensus. The EU welcomed the work on destruction but expressed concern about a reference to the term "net GWP", saying that the use of that term should

by no means be used as a precedent for future work. Delegates agreed to forward the draft decision (UNEP/OzL.Pro.20/CRP.16) to the high-level segment, where it was adopted.

Final Decision: In the final decision (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2 MOP Decision XX/B), the MOP, *inter alia*:

- invites parties and international funding agencies, including the Multilateral Fund, the Global Environment Facility (GEF) and other interested agents, to enable practical solutions for the purpose of gaining better knowledge on mitigating ODS emissions and destroying ODS 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;
- requests the Executive Committee of the Multilateral Fund to consider commencing pilot projects that may cover the collection, transport, storage and destruction of ODS. As an initial priority, the Executive Committee might consider projects with a focus on assembled stocks of ODS with high net global warming potential, in a representative sample of regionally diverse Article 5 parties;
- encourages 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 ODS by ensuring proper recovery of ODS from equipment containing ODS, the use of best practices and performance standards;
- encourages all parties to develop or consider improvements in national or regional strategies for the management of banks, including provisions to combat illegal trade;
- invites parties to submit their strategies and subsequent updates to the Ozone Secretariat as soon as possible;
- requests the TEAP to conduct a comprehensive cost-benefit analysis of destroying banks of ODS, taking into consideration the relative economic costs and environmental benefits to the ozone layer and the climate, of destruction versus recycling, reclaiming and re-using such substances;
- requests the TEAP to provide an interim report in time for dissemination one month before OEWG-29 and to provide the final report one month before MOP-21; and
- requests the Ozone Secretariat, with the assistance of the Multilateral Fund Secretariat, to consult with experts from the UNFCCC, GEF, Executive Board of the Clean Development Mechanism and the World Bank to develop a report on possible funding opportunities for the management and destruction of ODS banks and report to OEWG-29.

ISSUES RELATED TO ESSENTIAL USES: Delegates considered both essential-use nominations for MDIs and for the use of CFC-113 for certain aerospace applications.

CFC-113 for certain aerospace applications: Discussions on this issue took place on Monday. The Russian Federation made a request for the use of 130 tons of CFC-113 in the aerospace industry for 2009. The TEAP had authorized this request and a TEAP representative determined that their visit to the Russian Federation had stated that alternatives are being actively sought and amounts for exemptions are decreasing. The Russian Federation thanked TEAP for its work. The EC and the US requested further details about the TEAP visit to Russia, and

a TEAP member explained how they determined the essential use exemption for CFC-113. The parties agreed to confirm the allocation in 2008 of 140 tons and in 2009 of the 130 tons agreed to by MOP-19 for that use.

Essential uses and campaign production of CFCs for MDIs: Delegates discussed essential-use nominations for MDIs (UNEP/OzL.Conv.8/3-UNEP/OzL.Pro.20/3) in plenary on Sunday, Monday, Tuesday and Wednesday. A contact group convened from Monday until Thursday.

In plenary, delegates heard update reports by TEAP members, regarding nominations for essential-use exemptions for MDIs requested by the Russian Federation and the EC for 2009, and the US for 2010. TEAP reluctantly agreed to recommend such essential-use exemptions for the EC and the US with the understanding that no further nominations would be forthcoming from them. Preparatory Segment Co-Chair Beaumont noted that the EC had reduced its request for MDI essential-use exemptions from 38 to 22 tons of CFCs for 2009. The US reduced its request from 182 to 92 tons of CFCs for 2010. The US thanked the Medical Technical Options Committee (MTOC) for its work, noted concerns over the MTOC's suggestion of transitioning from epinephrine inhalers to an alternative in 2010, and looked forward to working with the EC on a joint CRP. The EC noted its support for working with the US. Preparatory Segment Co-Chair Sørensen suggested, and delegates agreed, to forward the proposal of the EC and US for a draft decision on essential-use exemptions of CFCs for MDIs (UNEP/OzL.Pro.20/CRP.10) to the high-level segment.

Delegates heard a report by the OEWG-28 campaign production and essential uses contact group providing an update on its work since OEWG-28 (UNEP/OzL.Pro.20/INF/9), noting, *inter alia*, that the group is still considering final campaign production of CFCs to supply requirements for MDI manufacturing after 2009. Further work was referred to a contact group on the issue.

The contact group was chaired by Paul Krajnik (Austria). Participants first considered the submission by the OEWG-28 contact group on MDIs regarding modifications of the terms used in past decisions on essential uses to extend their applicability to Article 5 parties' nominations for essential-use exemptions. Delegates deliberated on deleting references to non-applicability of a number of decisions affecting Article 5 parties vis-à-vis essential-use nominations for the years 1997-2002, 2000 and 2001 and for 2006 and 2007 (Decisions VIII/9, XI/14, XVII/5, respectively), and agreeing on deadlines for promoting industry participation for a smooth and efficient transition away from CFC-based MDIs. Several parties objected to the inclusion of deadlines, suggesting that they did not have appropriate technology, and debated the time required for transition and whether phase-out could be assisted by regulation. Delegates agreed to a number of deadlines, including a deadline of MOP-21, after which no essential uses shall be approved for Article 5 parties, unless they have submitted at least a preliminary plan of action regarding phase-out of MDIs for consideration by OEWG-29. While many Article 5 parties insisted on a 31 December 2009 deadline for approval of MDI inhalers in Article 5 countries to be eligible for consideration for essential-use exemptions, many Article 2 countries preferred 31 December 2008, arguing that it

was counterproductive to approve new products up to the final phase-out date. Delegates could not reach agreement and the meeting was suspended until Thursday to allow time for informal consultations. On Thursday, delegates agreed to compromise language referring to "any chlorofluorocarbon metered-dose inhaler product approved after 31 December 2008, excluding any product in the process of registration and approved by 31 December 2009.

The contact group also considered a proposal by the US for a draft decision on campaign financing. Delegates agreed to a preambular reference acknowledging that while CFC production and consumption in Article 5 countries will cease in 2010, essential-use exemptions will be possible. Delegates also clarified that campaign production constitutes a one-time essential-use exemption for the multi-year period determined by a party to phase out CFC-based MDIs. On Thursday, delegates agreed to forward the decisions on essential-use exemptions for the use of CFCs for the production of MDIs, further study of campaign production of CFCs for MDIs, and on modifications of the terms used in past decisions on essential uses to extend their applicability to Article 5 parties' nominations for essential-use exemptions. The high-level segment approved the decisions without amendment.

Final Decisions: In the decision on nominations for essential use exemptions for the use of CFCs for the production of MDIs (UNEP/OzL.Pro.20/CRP.10), the MOP decides to authorize the levels of production and consumption for 2009 and 2010 necessary to satisfy essential uses of CFCs for MDIs for asthma and chronic obstructive pulmonary disease as specified in the annex to the decision. Non-Article 5 parties, when licensing, authorizing or allocating essential-use exemptions for a manufacturer of MDIs, shall ensure 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. The annex to the decision contains the essential use authorizations for 2009 and 2010 for CFCs for MDIs, namely 22 metric tons in 2009 for the EC; 248 metric tons for the Russian Federation for 2009; and 92 metric tons for the US in 2010.

The decision on further study of campaign production of CFCs for MDIs (UNEP/OzL.Pro.20/CRP.14) acknowledges that CFC consumption and production in Article 5 parties will cease on 1 January 2010, with possible essential-use exemptions; recognizes that campaign production offers potential advantages in lieu of annual essential-use nominations to meet needs for pharmaceutical grade CFCs; and acknowledges that the MTOC requires additional information concerning the operation of a final campaign for Article 5 parties. The parties also request the TEAP present a report to MOP-21, preceded by a preliminary report to OEWG-29, concerning: the potential timing for final campaign production; options for long-term storage, distribution, and management of produced quantities of pharmaceutical-grade CFCs; options for minimizing the potential for too much or too little chlorofluorocarbon production as part of a final campaign; contractual arrangements that may be necessary; and options for reducing production of non-pharmaceutical-grade CFCs as well as options for final disposal of such CFCs. Parties further request the Multilateral Fund Secretariat to report to OEWG-29 on the

status of agreements to convert MDI manufacturing facilities in Article 5 countries and on the implementation of approved projects.

In the decision on modifications of the terms used in past decisions on essential uses to extend their applicability to Article 5 parties' nominations for essential-use exemptions (UNEP/OzL.Pro.20/CRP.17), the MOP decides to make modifications to a number of existing MOP decisions, in some cases to amend the title of decisions and remove the reference to non-Article 5 parties, so as to extend their application to Article 5 parties. The MOP further decides to include new references in:

- MOP Decision XVII/5, requesting Article 5 parties to submit a date to the Ozone Secretariat prior to MOP-22 by which time regulations to determine the non-essentiality of the vast majority of CFCs for MDIs, where the active ingredient is not solely Salbutamol, will have been proposed;
- MOP Decision IX/19, requiring Article 5 parties submitting essential-use nominations for CFCs for MDIs for the treatment of asthma and chronic obstructive pulmonary disease to present to the Ozone Secretariat an initial national or regional transition strategy by 31 January 2010 for circulation to all parties and, where possible, by 31 January 2009;
- MOP Decision XII/2, which states that a CFC MDI product approved after 31 December 2008, excluding any product in the process of registration and approved by 31 December 2009, for treatment of asthma and/or chronic obstructive pulmonary disease in an Article 5 party, is not an essential use; and
- MOP Decision XV/5, which states that no quantity of CFCs for essential uses shall be authorized after the commencement of MOP-21 if the nominating Article 5 party has not submitted to the Ozone Secretariat, in time for consideration by OEWG-29, a preliminary plan of action regarding the phase-out of the domestic use of CFC-containing MDIs where the sole active ingredient is Salbutamol.

The MOP further decides:

- that parties submitting nominations for essential-use exemptions and the TEAP reviewing nominations for essential-use exemptions shall consider the amended decisions when considering essential-use nominations in 2009 and beyond;
- to request the Secretariat to include the changes above in the relevant decisions of the parties contained in the Montreal Protocol Handbook at the time of its next revision; and
- to request the TEAP to reflect this decision in a revised version of the handbook on essential-use nominations and to submit, for consideration by parties, suggestions of any appropriate changes to the handbook and the timing to make such changes.

CONSIDERATION OF METHYL BROMIDE-RELATED ISSUES: On Monday, delegates discussed methyl bromide-related issues, including: nominations for 2009 and 2010 for critical-use exemptions; adjustment to the Montreal Protocol on allowances for production of methyl bromide to meet basic domestic needs; and QPS uses of methyl bromide. A contact group on methyl bromide also met throughout the week to discuss the draft decision on actions by parties to reduce methyl

bromide use for QPS (UNEP/OzL.Pro.20/CRP.5), as well as the proposals by the US and the EC for a decision on methyl bromide critical-use exemptions for 2009-2010 (UNEP/OzL.Pro.20/CRP.9 and UNEP/OzL.Pro.20/CRP.12), which were forwarded to the high-level segment on Thursday and adopted.

Nominations for 2009 and 2010 for critical-use exemptions (CUEs): During plenary, MBTOC Co-Chair Mohamed Besri discussed global consumption of methyl bromide in Article 5 and non-Article 5 parties from 1991 to 2007, and provided an update on the meta-analysis of methyl bromide CUEs for the US. MBTOC Co-Chair Marta Pizano provided an overview of the critical use nominations (CUNs) for methyl bromide, noting a general downward trend.

MBTOC Co-Chair Ian Porter discussed CUNs for methyl bromide's use for soil fumigation, saying that Australia and Canada could reduce CUNs if they adopted regulatory changes that lower methyl bromide dose rates, or adopt barrier films for strawberry runners. MBTOC Co-Chair Michelle Marcotte presented the MBTOC's Report on Quarantine, Structures and Commodities. In the ensuing discussion, Japan highlighted its decision to eliminate the use of methyl bromide by 2013. The EC proposed a draft decision on increasing the rate with which methyl bromide alternatives are used.

In a contact group co-chaired by Barry Reville (Australia) and Gabriel Hakizimana (Burundi), delegates considered alternative proposals for a draft decision on the evaluation of methyl bromide CUNs (UNEP/OzL.Pro.20/CRP.9 and UNEP/OzL.Pro.20/CRP.12). The proposal submitted by the EC built on the original draft decision, and added, *inter alia*, evaluation of efforts to approve alternatives and substitutes. The US proposal contained a more streamlined decision, including a suggestion that the MBTOC develop its recommendations as a single entity in a consensus process. Delegates did not agree on which proposal to work with. Some delegates raised concerns regarding transparency of MBTOC decision making in general, and the need for the MBTOC to provide additional information regarding its decisions in a timely manner, while others stressed the need to ensure that parties provide appropriate guidance to the MBTOC. On Wednesday, participants agreed to merge the US and EC documents into one, which was provisionally approved. On Thursday, the text was forwarded to the high-level segment. During the high-level segment, Australia noted that the decision, as included in the compilation decisions document (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2 MOP Decision XX/O) omitted an operative paragraph. He therefore proposed, and delegates agreed, to adopt the CRP.18/Rev.1.

Adjustment to the Montreal Protocol on allowances for production of methyl bromide to meet basic domestic needs of Article 5 parties (proposal by Kenya and Mauritius):

During plenary, Kenya, with Mauritius, proposed a draft decision (UNEP/OzL.Conv.8/3-UNEP/OzL.Pro.20/3) reducing the maximum production allowance for methyl bromide by half, beginning 1 January 2010. Jordan stated that date farmers, in particular, need to continue using methyl bromide and, supported by Morocco, opposed the proposal citing the economic value of agriculture. Mauritius, opposed by Tunisia, stressed that alternatives to methyl bromide may be available. The US

described recent successes and expressed optimism about further reductions in its use of methyl bromide. The EU supported the proposal, saying that alternatives are available.

Co-Chair Sørensen concluded the discussion on methyl bromide, stating that due to divergent views, the Kenyan proposal would not be considered further at MOP-20.

QPS uses of methyl bromide: In the contact group, participants discussed the draft decision on actions by parties to reduce methyl bromide use for QPS purposes and related emissions (UNEP/OzL.Pro.20/CRP.5), submitted by the EC, Mexico and Switzerland. Initial discussions stalled on the language around the updated definition of pre-shipment, the scope of the data being presented, and requesting the Implementation Committee to consider the reporting of methyl bromide used for QPS applications. Larger concerns also became clear, especially on how much of the data that the TEAP is being requested to analyze is actually available.

Continuing on Tuesday, many parties agreed on the usefulness of more detailed information on the major uses of methyl bromide in QPS. One party opposed additional information collection from parties, when much of the information was already available. Another party questioned whether gathering further information was possible within the required time period. The decision's sponsor maintained that the survey on where and how methyl bromide is used for QPS is vital to identifying alternatives. One Article 5 country said it would be unable to undertake a survey unless it received support from the Multilateral Fund, while others insisted that the Multilateral Fund cannot fund such an effort since methyl bromide use for QPS is exempt and not covered by the Montreal Protocol. Although consensus was not reached on whether a survey would be included in the draft decision, no other aspects of the decision proved contentious.

On Wednesday, after days of discussion around how TEAP would approach a study of methyl bromide uses in QPS, participants gravitated towards a multi-stage approach, beginning with TEAP reviewing all information on volumes and uses of methyl bromide for QPS to establish if it could be used to adequately report specific methyl bromide QPS uses.

On Thursday, the draft decision was forwarded to the high-level segment and adopted.

Final Decisions: In the decision on critical-use exemptions for 2009 and 2010 (UNEP/OzL.Pro.20/CRP.18/Rev.1), the MOP:

- permits the agreed critical-use categories for 2009 set forth in Table A of the annex to the present decision for each party, the levels of production and consumption for 2009 set forth in Table B of the annex, which are necessary to satisfy critical uses, in addition to the amounts permitted in decision XIX/9;
- requests the TEAP to ensure that recent findings with regard to the adoption rate of alternatives are annually updated and reported to the parties in its first report of each year and inform the work of the Panel;
- requests the TEAP to continue publishing annually in its progress report prior to each meeting of the OEWG the stocks of methyl bromide held by each nominating party, as reported in that party's accounting framework report;
- recognizes the continued contribution of the MBTOC's expertise and agrees that the Committee should ensure that

it develops its recommendations in a consensus process that includes full discussion among all available members of the Committee and should ensure that members with relevant expertise are involved in developing its recommendations;

- requests the TEAP to ensure that the critical-use recommendations reported in its annual progress report clearly set out the reasons for recommendations and that, where requests are received from parties for further information, the MBTOC should provide a response within four weeks of submission of such a request; and
- requests the TEAP to ensure that its consideration of nominations analyzes the impact of national, subnational, and local regulations and law on the potential use of methyl bromide alternatives, and include a description of the analysis in the critical-use nomination report.

In the final decision on actions by parties to reduce methyl bromide use for QPS purposes and related emissions (UNEP/OzL.Pro.20/CRP.18/Rev.1), the MOP:

- urges those parties that have not yet done so to report data on the use of methyl bromide for QPS applications, as required under paragraph 3 of Article 7, by April 2009 and to report such data annually thereafter;
- requests the Implementation Committee to consider the reporting of methyl bromide used for QPS applications under paragraph 3 of Article 7, in accordance with the Non-Compliance Procedure of the Montreal Protocol;
- requests the TEAP, in consultation with the International Plant Protection Convention (IPPC) Secretariat, to review all relevant, currently available information on the use of methyl bromide for QPS applications and related emissions, to assess trends in the major uses, available alternatives and other mitigation options, and barriers to the adoption of alternatives or determine what additional information or action may be required to meet those objectives;
- requests the TEAP to present a draft report based on the analysis of the available information to the OEWG-29, indicating areas where the information is not sufficient, explaining, where appropriate, why the data were inadequate and proposing how best to gather the information required for a satisfactory analysis;
- requests the TEAP, in accordance with its terms of reference, to list categories of use it has identified that have been classified as QPS use by some parties but not by others by OEWG-29 and that those parties are requested to provide information on the rationale for doing so to the TEAP in time for inclusion in its final report to MOP-21; and
- encourages parties in accordance with the recommendations of the third meeting of the Commission on Phytosanitary Measures under the IPPC to put in place a national strategy that describes actions that will help them reduce the use of methyl bromide for phytosanitary measures and/or reduce emissions of methyl bromide and make such strategies available to other parties through the Ozone Secretariat, where possible, before MOP-21.

APPLICATION OF TRADE PROVISIONS TO HCFCs:

On Monday, delegates agreed to forward the draft decision, proposed by Australia, on application of trade provisions to HCFCs to the high-level segment and delegates adopted the decision on Thursday.

Final Decision: In the decision on the trade provisions to HCFCs (UNEP/OzL.Conv.8/L.2 - UNEP/OzL.Pro.20/L.2, XX/C), the MOP: acknowledges the accelerated phase-out of HCFCs as determined by decision XIX/6, brings forward control measures for HCFCs for parties operating under paragraph 1 of Article 5 of the Protocol from 2016 to 2013, and agrees to substitute paragraph 1(a) of decision XV/3, which refers to 1 January 2016 as the date on which HCFC production and control measures take effect, so that it now refers to 1 January 2013 as the date.

PROCESS AGENTS: On Tuesday, delegates considered the TEAP's recommendation on process agents, including that three of the ten submitted uses could be added to the list of process agents. China suggested, and delegates agreed, that the issue would be revisited at MOP-21.

UPDATE REPORTS BY TEAP: On Monday in the preparatory segment, delegates heard update reports presented by TEAP members.

CTC emissions and opportunities for reduction: Regarding the task force on CTC emissions, a TEAP member reported that although total production had been slowly declining, recent atmospheric measurements have remained high, resulting in the conclusion that there is a rapidly growing new source that has to be investigated further.

Regional imbalances in respect of halons: On Monday in the preparatory segment, delegates considered TEAP's assessment that there may be regional imbalances in the availability of halons and that TEAP may wish to revisit the issue in 2009.

Scoping study on alternatives to HCFCs for mines and very high temperature conditions: On Monday, in the preparatory segment, delegates heard an update regarding the scoping study of alternatives to HCFCs for mines and very high temperature conditions. Explaining why the report was not ready for MOP-20, Co-Chair Beaumont requested TEAP to complete the study by OEWG-29 in 2009. Kuwait, Saudi Arabia, Jordan, Bahrain and Oman reminded parties of the decision to support the study; highlighted the importance of finding alternatives to HCFCs, especially in countries with very high temperatures; requested country-specific field visits to determine alternatives; and urged TEAP to complete the study as soon as possible. The US stressed the importance of the study in light of the accelerated HCFC phase-out schedule. South Africa supported TEAP field visits, saying it uses HCFCs in mines and is seeking alternatives. TEAP confirmed that the study will be available for review by January 2009, and will be discussed at OEWG-29.

TEAP ADMINISTRATIVE ISSUES: On Monday, TEAP Co-Chair Stephen Andersen presented TEAP administrative issues. He explained that the Panel was requesting a budget of US\$100,000 for 2009 for travel and meeting expenses, noting that actual expenditures for such purposes would require approval by the Panel Co-Chairs and the Ozone Secretariat, and would not include consulting fees or wages.

Regarding membership of the technical options committees, the TEAP proposed Sergey Kopylov (Russian Federation) as a new Co-Chair of the Halons Technical Options Committee. Other expert positions needing to be filled included those for nutsedge control, orchard replant, forestry, and nursery propagation for the Methyl Bromide Technical Options Committee; for aviation fire protection for the Halons Technical Options Committee; and for several refrigeration and air conditioning subsectors for the Refrigeration, Air Conditioning and Heat Pumps Technical Options Committee.

It was agreed that the Secretariat would prepare a draft decision on the nomination of Kopylov for consideration during the high-level segment of the meeting, and a draft decision was adopted on Thursday.

Final Decision: In the decision on endorsement of a new Co-Chair of the Halons Technical Options Committee (UNEP/OzL.Conv.8/L.2 - UNEP/OzL.Pro.20/L.2, XX/R), the COP agrees to endorse Sergey Kopylov (Russian Federation) as the new Co-Chair of the Halons TOC.

COMPLIANCE AND REPORTING ISSUES:

Implementation Committee President Hassan Hannachi (Tunisia) presented the report of the 41st meeting of the Implementation Committee on Tuesday. He described a series of recommendations and seven decisions from the report, covering every stage of the compliance system of the Montreal Protocol. He indicated that the data reporting rate has improved significantly, with 188 parties reporting.

In the ensuing discussion, Bangladesh described steps it has taken to phase out ODS and asked delegates to make an exception so it would not face potential non-compliance from 2007-2009. Pakistan supported Bangladesh and proposed following the transition strategy approved by the Executive Committee. Australia, supported by Switzerland, the US and the EC, suggested that the Implementation Committee reconsider the case of Bangladesh during its next meeting in 2009, noting concern about the lack of a work plan or monitoring.

The President of the Implementation Committee said the matter had already been considered in detail, but did not oppose delaying the decision to allow further consideration. Egypt noted that developing countries generally face difficulties replacing CFCs since alternative technologies are often controlled by multinational corporations and hard to access for national companies.

Final Decision: The MOP adopted eight decisions on compliance and reporting issues. The decisions note non-compliance by Somalia and Ecuador (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, MOP Decision XX/T and XX/V, and potential non-compliance by the Solomon Islands (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, MOP Decision XX/S). Additional decisions relate, *inter alia*, to the report on the establishment of licensing systems under Article 4B (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, MOP Decision XX/X), requests for a change in baseline data by Saudi Arabia (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, MOP Decision XX/V), reports of parties submitted under Article 9 (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, MOP Decision XX/U), Montreal Protocol financial matters (UNEP/OzL.Conv.8/L.2-UNEP/

OzL.Pro.20/L.2, MOP Decision XX/Q), and Article 7 data and information (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, MOP Decision XX/I).

CONSIDERATION OF MEMBERSHIP OF MONTREAL PROTOCOL BODIES FOR 2009: Membership of Montreal Protocol Bodies was considered on Wednesday and Thursday in plenary and then approved by the high-level segment on Thursday afternoon.

Members of the Implementation Committee: In the preparatory segment on Wednesday, Co-Chair Beaumont presented a draft decision on the membership of the Implementation Committee (UNEP/OzL. Pro.20/3, Dec XX/BB), noting the countries nominated for this Committee, the President and the Vice President. The high-level segment approved the draft decision.

Final Decision: In the decision on Implementation Committee membership (UNEP/OzL.Conv.8/L.2 - UNEP/OzL.Pro.20/L.2, MOP Decision XX/F), amended to include country names and new Chairs, the MOP confirms the positions of Jordan, Mauritius, Mexico, New Zealand and the Russian Federation as members of the committee for one additional year, and selects Armenia, Germany, Niger, Nicaragua and Sri Lanka as members of the committee for a two-year period commencing on 1 January 2009. It also selects Robyn Washbourne (New Zealand) to serve as President and Ghazi Odat (Jordan) as Vice-President and Rapporteur for a term of one year commencing on 1 January 2009.

Members of the Executive Committee of the Multilateral Fund: In the preparatory segment on Thursday, Co-Chair Beaumont presented a draft decision (UNEP/OzL.Pro.20/3, MOP Decision XX/G) on the Executive Committee of the Multilateral Fund, nominating a number of Article 5 and non-Article 5 countries as members, and a Chair and Vice-Chair. The high-level segment approved the draft decision on Thursday.

Final Decision: In the decision on the Executive Committee of the Multilateral Fund (UNEP/OzL.Conv.8/L.2 - UNEP/OzL. Pro.20/L.2, Dec XX/G), amended to include country names and new Chairs, members of the Executive Committee include the following Article 5 parties: Georgia, China, Yemen, Dominican Republic, Bolivia, Namibia and Gabon; and non-Article 5 parties: US, Japan, Germany, Belgium, Australia, Sweden and Romania, for one year commencing 1 January 2009. The decision also notes the selection of Husamuddin Ahmadzai (Sweden) as President and a delegate from the Dominican Republic as Vice-Chair of the Executive Committee for one year commencing on 1 January 2009.

Co-Chairs of the OEWG: In the preparatory segment on Thursday, Co-Chair Beaumont presented a draft decision on the Co-Chairs of the OEWG (UNEP/OzL.Pro.20/3, Dec XX/DD). The high-level segment approved the draft decision.

Final Decision: In the decision on OEWG membership (UNEP/OzL.Conv.8/L.2 - UNEP/OzL.Pro.20/L.2, MOP Decision XX/H), amended to include names, the MOP names Martin Sirois (Canada) and Maqsood Akhtar (Pakistan) as Co-Chairs of the OEWG of the Montreal Protocol for 2009.

DATES AND VENUES FOR FUTURE MEETINGS: In Thursday's high-level segment, Egypt announced its offer to host MOP-21 in Sharm el Sheikh, Egypt. Parties endorsed the offer and the decision was adopted Thursday.

With regard to the timing of COP-9, MOP-20 President Toth introduced a draft decision (Decision D, UNEP/OzL.Conv.8/L.2 - UNEP/OzL.Pro.20/L.2) to the high-level segment on Thursday, which the parties adopted.

Final Decisions: In the decision on the timing of COP-9 of the Vienna Convention (UNEP/OzL.Conv.8/L.2 - UNEP/OzL. Pro.20/L.2, COP Decision XX/D), the COP agrees to convene its ninth meeting back-to-back with MOP-23.

In the decision on date and venue of MOP-21 (Decision Y, UNEP/OzL.Conv.8/L.2 - UNEP/OzL.Pro.20/L.2), the MOP agrees to convene MOP-21 in Sharm el Sheikh, Egypt, and to announce a firm date for the meeting as soon as possible.

OTHER MATTERS: Submission by Qatar to adopt a Doha Declaration: On Sunday morning in plenary, Qatar presented its proposal for parties to adopt a Doha Declaration, outlining the achievements of MOP-20. The declaration was discussed informally among delegates throughout the meeting. A draft Doha Declaration (UNEP/OzL.Pro.20/CRP.11) was presented to the plenary on Thursday morning. At the request of the EC, Canada and the US, further informal consultations were convened. On Thursday afternoon, delegates agreed to forward the revised Doha Declaration (UNEP/OzL.Pro.20/CRP.11/Rev.1), including sections on the destruction of ODS, the adoption of a culture of "paperless" conferences and the importance of the replenishment of the Multilateral Fund, to the high-level segment for adoption.

Final Declaration: In the Doha Declaration, the ministers of the environment and heads of delegation note the following:

- On the issue of destruction of ODS: resolve to undertake an initial effort to destroy banks of ODS; commit to undertake further studies to assess the technical and economic feasibility of destroying ODS; commit to undertake pilot projects to generate practical data and experience on management and financing modalities, achieve climate benefits, and explore opportunities to leverage co-financing in order to maximize environmental benefits;
- On the issue of replenishment: underline the commitment to a replenishment of the Multilateral Fund of US\$490 million for the period 2009-2011 with the understanding that these funds will be utilized to enable developing countries to meet their obligations under the Protocol;
- On atmospheric measurements: Urge the governments to seek to ensure full coverage of the relevant data gathering programmes, in order to ensure that the atmosphere, including its stratospheric ozone and its interrelation with climatic change, is kept under continuous observation;
- On the Government of Qatar's initiatives: applaud the two initiatives announced by the Government of Qatar to establish: a monitoring station in Qatar for monitoring the ozone layer and the Earth's stratosphere in collaboration with NASA, and an Ozone Layer and Climate Change Research Center, within Qatar's Science and Technology Park and in collaboration with UNEP; and

• On this and future paperless meetings: recognize the outstanding contribution of the Government of Qatar in embracing and conducting, for the first time in the history of the UN, a very successful paperless meeting, a practice it is hoped will be extended to the conduct of future UN meetings; and express great appreciation to the Government of Qatar for the donation of the computers and paperless system, which will enable future UN meetings to be held in a paperless manner.

Decision on difficulties faced by Iraq: On Tuesday, Iraq introduced a draft decision regarding its difficulties in implementing the Protocol (UNEP/OzL.Pro.20/CRP.1). Iraq suggested that while it has acceded to the Vienna Convention and the Montreal Protocol, it requires technical and financial assistance to control the entry of ODS into Iraq and urged other countries to control exports. Many countries supported Iraq's request, while others wanted to consider it further. Delegates consulted informally throughout the week and on Thursday in plenary, and Iraq introduced a revised draft decision (UNEP/OzL.Pro.20/CRP.1/Rev.1) that included a request to the Executive Committee to show flexibility in considering project proposals. Delegates agreed to forward the decision to the high-level segment with minor amendments. This was adopted during the high-level segment on Thursday afternoon.

Final Decision: In the decision on the difficulties faced by Iraq (UNEP/OzL.Pro.20/CRP.1/Rev.2), the MOP:

- urges all parties to assist Iraq in controlling the export of ODS and ODS-based technologies into Iraq through the control of trade as per the provisions of the Montreal Protocol;
- requests the Executive Committee, when considering project proposals for Iraq to phase out ODS, to take into account the special situation of the party, which might necessitate phase-out of ODS in Annexes A and B beyond 2010 and flexibility in considering the project proposals; and
- requests implementing agencies to provide all possible assistance to Iraq in developing its country programme and national phase-out plans and in continuing its efforts to report to the Secretariat, as soon as possible, data on consumption of ODS in accordance with Montreal Protocol requirements.

Workshop for a dialogue on high-GWP substitutes for ODS: On Tuesday, the US introduced a proposal to hold a workshop on high-GWP substitutes for ODS (UNEP/OzL.Pro.20/CRP.7) and explained that its proposal included a request for TEAP to update its 2005 Supplement to the Special Report on the Ozone Layer and Climate, and convene a half-day open-ended dialogue on high-GWP substitutes to ODS at OEWG-29. The EU, supported by Australia, requested more time for discussion and delegates agreed to continue discussions informally.

On Thursday, the US confirmed that delegates had consulted informally and that a revised CRP (UNEP/OzL.Pro.20/CRP.7/Rev.1) was available. He noted that while the decision had not included language on the provision of funds for the workshop, that there was agreement that funding would be made available to ensure robust participation of Article 5 countries. China said this "gentlemen's agreement" must be included in the meeting report. Co-Chair Sørensen confirmed a budget of US\$150,000.

Delegates agreed to the proposal with minor editorial amendments and it was forwarded to the high-level segment and adopted on Thursday afternoon.

Final Decision: In the final decision on a workshop for a dialogue on high-GWP ODS (UNEP/OzL.Pro.20/CRP.7/Rev.2), the MOP agrees to, *inter alia*:

- request TEAP to update the Panel's 2005 Supplement to the Special Report on the Ozone Layer and Climate and to report on the status of substitutes for HCFCs, including a description of the various use patterns and potential market penetration of alternatives that have high GWPs;
- request the Ozone Secretariat to prepare a report that compiles current control measures, limits and information reporting requirements for compounds that are substitutes for ODS and that are addressed under international agreements relevant to climate change;
- convene a half-day open-ended dialogue on high-GWP substitutes to ODS among parties, including participation by the Assessment Panels, the Ozone Secretariat, and the Multilateral Fund Secretariat, and inviting the Fund's implementing agencies, other relevant multilateral environmental agreement secretariats and non-governmental organizations to discuss technical and policy issues related to high-GWP substitutes to ODS, with a particular focus on HCFCs;
- hold the dialogue on high-GWP substitutes to ODS preceding the OEWG-29 meeting; and
- further request the Secretariat to prepare, in cooperation with the Co-Chairs of the workshop, a summary report of the discussions that take place during the dialogue, and to report on the proceedings to OEWG-29.

CLOSING PLENARY

The closing plenary was held on Thursday evening. In the beginning of the session the preparatory segment reconvened and agreed to forward several outstanding decisions to the high-level segment. Co-Chair Beaumont thanked delegates for their hard work in the preparatory segment and closed the segment.

MOP-20 President Tóth then opened and chaired the high-level segment. He announced the meeting credentials and said the Bureau had approved 94 of the 143 participating parties. He urged parties to submit credentials at the next meeting.

Delegates considered the reports of the joint meeting (UNEP/OzL.Conv.8/L.1- UNEP/OzL.Pro.20/L.1, Add.1, Add.2, and Add.3) and adopted them after a number of minor amendments and statements of clarification.

Tanzania, for the African Group, complemented the Co-Chairs' outstanding leadership, reaffirmed its commitment to the Montreal Protocol and called for further financial support. China thanked the Co-Chairs and looked forward to another 20 years of success under the Montreal Protocol. Qatar thanked delegates for visiting his country and for achieving successful outcomes. President Tóth urged delegates to return their laptops to ensure that paperless meetings could continue into the future. He thanked the Secretariat, the Government of Qatar and participants for their hard work and looked forward to meeting everyone in Egypt in 2009. He gavelled the meeting to a close at 7:37 pm.

A BRIEF ANALYSIS OF THE MEETING

OZONE DEPLETION IN A DESERT SETTING

The city of Doha, Qatar, hosted the eighth meeting of the COP of the Vienna Convention (COP-8) and the 20th meeting of the MOP (MOP-20) of the Montreal Protocol. The desert city provides all the comforts of modern living, perhaps the most important being temperature control. Along with this luxury, comes the challenge of identifying ways to provide cooling and refrigeration for the city without depleting the ozone layer or contributing to ozone's sister issue, climate change.

Delegates in Doha were faced with a number of challenges, including ensuring that the accelerated HCFC phase-out was built into the triennial replenishment of the Multilateral Fund, and addressing the long-standing challenge of the destruction of ozone depleting substances (ODS) that are stored in banks. As MOP-20 demonstrated, in spite of the many successes of the Montreal Protocol there is still much work to be done to protect the ozone layer. This analysis will examine how these key issues were addressed at COP-8 and MOP-20 and how this will affect the road to MOP-21 in Sharm el-Sheikh, Egypt.

LESSONS FROM THE SOUQ

Last year at MOP-19, parties committed to an accelerated phase out of HCFCs, a chemical that was originally seen as a substitute for CFCs but proved to be ozone depleting substances with high global warming potential. In this context, it is also worth recalling that MOP-19 Decision XIX/6 on adjustments to the Montreal Protocol with regard to HCFCs was a carefully crafted compromise. Of utter importance to Article 5 (developing) countries was the reference to stable and sufficient funding to meet all agreed incremental costs to comply with the accelerated phase-out schedule. At MOP-20, participants had to ensure that this ambitious schedule could actually be met.

The Multilateral Fund has often been hailed as the key to the Montreal Protocol's success and is expected to play a similar role in the phase out of HCFCs. The replenishment for the period of 2009-2011 represents the first time that HCFC-related phase-out activities are included in the Multilateral Fund and, therefore, added a new dimension to the triennial debate, especially since they will consume the majority of the allocated funds. Negotiations on replenishment and especially HCFC-related activities started with the two different scenarios set out in the reports of the TEAP Replenishment Task Force: the baseline or lowest cost scenario, assuming high cost effectiveness and modest quantities phased out during the triennium; and the 2012 consumption level scenario, assuming low cost effectiveness and larger quantities to be phased out. Along these lines, the required range of funding in 2009-2011 replenishment for the baseline scenario is US\$338.7 - 387.2 million, and for the 2012 funding scenario is US \$510.6 - 629.8 million. Article 2 (donor) countries rejected the 2012 scenario on the basis that production and consumption of HCFCs is not likely to decrease until 2013, the year stipulated for the freeze of HCFC consumption; and it could lead indirectly to funding increased production, thereby creating a perverse incentive. On the other hand, Article 5 countries insisted that additional funding was required to control and lower the current rate of growth in those industries.

The scene was set for the negotiations on HCFC-related activities when one Article 2 country insisted that the "lowest amount in the baseline scenario was too high" and in turn Article 5 countries countered that the "highest of the 2012 consumption scenarios was too low." As one delegate put it, negotiations became comparable to trading camels in a souq, the traditional Arabian market in Doha, where bargaining is a long perfected art form. As Article 2 and Article 5 countries sat on opposite sides of the negotiating table, one side started off with an offer of under US\$320 million and the other countered with more than double, over US\$700 million. By the evening before the end of the negotiations, after a number of steps and offers, the gap had "narrowed" to US\$400 versus US\$580 million.

In the end it did not come much as a surprise when parties settled on a final replenishment right in the middle – US\$490 million. When deducting the carry-over from the past triennium and the interest accrued over that period, the total amount of new funds is US\$400 million, exactly the same as for the past triennium. Furthermore, the actual contributions of most donor countries will actually decline, due to the fixed-exchange-rate mechanism that has the US dollar at a lower level vis-à-vis other major donor currencies in comparison to the previous replenishment. A number of these parties had arrived in Doha with a mandate allowing for an increase in their contributions, but other parties noted that due to the current financial crisis an increase in contributions was not realistic. Delegates from both Article 5 and Article 2 countries agreed that the outcome of the MOP-20 replenishment negotiations met the stipulation of MOP-19 Decision XIX/6 to ensure stable and sufficient funding to comply with the accelerated HCFC phase-out schedule. Much will depend on the operationalization of HCFC-related activities throughout this replenishment period by the Executive Committee of the Multilateral Fund. Key issues that it will have to address include: second conversions, which are cases where plants have been converted from CFC production to HCFC production and now would seek funding for a further conversion; and the cut-off date determining which level of HCFC consumption and production will be eligible for funding.

A GENIE IN THE BOTTLE – THE DESTRUCTION OF ODS

While the discussion over the funding of HCFC phase-out took center stage at MOP-20, another key debate was also underway: the destruction of ODS. The TEAP, in collaboration with Intergovernmental Panel on Climate Change, estimates that there were approximately 5.2 million tons of ODS stored in global banks in 2002. Within those, 1 million tons are readily available for recovery and destruction.

Destruction mitigates the risk of ODS entering the atmosphere and depleting the ozone layer by breaking ODS down into inert components. Furthermore, since Article 5 countries are expected to completely phase out the production and consumption of CFCs, halons and CTC by 2010, the amount of ODS available for recovery and destruction will continue to grow. Add to that increasing quantities of HCFCs due to the accelerated phase-out and the issue becomes even more pressing.

The task at hand for MOP-20 delegates was to agree to undertake further studies on destruction and on initiating pilot projects including collection, storage and destruction. On the sidelines, and informally, however, delegates were considering

how to fund destruction. While phase-out of ODS falls within the mandate of the Multilateral Fund, there is no mandate to cover costs of destruction for ODS existing in stockpiles and banks. The Multilateral Fund, however, can fund studies and pilot projects, which MOP-20 tasked it to do.

According to several delegates, funding destruction would require an amendment to the Multilateral Fund and, consequently, greater replenishments in the future. While some speculated this was a logical progression for the Montreal Protocol, and Article 5 countries prefer the use of the Multilateral Fund as a primary funding mechanism because of its accessibility and track record, others suggested there may not be sufficient political will for a greater replenishment load. Some delegates cited references of parties to the potential use of the Clean Development Mechanism, or voluntary carbon markets, to fund destruction. Since the cost of destroying HCFCs is potentially very large, selling carbon credits for destruction of ODS with GWP may make it financially viable to operate destruction facilities on a commercial basis. In the decision on destruction of ODS, TEAP was asked to assess the relative economic costs and environmental benefits to both the ozone layer and the climate of destruction versus recycling, reclaiming and re-using such substances. Many delegates commented that destruction is the environmentally preferable option, because recycling, reclaiming and reusing ODS is likely to result in eventual release of ODS into the atmosphere.

Whatever funding mechanisms, or combination of mechanisms, are decided upon, synergies with other conventions will require greater consideration. The ties to UNFCCC and the Kyoto Protocol are clear, since a number of substances covered by the Montreal Protocol have great GWP and their environmentally-sound destruction counteracts both climate change and ozone depletion. In addition, cooperation with the Basel Convention will become more and more important as transboundary transport of ODS will be necessary because destruction facilities are expensive and cannot be constructed in each country. Unless the issue of destruction of ODS is addressed in a speedy and efficient manner through cooperation at all levels, many of the successes under the Protocol could be undone by significant amounts of ODS being released into the atmosphere through leakage.

ON THE DESERT HORIZON

As MOP-20 was gaveled to a close, many suggested that once again the Montreal Protocol lived up to its esteemed reputation as the most successful multilateral environmental agreement. Not only was this the first meeting to forego the usual flurry of white paper documents and go paperless, it also bid farewell to the last production facilities for CFCs in India and China, proving that parties are complying and phase-out schedules can be achieved. The next challenge will be realizing the same result for HCFCs. Now that HCFCs are included in the Multilateral Fund, parties have demonstrated their willingness to meet this challenge.

MOP-20 also laid important groundwork for future work by agreeing to study key issues such as destruction, campaign financing for CFC based MDIs, and examining the use of QPS in an effort to eventually phase out methyl-bromide.

The road ahead, however, remains long. After 21 years, the Montreal Protocol has successfully phased out a significant number of ODS and has effectively addressed production and consumption of others. However, fully mitigating risks to the ozone layer requires two complimentary approaches – phase-out and destruction. As the parties reach the phase-out dates, addressing destruction becomes imperative and the next challenge for the Protocol – one that delegates will tackle again in another desert oasis, Sharm el-Sheikh, Egypt. By then, hopefully, the Protocol will be a few steps closer to blending luxury and sensibility and finding ways to remain cool, without contributing to climate change or the ozone hole.

UPCOMING MEETINGS

INFORMAL WORKSHOP ON STAKEHOLDERS' INFORMATION NEEDS ON CHEMICALS IN ARTICLES/ PRODUCTS: This informal workshop will be held from 2-4 December 2008, in Bangkok, Thailand. For more information, contact the SAICM Secretariat: tel: +41-22-917-12-34; fax: +41-22-797-3460; e-mail: saicm@chemicals.unep.ch; internet: http://www.chem.unep.ch/unepsaicm/cheminprod_dec08/default.htm

EUROPE AND CENTRAL ASIA (ECA) CONTACT GROUP MEETING ON PROGRESS OF TPMP IMPLEMENTATION AND ASSESSMENT OF

AWARENESS RAISING ACTIVITIES: This meeting will be held in Chisinau, Moldova, from 2-4 December 2008. For more information, contact UNEP OzonAction Branch: tel: +33-1-44-37 1450; fax: +33-1-44-37-1474; e-mail: ozonaction@unep.fr; internet: <http://www.unep.fr/ozonaction/events/2008%20events.pdf>

STOCKHOLM CONVENTION EXPERT MEETING TO FURTHER DEVELOP THE STANDARDIZED TOOLKIT FOR IDENTIFICATION AND QUANTIFICATION OF DIOXIN AND FURAN RELEASES: This expert meeting will be held from 3-4 December 2008, in Geneva, Switzerland, to prepare proposals for Stockholm Convention COP 4 for revising and updating the Toolkit. For more information, contact: Stockholm Convention Secretariat; tel: +41-22-917-8729; fax: +41-22-917-8098; e-mail: ssc@pops.int; internet: <http://www.pops.int>

FIRST MEETING OF ODS CUSTOMS ENFORCEMENT NETWORK MEETING FOR LATIN AMERICA: This meeting will be held in Panama from 9-11 December 2008. For more information, contact UNEP OzonAction Branch: tel: +33-1-44-37-1450; fax: +33-1-44-37-1474; e-mail: ozonaction@unep.fr; internet: <http://www.unep.fr/ozonaction/events/2008%20events.pdf>

FOURTEENTH CONFERENCE OF THE PARTIES TO THE UNFCCC AND FOURTH MEETING OF THE PARTIES TO THE KYOTO PROTOCOL: This meeting will convene in Poznań, Poland, from 1-12 December 2008. The conference will also include the 29th sessions of the Convention's two subsidiary bodies – Subsidiary Body for Scientific and Technological Advice (SBSTA) and Subsidiary Body for Implementation (SBI) – as well as the 4th session of the *Ad hoc* Working Group on Long Term Cooperative Action (AWG-LCA) and the resumed 6th session of the *Ad Hoc* Working Group on Further Commitments for Annex I Parties

under the Kyoto Protocol (AWG-KP). For more information, contact: UNFCCC Secretariat; tel: +49-228-815-1000; fax: +49-228-815-1999; e-mail: secretariat@unfccc.int; internet: <http://www.unfccc.int>

EASTERN EUROPEAN BRIEFING ON HCFC PHASE-OUT: This briefing will be held in Belgrade in late March 2009, as a joint initiative of United Nations Environment Programme-Division of Technology, Environment and Economics (UNEP-DTIE) and the Serbian Ministry of Environment. The purpose of the meeting is to gain knowledge of HCFC consumption patterns for English speaking countries of the Eastern European Central Asian network. It will focus on policy options and legislation supporting HCFC phase-out. For more information, contact: Dunja Dobric, Ministry of Environment and Spatial Planning, Serbia; tel: +38-164-816-6357; fax: +38-111-313-1394; e-mail: dunja.dobric@ekoserb.sr.gov.yu; internet: <http://www.ekoserb.sr.gov.yu>

SEVENTH SESSION OF THE AWG-KP AND FIFTH SESSION OF THE AWG-LCA: The 5th session of the *Ad hoc* Working Group on Long Term Cooperative Action (AWG-LCA) and the 7th session of the *Ad Hoc* Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP) will meet from 29 March - 8 April 2009 in Bonn, Germany. For more information, contact: UNFCCC Secretariat; tel: +49-228-815-1000; fax: +49-228-815-1999; e-mail: secretariat@unfccc.int; internet: <http://www.unfccc.int>

FOURTH MEETING OF THE CONFERENCE OF THE PARTIES TO THE STOCKHOLM CONVENTION ON PERSISTENT ORGANIC POLLUTANTS: COP 4 will be held from 4-8 May 2009, in Geneva, Switzerland. The meeting will address a non-compliance mechanism, synergies between the Rotterdam, Basel and Stockholm Conventions, and recommendations from the POPs Review Committee to schedule further chemicals under the Convention. For more information, contact: Stockholm Convention Secretariat; tel: +41-22-917-8729; fax: +41-22-917-8098; e-mail: ssc@pops.int; internet: <http://www.pops.int/>

SECOND SESSION OF THE INTERNATIONAL CONFERENCE ON CHEMICALS MANAGEMENT (ICCM-2): This meeting will take place from 11-15 May 2009 in Geneva, Switzerland. For more information, contact: SAICM Secretariat; tel: +41-22-917-8532; fax: +41-22-797-3460; e-mail: saicm@chemicals.unep.ch; internet: <http://www.chem.unep.ch/saicm/iccm/ICCM2/iccm2.htm>

UNFCCC SUBSIDIARY BODIES MEETINGS: The 30th sessions of the UNFCCC Convention subsidiary bodies – SBSTA and SBI – and the 6th session of the *Ad hoc* Working Group on Long Term Cooperative Action (AWG-LCA) and the 8th session of the *Ad Hoc* Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP) will meet from 1-12 June 2009 in Bonn, Germany. For more information, contact: UNFCCC Secretariat; tel: +49-228-815-1000; fax: +49-228-815-1999; e-mail: secretariat@unfccc.int; internet: <http://www.unfccc.int>

42ND MEETING OF THE IMPLEMENTATION COMMITTEE UNDER THE NON-COMPLIANCE PROCEDURE FOR THE MONTREAL PROTOCOL:

This meeting will be held from 15-17 July 2009, in Geneva, Switzerland. For more information, contact: Ozone Secretariat; tel: +254-20-762-3851/3611; fax: +254-20-762-4691/92/93 e-mail: ozoneinfo@unep.org; internet: <http://ozone.unep.org>

WORKSHOP FOR A DIALOGUE ON HIGH-GWP ALTERNATIVES FOR OZONE DEPLETING SUBSTANCES:

This workshop will be held on 19 July 2009, one day before the twenty-ninth Open-ended Working Group of the parties to the Montreal Protocol (OEWG 29) at a venue to be decided by the Ozone Secretariat. This meeting will focus on technical and policy issues related to ODS alternatives and exchanging views on the best ways of using the experience of the Montreal Protocol for addressing the impact of HFCs and maximizing the ozone and climate benefits of the HCFCs early phase-out. For more information, contact: Ozone Secretariat; tel: +254-20-762-3851/3611; fax: +254-20-762-4691/92/93 e-mail: ozoneinfo@unep.org; internet: <http://ozone.unep.org>

29TH MEETING OF THE OPEN-ENDED WORKING GROUP OF THE PARTIES TO THE MONTREAL PROTOCOL ON SUBSTANCES THAT DEplete THE OZONE LAYER:

This meeting will be held from 20-24 July 2009, in Geneva, Switzerland. For more information, contact: Ozone Secretariat; tel: +254-20-762-3851/3611; fax: +254-20-762-4691/92/93 e-mail: ozoneinfo@unep.org; internet: <http://ozone.unep.org>

MONTREAL PROTOCOL MOP-21: The 21st Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer will take place in Sharm el Sheikh, Egypt, at a date to be determined. For more information, contact: Ozone Secretariat; tel: +254-20-762-3851/3611; fax: +254-20-762-4691/92/93 e-mail: ozoneinfo@unep.org; internet: <http://ozone.unep.org>

GLOSSARY

CFC	Chlorofluorocarbons
CTC	Carbon tetrachloride
CUE	Critical-use exemption
CUN	Critical-use nomination
GWP	Global warming potential
HCFC	Hydrochlorofluorocarbons
HFC	Hydrofluorocarbons
MTOC	Medical Technical Options Committee
MBTOC	Methyl Bromide Technical Options Committee
MDI	Metered-dose inhaler
ODS	Ozone depleting substances
OEWG	Open-ended Working Group
ORM	Ozone Research Managers
QPS	Quarantine and pre-shipment
TEAP	Technology and Economic Assessment Panel
WMO	World Meteorological Organization
WMO-GAW	World Meteorological Organization-Global Atmosphere Watch

**SUMMARY OF THE TWENTIETH MEETING OF THE PARTIES TO THE MONTREAL PROTOCOL AND EIGHTH MEETING OF THE CONFERENCE OF THE PARTIES TO THE VIENNA CONVENTION:
16-20 NOVEMBER 2008**

The eighth Conference of the Parties to the Vienna Convention for the Protection of the Ozone Layer and the twentieth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer (COP-8/MOP-20) took place in Doha, Qatar, from 16-20 November 2008. The joint meeting was attended by over 500 participants representing governments, UN agencies, intergovernmental and non-governmental organizations, academia, industry and the agricultural sector.

COP-8/MOP-20 opened with a preparatory segment from Sunday to Tuesday, 16-18 November, that addressed the COP/MOP's substantive agenda items and related draft decisions. This was followed by a high-level segment, which convened from Wednesday to Thursday, 19-20 November, and adopted the decisions forwarded to it by the preparatory segment. As the preparatory segment did not conclude its work on a number of contentious issues by Tuesday, it reconvened several times during the high-level segment to address outstanding issues, including replenishment of the Multilateral Fund, destruction of ozone depleting substances (ODS), and essential uses of metered dose inhalers.

COP-8/MOP-20 adopted a Doha Declaration and 29 decisions, including: replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol; ratification; compliance; methyl bromide; destruction of ODS; essential- and critical-use exemptions; process agents; and financial and administrative matters. Despite an extensive agenda, the hard work of delegates in plenary, contact groups and informal bilateral discussions, led to the resolution of all items, and enabled the meeting to conclude, as scheduled, on Thursday evening.

A BRIEF HISTORY OF THE OZONE REGIME

Concerns that the Earth's stratospheric ozone layer could be at risk from CFCs and other anthropogenic substances were first raised in the early 1970s. At that time, scientists warned that the release of these substances into the atmosphere could deplete the ozone layer, hindering its ability to prevent harmful ultraviolet rays from reaching the Earth. This would adversely affect ocean ecosystems, agricultural productivity and animal populations, and harm humans through higher rates of skin cancers, cataracts and weakened immune systems. In response to this growing concern, the United Nations Environment Programme (UNEP) convened a conference in March 1977 that adopted a World Plan of Action on the Ozone Layer and established a Coordinating Committee to guide future international action on ozone protection.

VIENNA CONVENTION: In May 1981, the UNEP Governing Council launched negotiations on an international agreement to protect the ozone layer and, in March 1985, the Vienna Convention for the Protection of the Ozone Layer was adopted. The Convention called for cooperation on monitoring, research and data exchange, but did not impose obligations to reduce the use of ODS. The Convention now has 193 parties.

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MONTREAL PROTOCOL: In September 1987, efforts to negotiate binding obligations to reduce the use of ODS led to the adoption of the Montreal Protocol on Substances that Deplete the Ozone Layer. The Protocol introduced control measures for some CFCs and halons for developed countries (non-Article 5 parties). Developing countries (Article 5 parties) were granted a grace period allowing them to increase their use of these ODS before taking on commitments. The Protocol currently has 193 parties.

Since 1987, several amendments and adjustments to the Protocol have been adopted, adding new obligations and additional ODS, and adjusting existing control schedules. Amendments require ratification by a defined number of parties before they enter into force, while adjustments enter into force automatically.

LONDON AMENDMENT AND ADJUSTMENTS: Delegates to the second Meeting of the Parties (MOP-2), which took place in London, UK, in 1990, tightened control schedules and agreed to add ten more CFCs to the list of ODS, as well as carbon tetrachloride (CTC) and methyl chloroform. To date, 189 parties have ratified the London Amendment. MOP-2 also established the Multilateral Fund, which meets the incremental costs incurred by Article 5 parties in implementing the Protocol's control measures and finances clearinghouse functions, including technical assistance, information, training, and the costs of the Multilateral Fund Secretariat. The Fund is replenished every three years, and has received pledges of over US\$2 billion since its inception.

COPENHAGEN AMENDMENT AND ADJUSTMENTS: At MOP-4, held in Copenhagen, Denmark, in 1992, delegates tightened existing control schedules and added controls on methyl bromide, hydrobromofluorocarbons and hydrochlorofluorocarbons (HCFCs). MOP-4 also agreed to enact non-compliance procedures and to establish an Implementation Committee. The Implementation Committee examines cases of possible non-compliance by parties, and makes recommendations to the MOP aimed at securing full compliance. To date, 184 parties have ratified the Copenhagen Amendment.

MONTREAL AMENDMENT AND ADJUSTMENTS: At MOP-9, held in Montreal, Canada, in 1997, delegates agreed to a new licensing system for the import and export of ODS, in addition to tightening existing control schedules. They also agreed to a ban on trade in methyl bromide with non-parties to the Copenhagen Amendment. To date, 167 parties have ratified the Montreal Amendment.

BEIJING AMENDMENT AND ADJUSTMENTS: At MOP-11, held in Beijing, China, in 1999, delegates agreed to controls on bromochloromethane and additional controls on HCFCs, and to reporting on methyl bromide for quarantine and pre-shipment (QPS) applications. At present, 144 parties have ratified the Beijing Amendment.

MOPs 14-15: At MOP-14, held in Rome, Italy, in 2002, the MOP's decisions covered such matters as compliance, interaction with the World Trade Organization, and replenishment of the Multilateral Fund with US\$474 million for 2003-2005. MOP-15, held in Nairobi, Kenya, in 2003, resulted in decisions on issues including the implications of the entry into force of the Beijing Amendment. However, disagreements surfaced over exemptions allowing the use of methyl bromide beyond 2004 for critical

uses where no technically or economically feasible alternatives are available. Delegates could not reach agreement and took the unprecedented step of calling for an "extraordinary" MOP.

FIRST EXTRAORDINARY MOP: The first Extraordinary Meeting of the Parties to the Montreal Protocol (ExMOP-1) took place in March 2004, in Montreal, Canada. Parties agreed to critical-use exemptions (CUEs) for methyl bromide for 2005 only. The introduction of a "double-cap" concept distinguishing between old and new production of methyl bromide was central to this compromise. Parties agreed to a cap for new production of 30% of parties' 1991 baseline levels, meaning that where the capped amount was insufficient for approved critical uses in 2005, parties were required to use existing stockpiles.

MOP-16: MOP-16 took place in Prague, Czech Republic, in November 2004. The parties adopted decisions on the Multilateral Fund, ratification, compliance, trade in ODS and other matters, but work on methyl bromide exemptions for 2006 was not completed. For the second time, parties decided to hold an extraordinary MOP.

SECOND EXTRAORDINARY MOP: ExMOP-2 was held in July 2005, in Montreal, Canada. Parties agreed to supplementary levels of CUEs for 2006 left unresolved at MOP-16. Under this decision, parties also agreed that: CUEs allocated domestically that exceed levels permitted by the MOP must be drawn from existing stocks; methyl bromide stocks must be reported; and parties must "endeavor" to allocate CUEs to the particular use categories specified in the decision.

COP-7/MOP-17: MOP-17 was held jointly with the seventh Conference of the Parties to the Vienna Convention in Dakar, Senegal, in December 2005. Parties approved essential-use exemptions for 2006 and 2007, supplemental CUEs for 2006 and CUEs for 2007, and production and consumption of methyl bromide in non-Article 5 parties for laboratory and analytical critical uses. Other decisions concerned, *inter alia*: submission of information on methyl bromide in space fumigation; replenishment of the Multilateral Fund with US\$470.4 million for 2006-2008; and the terms of reference for a feasibility study on developing a monitoring system for the transboundary movement of controlled ODS.

MOP-18: MOP-18 took place in New Delhi, India, from 30 October - 3 November 2006. Parties adopted decisions on: essential-use exemptions; future work following the Secretariat's workshop on the Special Report of the Intergovernmental Panel on Climate Change and the Technology and Economic Assessment Panel (TEAP); CUEs; difficulties faced by some Article 5 parties manufacturing CFC-based metered-dose inhalers (MDIs); treatment of stockpiled ODS relative to compliance; a feasibility study on developing a system for monitoring the transboundary movement of ODS; and key challenges to be faced by parties in protecting the ozone layer over the next decade. Parties deferred consideration, until the 27th meeting of the Open-ended Working Group (OEWG) of the Parties to the Montreal Protocol, of multi-year exemptions for CUEs and options for preventing harmful trade in methyl bromide stocks.

MOP-19: MOP-19 took place in Montreal, Canada, from 17-21 September 2007. Delegates adopted 29 decisions, including on: an accelerated phase-out of HCFCs; essential-use nominations and other issues arising out of the 2006 reports of

the TEAP; critical-use nominations for methyl bromide; and monitoring transboundary movements and illegal trade in ODS. A Montreal Declaration was also adopted, which acknowledges the historic global cooperation achieved during the last 20 years under the Montreal Protocol, and reaffirms parties' commitment to phase out consumption and production of ODS through a range of actions.

CURRENT ODS CONTROL SCHEDULES: Under the amendments to the Montreal Protocol, non-Article 5 parties were required to phase out production and consumption of: halons by 1994; CFCs, CTC, hydrobromochlorofluorocarbons and methyl chloroform by 1996; bromochloromethane by 2002; and methyl bromide by 2005. The phase-out of HCFC production and consumption by Article 2 countries is set for 2020 and 2030 for Article 5 parties (with interim targets prior to those dates). Production was to be stabilized by 2004 and is to be frozen in 2013. Article 5 parties were required to phase out production and consumption of bromochloromethane by 2002. These parties must still phase out: production and consumption of CFCs, halons and CTC by 2010, and methyl chloroform and methyl bromide by 2015. There are exemptions to these phase-outs to allow for certain uses lacking feasible alternatives or in particular circumstances.

COP-8/MOP-20 REPORT

PREPARATORY SEGMENT

On Sunday morning, 16 November 2008, the eighth Conference of the Parties to the Vienna Convention for the Protection of the Ozone Layer and the twentieth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer (COP-8/MOP-20) preparatory segment was opened by preparatory segment Co-Chair Mikkel Sørensen (Denmark). Preparatory segment Co-Chair Judy Beaumont (South Africa) highlighted the importance of the Replenishment Task Force, the fixed-exchange-rate mechanism, environmentally-sound disposal of ozone depleting substances (ODS), the election of new officers for several committees, and the need for transparency.

MOP-19 President Abdullah bin Mubarak bin Aaboud al-Midhadi, Minister of Environment, Qatar, welcomed participants and announced that this was the first paper-free meeting of the Montreal Protocol and the UN system, and that his country had decided to donate all the computers used at this meeting to UNEP so it can continue to hold environmentally conscious, paper-free meetings.

Marco González, Executive Secretary of the Ozone Secretariat, thanked the Government of Qatar for helping pioneer the use of electronic documentation in the UN system. He also urged support for: parties that have yet to phase out chlorofluorocarbons (CFCs), halons and carbon tetrachloride (CTC) by 2010; a robust replenishment of Multilateral Fund; a decision on ODS destruction; and working to close the gap in satellite monitoring programmes.

Co-Chair Beaumont introduced the agenda for the preparatory segment (UNEP/OzL.Conv.8/1-UNEP/OzL.Pro.20/1), and delegates adopted it with the inclusion of proposals by Iraq, Nepal, Mexico and the US, as well as a Qatari proposal to develop a Doha Declaration. Parties also agreed to the organization of work.

Throughout COP-8/MOP-20, delegates discussed agenda items and corresponding draft decisions in plenary, contact groups and bilateral consultations. Rather than addressing agenda items in numerical order, issues likely to lead to the establishment of contact groups were addressed first, in an effort to ensure as little overlap between contact groups as possible. Draft decisions were approved by the preparatory segment and forwarded to the high-level segment for adoption on Thursday afternoon. The description of the negotiations, the summary of the decisions and other outcomes can be found below.

HIGH-LEVEL SEGMENT

On Wednesday morning, delegates attended the opening of the high-level segment. MOP-19 President Abdullah bin Mubarak bin Aaboud al-Midhadi, Minister of Environment, Qatar, highlighted activities undertaken in Qatar on ozone protection, including launching a stratospheric ozone monitoring station along with the US National Aeronautics and Space Administration (NASA), and a center for applied research for creating ozone alternatives in cooperation with United Nations Environment Programme (UNEP).

Djibo Leity Ka, Minister of Environment, Senegal, and President of the Bureau of the Vienna Convention, explained that the Bureau had undertaken major activities since its last meeting three years ago in Dakar, Senegal, including strengthening of ozone monitoring and research networks.

Congratulating the Government of Qatar on a groundbreaking meeting, Executive Secretary Marco González underscored the importance of the paperless initiative, and the need for its extension to the global environmental system, including at the UNEP Governing Council meeting in February 2009.

Abdullah bin Mubarak bin Aaboud al-Midhadi introduced nominations for officers, and delegates elected Róbert Tóth (Hungary) as MOP-20 President and Patali Ranawaka (Sri Lanka) as COP-8 President by acclamation. Delegates adopted the agenda of the COP-8/MOP-20 high-level segment (UNEP/OzL.Conv.8/1-UNEP/OzL.Pro.20/1) without amendment.

PRESENTATIONS BY THE ASSESSMENT PANELS: Delegates heard presentations from the assessment panels on Wednesday.

Scientific Assessment Panel: A.R. Ravishankara (US), Co-Chair of the Scientific Assessment Panel, discussed levels and trends of ODS, with an emphasis on HCFCs. He also gave a bird's eye view of the Panel's coming 2010 assessment and a timeline of its planned work through 2011, and discussed the current level of atmospheric ozone and its trends and the current understanding of atmospheric science.

Environmental Effects Assessment Panel: Jan van der Leun (Netherlands), Co-Chair of the Environmental Effects Assessment Panel, recounted the interactions between ozone depletion and climate change, and discussed ultraviolet radiation and skin cancer as some of the side effects of the ozone hole. He discussed several studies documenting these issues and showing their highly interconnected nature. He said that a progress report on the Panel's work will appear soon.

Technology and Economic Assessment Panel (TEAP): Lambert Kuijpers (Netherlands), Co-Chair of the TEAP, updated the timelines for the Panel's work including on halons, quarantine and preshipment (QPS) and methyl bromide. He

recounted timelines for the Panel's work up to 2010, and listed many of the issues it will cover in its six technical options committees, which produce several series of reports. He discussed halons, supply and demand, and remaining challenges for total phase out of CFC-based metered-dose inhalers (MDIs).

PRESENTATION BY THE MULTILATERAL FUND ON THE WORK OF THE EXECUTIVE COMMITTEE:

On Wednesday, Albert Rombonot (Gabon), Chair of the Executive Committee of the Multilateral Fund, described the Multilateral Fund's work to phase out ODS and recognized several implementation agencies, including the United Nations Development Programme (UNDP) and the United Nations Industrial Development Organization (UNIDO), for their in-country work. He enumerated that the Multilateral Fund has 50 agreements with national governments and has disbursed US\$140 million to phase out ODS. He analyzed the capacity of countries to honor their commitments, and success towards the phase-out of CFCs by 2010. He said that 2008 is a transition year for moving on the issue of HCFCs and helping Article 5 countries stay on schedule.

COUNTRY STATEMENTS: On Wednesday and Thursday, delegates heard statements from senior officials and heads of delegations. Egypt announced that it will host MOP-21 in Sharm el-Sheikh, Egypt. Many countries spoke regarding their efforts and challenges in phasing out HCFCs. India said that one of the challenges in meeting, the freeze by 2013 is that HCFC alternatives without a high-global warming potential (GWP) remain elusive. Sri Lanka explained that its next challenge was to phase out HCFCs, especially since consumption is increasing. Iraq described its project to phase out HCFCs and its establishment of a national ozone committee. Djibouti noted the need for availability of HCFC substitutes and for financial assistance from the Multilateral Fund. Noting that the Montreal Protocol benefits both the ozone layer and climate system, the US stressed the need to destroy ODS banks and to find ways of replacing HCFCs with substances with low, or neutral, GWP.

Burkina Faso highlighted its need for technical and financial support for the development of an HCFC management plan. Japan said there is a need to focus on facilitating the phase-out of HCFCs in Article 5 countries and said it would assist through technology transfer. Venezuela noted the need to fight illicit trade in ODS, and for clear and specific actions regarding methyl bromide regulation. Kuwait called for regulations and a schedule for the phase-out of HCFCs. China said that there is a lack of mature and feasible alternatives to HCFCs, and thus total HCFC phase-out would be a long process. Syria said that they have removed 90% of the halons and are looking forward towards accelerated HCFC phase-out. A representative of Finland, on behalf of the Expert Group on Technology Transfer of the United Nations Framework Convention on Climate Change (UNFCCC), said that if HCFCs increase as a result of the Montreal Protocol it will contribute to climate change, and urged cooperation between the Montreal Protocol and the UNFCCC. In response to the historic agreement on HCFCs at MOP-19, Serbia announced that it is convening a high-level briefing on the HCFC phase-out, scheduled to convene in Belgrade in March 2009. The Philippines noted its work to reduce CFCs and phase out HCFCs.

Many countries highlighted activities towards ozone protection. Bosnia and Herzegovina noted his country's effort since 2000 to reduce ODS, saying it is now on track to reach zero consumption of CFCs by 2010. Highlighting its efforts towards ozone protection, Uganda described the challenge of containing illegal trade in ODS, and advocated for technology transfer to Article 5 countries for phasing out ODS. The Dominican Republic highlighted training of refrigeration technicians. South Africa suggested that Basel Regional and Coordinating Centers should also undertake work on implementation of the Montreal Protocol. The EU urged delegates to avoid resting on past achievements and said the Multilateral Fund should avoid indirectly funding production of HCFCs and avoid products with high GWP. Jordan said it had eliminated 70% of ODS and that it was initiating a renewable energy fund. Lebanon informed delegates it had exceeded the requirements of the Vienna Convention and Montreal Protocol, and advocated for the establishment of a pan-Arab body to address ozone issues. Tanzania said it has phased out 80% of its CFC consumption, and that training of professionals to organize recovery and recycling programmes is necessary.

The Lao People's Democratic Republic stated that it has established an import/export licensing system to regulate trade in ODS. Cameroon described its awareness-raising campaign to inform the public about ozone issues and its capacity-building workshops for phytosanitary specialists who use ODS, but stated that illicit trafficking of ODS remains a problem. Yemen recounted its successful phase-out of CFCs from aerosols and halons from fire extinguishers. Macedonia described its elimination of CFCs in government departments. Burundi described its efforts to phase out CFCs. The United Arab Emirates outlined work to combat illegal trade in ODS, including enacting laws on importing and licensing of ODS. Bangladesh explained that the transition to non-CFC based MDIs is a time consuming process and that CFC-free MDIs are not yet available in his country. Mozambique explained it has reduced CFC and methyl bromide imports, but was seeking further partnerships in technology transfer, institutional capacity building and financial support. Croatia highlighted its efforts to phase out ODS, but said an efficient system for recovery, recycling and destruction of ODS was required. Indonesia urged ODS producers to do more to prevent the export of banned ODS.

Brunei Darussalam informed delegates that it is on-track to meet its commitments, and thanked the implementing agencies. Cambodia stressed that capacity building of personnel in the national ozone unit was a priority. Iran said it had established a national ozone network, including comprehensive training on appreciation of ozone-related data and ODS tracking. Armenia stated it has achieved an 85% reduction in CFC consumption, and is working towards a total phase-out of CFCs by 2010. Malaysia reported its CFC consumption in 2007 was well below its commitments under the Montreal Protocol. Kenya described how most remaining ODS are contained in functioning and still-needed refrigerators and air conditioners, which will make them difficult to collect. Brazil reported that it has eliminated about 90% of ODS, and acknowledged the value of programmes to collect, transport and store ODS. Trinidad and Tobago said they have a multi-sectoral policy approach for phasing out

ODS, which includes the implementation of the freeze and quota systems for CFCs. Cuba noted that it was leading an energy revolution in phasing out CFCs in domestic refrigerators. Afghanistan requested the Multilateral Fund to consider the difficulties faced by Afghanistan in achieving the targets for ODS phase-out. Pakistan explained that with support from the Multilateral Fund, refrigeration and foam-based industries in Pakistan have switched from use of CFCs to ozone-friendly technologies. Turkey stated that it does not produce ODS, has banned all CFC imports, and is ready to implement an accelerated phase-out schedule for HCFCs.

Sudan suggested that there is a need to expand ozone monitoring stations, ground monitoring and observation stations, and deal with stockpiles. Myanmar said environmental protection is a high priority, and that they are implementing a country programme for phasing out CFCs with the help of UNIDO. Malawi noted that while the consumption of CFCs is decreasing, big challenges remain, including lack of capacity for destroying stockpiles of ODS. The Federated States of Micronesia welcomed discussion on the decision for destruction of ODS banks. The Basel Convention highlighted the importance of synergies between chemicals and waste-related conventions and the need for greater participation of the Basel Convention in the Montreal Protocol. Mauritius highlighted the urgent need to make bold decisions on the destruction of ODS banks and replenishment of the Multilateral Fund.

Greenpeace said the growth of the ozone hole is a stark reminder of the need to eliminate ODS, and that parties need to phase out HCFCs utilizing safe destruction methods. The International Institute of Refrigeration noted efforts must continue to eliminate CFCs in refrigerators and said that alternatives such as solar or magnetic refrigeration are now available. The Institute for Governance and Sustainable Development supported consideration of destruction of ODS banks and addressing HCFC phase-out.

COP-8/MOP-20 OUTCOMES AND DECISIONS

OZONE RESEARCH MANAGERS REPORT: Participants discussed the report of the 7th meeting of the Ozone Research Managers (ORM) on Sunday and Tuesday.

Michael Kurylo, Chair of the 7th ORM meeting, said ozone depletion and climate change are highly interconnected and the complexities of ozone and climate science demand new measurement activities. He highlighted several recommendations from the report, including those on increased research on ozone evolution and monitoring. Senegal urged space agencies and governments to coordinate work on long-term time-series satellite data, citing gaps in monitoring ozone that are likely to occur.

The EU expressed general support for research activities and requested time to review the draft decisions to ensure all necessary additional details were included. The US expressed surprise at the existence of gaps in satellite data, and urged that attention be directed towards this problem. TEAP responded, saying that a statement has been issued calling attention to the problem, and invited additional discussion. On Thursday, during the evening plenary, Senegal proposed minor amendments to the draft decision. The preparatory segment forwarded the decision to the high-level segment, where the decision was adopted.

Final Decision: The decision on the report of seventh meeting of the ORM (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, COP Decision XX/A) takes note of the report of the seventh meeting of the ORM and endorses the recommendations adopted by the ORM at its meeting. The decision requests all parties to make a renewed effort to implement the actions recommended by the ORM, particularly those adopted at its seventh meeting, with a view to:

- address uncertainties and new questions, including actual quantification of the extent to which chemical and dynamical processes are responsible for ozone production, loss, transport and distribution;
- maintain and expand surface observation networks where gaps in geographical coverage result in data deficiencies in order to ensure the continuity and improvement of ground-based *in situ* observations of ozone depleting substances, their substitutes and greenhouse gases as well as the networks that provide altitude profile information for ozone and climate related species;
- ensure that data acquired through observation are of the highest possible quality and include the metadata necessary to make them valuable to users today and in the future; and
- strengthen the capacity of developing countries and countries with economies in transition to enable them to maintain existing instruments and networks, acquire new observational capabilities and increase their participation in scientific research and assessments.

STATUS OF THE GENERAL TRUST FUND FOR FINANCING ACTIVITIES ON RESEARCH AND SYSTEMATIC OBSERVATIONS:

On Sunday, Megumi Seki, Ozone Secretariat, presented a report on the Vienna Convention Trust Fund, explaining that the Trust Fund provides support to maintain existing World Meteorological Organization-Global Atmosphere Watch (WMO-GAW) satellites. She said the Fund had received contributions of US\$179,135. Geir Braathen, WMO, reported on the Trust Fund's activities outlining the ozone observing system of the WMO-GAW and WMO's planned activities for 2009.

In the ensuing discussion, Kuwait questioned WMO regarding the possibility of installing an ozone monitoring system covering the Arab Gulf region. Indonesia requested more support to increase its ozone monitoring capabilities. Canada reported on its continued support for ozone monitoring and expressed concern about the upcoming decommissioning of satellites, which might result in a gap in observation of the ozone layer, and called for funding to maintain a strong global monitoring system.

Jordan requested funding for comprehensive monitoring to cover all regions, especially Western Asia, which faces severe risks from ozone depletion. Saudi Arabia noted that some Gulf countries still lack monitoring tools and supported increased monitoring at stratospheric and tropospheric levels. Noting several impacts of climate change on the southern hemisphere, Argentina suggested building on synergies between efforts to protect the ozone layer and to combat climate change.

On Wednesday, delegates agreed to minor amendments to the draft decision and forwarded it to the high-level segment, where the decision was adopted Thursday afternoon.

Final Decision: In the decision on the trust fund for research and observations relevant to the Convention (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, COP Decision XX/B), the COP, *inter alia*:

- urges all parties and relevant international organizations to make voluntary financial contributions to the Trust Fund to enable the continuation and enhancement of monitoring and research activities in developing countries, taking into account the need for balanced global coverage;
- requests the Secretariat to continue to invite parties and relevant international organizations annually to make voluntary contributions to the Fund and with each successive invitation to the parties to report on the prior years' contributions, funded activities and planned future activities;
- requests the Secretariat and the WMO to continue their cooperation in respect of the Trust Fund pursuant to the terms of the memorandum of understanding between the two bodies and to alert the parties to amend the memorandum of understanding to take into consideration evolving needs and conditions; and
- reminds the Secretariat and the WMO of the request that they strive for regional balance in the activities supported by the Fund and to make an effort to leverage other sources of funding.

FINANCIAL REPORTS AND BUDGETS OF THE TRUST FUNDS FOR THE VIENNA CONVENTION AND THE MONTREAL PROTOCOL: Preparatory Segment Co-Chair Sørensen introduced the agenda item (UNEP/OzL.Conv.8/4-UNEP/OzL.Pro.20/4) on Sunday and delegates agreed to follow the established practice of setting up a subcommittee to prepare a draft recommendation for consideration by parties. France, for the European Community and its member states (EU), called on parties to pay contributions in full and on time.

The budget group discussed the trust funds further on Wednesday, and it was decided that the budget would require no increase and budget levels would remain level for at least two years for the Montreal Protocol and at least three years for the Vienna Convention. The decision was forwarded to the high-level segment and adopted Thursday.

Final Decision: In the decision on the financial reports and budgets of the trust funds for the Vienna Convention and the Montreal Protocol (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, COP Decision XX/C), the COP, *inter alia*:

- takes note with appreciation of the financial statement of the Trust Fund for the biennium 2006-2007 and the report on the actual expenditures for 2007 as compared to the approvals for that year;
- approves the revised 2008 budget for the Trust Fund in the amount of US\$1,213,142, the amount of US\$699,897 for 2009, the amount of US\$717,901 for 2010, and the amount of US\$1,268,489 for 2011;
- authorizes the Secretariat to draw down an amount of US\$96,897, US\$114,901 and US\$665,489 in years 2009, 2010 and 2011, respectively, from the Fund's balance;
- ensures, as a consequence of the draw-downs, that the contributions to be paid by the parties amount to US\$603,000 for the years 2009, 2010 and 2011;
- urges all parties to pay their outstanding contributions as well

- as their future contributions promptly and in full; and
- requests the Executive Director to extend the Vienna Convention Trust Fund until 31 December 2015.

The budget tables are contained in an annex to the decision document.

STATUS OF RATIFICATIONS: Preparatory Segment Co-Chair Beaumont reported on the ratification status of the Vienna Convention, the Montreal Protocol and the Amendments to the Montreal Protocol on Monday. Delegates agreed to amend the respective draft decisions, VIII/AA and XX/AA (UNEP/OzL.Conv.8/3 and UNEP/OzL.Pro.20/3), and forward them to the high-level segment, where they were adopted on Thursday.

Final Decision: In the decision on ratification of the Montreal Protocol and Vienna Convention (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, COP/MOP Decision VIII/E and XX/E), the COP/MOP agrees to:

- note with satisfaction the number of countries that have ratified the Vienna Convention and the Montreal Protocol;
- note that, as of 15 November 2008, 189 parties had ratified the London Amendment to the Montreal Protocol, 184 parties had ratified the Copenhagen Amendment to the Montreal Protocol, 167 parties had ratified the Montreal Amendment to the Montreal Protocol and 144 parties had ratified the Beijing Amendment to the Montreal Protocol; and
- urge all states that have not yet done so to ratify, approve or accede to the Vienna Convention and the Montreal Protocol and its amendments, taking into account that universal participation is necessary to ensure the protection of the ozone layer.

REPLENISHMENT OF THE MULTILATERAL FUND: This issue was discussed in plenary on Sunday through Thursday and negotiations took place in a contact group from Sunday evening until Thursday at noon.

The plenary discussion on replenishment started off with a presentation by TEAP members on the basis of the reports of the TEAP Replenishment Task Force on Assessment of the Funding Requirement for the Replenishment of the Multilateral Fund 2009-2011. TEAP members explained that the total funding requirements for the period were in the range of US\$399 million to US\$630 million. The presenters outlined issues and costs related to inflation, cut-off dates, institutional strengthening, second conversions, cost-effectiveness factors, climate benefits and demonstration projects.

In the ensuing discussion, delegates debated replenishment and the fixed-exchange-rate mechanism. Uruguay urged that when considering the Fund's replenishment, delegates also consider synergies with the Kyoto Protocol in order not to "misstep" the goal of mitigating climate change. The US noted its concern with, *inter alia*, unconstrained production and consumption of HCFC in Article 5 countries until the freeze year of 2013, and instead suggested balanced funding to ensure a steady decline in HCFCs. China underscored the need for sufficient financial support for institution building and for Article 5 countries to meet their HCFC phase-out schedules. Japan suggested more focused discussion about the replenishment of the Fund. Jordan highlighted the importance of financial strategies enabling parties to meet cut-off dates, and strengthening institutions. Colombia urged that cut-off dates

be flexible and take into account the interests and concerns of Article 5 countries. Morocco urged making sufficient funding available to Article 5 countries for destruction, conversion and re-conversion. Argentina emphasized the importance of financial support for Article 5 countries and of assuring that replacements have the least GWP. Malaysia said that the total funding estimated by TEAP may be insufficient for the costs of HCFC phase-out.

Regarding the fixed-exchange-rate mechanism, the US said that it only provisionally supported the mechanism, since it remains to be seen how it operates in a weak economy. The EU said discussions on whether to make the fixed-exchange-rate mechanism permanent would be useful.

In plenary on Wednesday, Albert Rombonot (Gabon), Chair, Executive Committee of the Multilateral Fund, described the Multilateral Fund's work to phase out ODS. He enumerated that the Multilateral Fund has 50 agreements with national governments and has disbursed US\$140 million to phase out ODS.

The contact group was co-chaired by Laura Berón (Argentina) and Jozef Buys (Belgium). In response to the high degree of interest, delegates agreed the contact group would begin its work as an open-ended group. Delegates first discussed whether the contact group should return to the previously used working modality of only having 12 members from Article 2 countries and 12 members from Article 5 countries negotiate. They agreed to return to this working modality on Monday afternoon and closed the meeting to observers.

On Monday morning, delegates gave general opening statements, focusing mainly on two scenarios for HCFC-related activities set out by the TEAP Replenishment Task Force, namely: the baseline or lowest cost scenario, assuming modest quantities of HCFCs will be phased out during the triennium; and the 2012 consumption level scenario, assuming larger quantities will have to be phased out due to increased production. Many Article 2 countries preferred to start negotiations from the baseline scenario, while several Article 5 countries expressed their support for the 2012 funding scenario.

Delegates then considered the issues as set out in the executive summary of the supplemental report of the TEAP Replenishment Task Force (UNEP/OzL.Pro.20/6). Regarding taking inflation into account, Article 2 countries pointed to the financial crisis and prospects of deflation and said it was not the time to start accounting for inflation; while Article 5 countries pointed to the preponderance of inflation in their countries. On cut-off dates for HCFCs, many Article 5 countries preferred a later cut-off date while some Article 2 countries noted that an earlier cut-off date would mean that subsequent increases would not be eligible for funding and others suggested spreading eligible funding over more than one triennium.

In the closed session Monday afternoon, the contact group considered all budget items proposed by the TEAP, except those relating to HCFCs and destruction of ODS. They considered those items line by line, asking for additional clarification by the TEAP, and agreed to a total amount of US\$158 million for compliance-related activities.

The contact group then considered HCFC-related activities, which were to be included in the replenishment for the first time and were likely to make up nearly two-thirds of the overall allocation. Delegates agreed not to consider this item line by line, due to the wide range in funding estimates and uncertainties with regard to inclusion of second conversions and cut-off dates. They agreed instead to negotiate the overall allocation, based on the TEAP scenarios and the total funding for the 2009-2011 replenishment. They agreed that the required range of funding for the baseline scenario was US\$338.7 - 387.2 million, and for the 2012 funding scenario was US\$510.6 - US\$629.8 million. Negotiations started off with one Article 2 party commenting that "the lowest allocation was too high" and Article 5 parties countering that "the highest allocation was too low," suggesting an overall allocation of over US\$700 million. By Wednesday evening, Article 2 parties were suggesting a total allocation of US\$400 million and Article 5 countries were insisting on a minimum of US\$580 million. The contact group concluded its negotiations on Thursday at noon agreeing to a total allocation of US\$490 million.

In plenary on Thursday, Contact Group Co-Chair Buys reported that the group agreed to a replenishment of US\$490 million, including a US\$73 million carry over and US\$17 million in interest earned over the past triennium. As a result, the new contributions amount to US\$400 million. Co-Chairs Buys and Béron thanked delegates for their willingness to cooperate and said the decision was historic, especially in a time of financial crisis.

Delegates considered the draft decision on the 2009-2011 replenishment of the Multilateral Fund with an annex containing the contributions by parties to the Seventh Replenishment of the Multilateral Fund according to the UN scale of assessments (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, MOP Decision XX/A). Germany agreed to this decision, noting that as a formality it still had to seek parliamentary ratification, which could be done after the decision was adopted. Delegates sought some clarification about the scale of assessments for the contributions, and Contact Group Co-Chair Béron explained that the numbers in the annex would be checked and corrected if necessary. Japan thanked delegates for their cooperation in resolving this difficult issue. The US clarified that it could not use the fixed-exchange-rate system, since it made its contribution in US dollars. The decision was amended and forwarded to the high-level segment where it was adopted on Thursday evening.

Delegates also considered the decision on the fixed-exchange-rate system (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, COP Decision XX/D), which was forwarded to the high-level segment and adopted on Thursday evening.

Final Decisions: In the decision on the 2009-2011 replenishment of the Multilateral Fund (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, MOP Decision XX/A), parties agreed to adopt a budget for the Multilateral Fund for the Implementation of the Montreal Protocol for 2009-2011 of US\$490,000,000. Parties noted outstanding contributions from some parties with economies in transition in the period 2006-2008 stand at US\$5,604,438. Parties further adopted the scale of contributions based on a replenishment of US\$133,333,334 for 2009, US\$133,333,333 for 2010, and US\$133,333,333 for 2011. Parties

also requested the Executive Committee of the Multilateral Fund to take action to ensure that the entire budget for 2009-2011 is committed by the end of 2011, and that parties not operating under paragraph 1 of Article 5 should make timely payments. An annex contains the contributions by parties to the seventh replenishment of the Multilateral Fund, according to the UN scale of assessments.

The decision on the extension of the fixed-exchange-rate mechanism to the 2009-2011 replenishment of the Multilateral Fund (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2 MOP Decision XX/D) agrees to: direct the Treasurer to extend the fixed-exchange-rate mechanism to the period 2009-2011; and urge parties to pay their contributions to the Multilateral Fund in full and as early as possible.

The MOP further agreed that: parties choosing to pay their contributions to the Multilateral Fund in national currencies will calculate their contributions based on the average UN exchange rate for the six-month period commencing 1 January 2008; parties not choosing to pay in national currencies pursuant to the fixed-exchange-rate mechanism will continue to pay in US dollars; only parties with inflation rate fluctuations of less than 10% for the preceding triennium will be eligible to utilize the fixed-exchange-rate mechanism; and if the fixed-exchange-rate mechanism is to be used for the replenishment period 2012-2014, parties choosing to pay their contributions in national currencies will calculate their contributions based on the average UN exchange rate for the six-month period commencing 1 January 2011.

ENVIRONMENTALLY SOUND DISPOSAL OF ODS:

This issue was introduced in plenary on Sunday, and then discussed in a contact group co-chaired by Martin Sirois (Canada) and Agustín Sánchez (Mexico) throughout the week, and in closed session beginning on Tuesday. In plenary, delegates initiated discussion on this issue and heard a report from the OEWG-28 contact group on ODS disposal (UNEP/OzL.Conv.8/3-UNEP/OzL.Pro.20/3) explaining the group received comments from seven parties, which included a suggestion to take a step-by-step approach for destruction of ODS banks. Mexico highlighted its CRP (UNEP/OzL.Pro.20/CRP.3) proposing to finance pilot projects for the destruction of contaminated CFC banks that have been accumulated and that cannot fit into existing banks. The European Commission (EC) noted that they support a step-by-step approach, where the first goal would be to build upon the ongoing work of the implementing agencies or the Multilateral Fund to develop practical experience with the ODS bank management process.

Several delegates stressed the need for rapid action on environmentally sound disposal of ODS. Proposals were made to move in two or three stages: beginning with the most accessible banks, followed by medium and high-effort banks. Much discussion covered potential use of the Multilateral Fund to assist Article 5 countries. Delegates also discussed the need for additional data about banks.

The contact group completed its work on Wednesday and announced it had reached consensus. The EU welcomed the work on destruction but expressed concern about a reference to the term "net GWP", saying that the use of that term should

by no means be used as a precedent for future work. Delegates agreed to forward the draft decision (UNEP/OzL.Pro.20/CRP.16) to the high-level segment, where it was adopted.

Final Decision: In the final decision (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2 MOP Decision XX/B), the MOP, *inter alia*:

- invites parties and international funding agencies, including the Multilateral Fund, the Global Environment Facility (GEF) and other interested agents, to enable practical solutions for the purpose of gaining better knowledge on mitigating ODS emissions and destroying ODS 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;
- requests the Executive Committee of the Multilateral Fund to consider commencing pilot projects that may cover the collection, transport, storage and destruction of ODS. As an initial priority, the Executive Committee might consider projects with a focus on assembled stocks of ODS with high net global warming potential, in a representative sample of regionally diverse Article 5 parties;
- encourages 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 ODS by ensuring proper recovery of ODS from equipment containing ODS, the use of best practices and performance standards;
- encourages all parties to develop or consider improvements in national or regional strategies for the management of banks, including provisions to combat illegal trade;
- invites parties to submit their strategies and subsequent updates to the Ozone Secretariat as soon as possible;
- requests the TEAP to conduct a comprehensive cost-benefit analysis of destroying banks of ODS, taking into consideration the relative economic costs and environmental benefits to the ozone layer and the climate, of destruction versus recycling, reclaiming and re-using such substances;
- requests the TEAP to provide an interim report in time for dissemination one month before OEWG-29 and to provide the final report one month before MOP-21; and
- requests the Ozone Secretariat, with the assistance of the Multilateral Fund Secretariat, to consult with experts from the UNFCCC, GEF, Executive Board of the Clean Development Mechanism and the World Bank to develop a report on possible funding opportunities for the management and destruction of ODS banks and report to OEWG-29.

ISSUES RELATED TO ESSENTIAL USES: Delegates considered both essential-use nominations for MDIs and for the use of CFC-113 for certain aerospace applications.

CFC-113 for certain aerospace applications: Discussions on this issue took place on Monday. The Russian Federation made a request for the use of 130 tons of CFC-113 in the aerospace industry for 2009. The TEAP had authorized this request and a TEAP representative determined that their visit to the Russian Federation had stated that alternatives are being actively sought and amounts for exemptions are decreasing. The Russian Federation thanked TEAP for its work. The EC and the US requested further details about the TEAP visit to Russia, and

a TEAP member explained how they determined the essential use exemption for CFC-113. The parties agreed to confirm the allocation in 2008 of 140 tons and in 2009 of the 130 tons agreed to by MOP-19 for that use.

Essential uses and campaign production of CFCs for MDIs: Delegates discussed essential-use nominations for MDIs (UNEP/OzL.Conv.8/3-UNEP/OzL.Pro.20/3) in plenary on Sunday, Monday, Tuesday and Wednesday. A contact group convened from Monday until Thursday.

In plenary, delegates heard update reports by TEAP members, regarding nominations for essential-use exemptions for MDIs requested by the Russian Federation and the EC for 2009, and the US for 2010. TEAP reluctantly agreed to recommend such essential-use exemptions for the EC and the US with the understanding that no further nominations would be forthcoming from them. Preparatory Segment Co-Chair Beaumont noted that the EC had reduced its request for MDI essential-use exemptions from 38 to 22 tons of CFCs for 2009. The US reduced its request from 182 to 92 tons of CFCs for 2010. The US thanked the Medical Technical Options Committee (MTOC) for its work, noted concerns over the MTOC's suggestion of transitioning from epinephrine inhalers to an alternative in 2010, and looked forward to working with the EC on a joint CRP. The EC noted its support for working with the US. Preparatory Segment Co-Chair Sørensen suggested, and delegates agreed, to forward the proposal of the EC and US for a draft decision on essential-use exemptions of CFCs for MDIs (UNEP/OzL.Pro.20/CRP.10) to the high-level segment.

Delegates heard a report by the OEWG-28 campaign production and essential uses contact group providing an update on its work since OEWG-28 (UNEP/OzL.Pro.20/INF/9), noting, *inter alia*, that the group is still considering final campaign production of CFCs to supply requirements for MDI manufacturing after 2009. Further work was referred to a contact group on the issue.

The contact group was chaired by Paul Krajnik (Austria). Participants first considered the submission by the OEWG-28 contact group on MDIs regarding modifications of the terms used in past decisions on essential uses to extend their applicability to Article 5 parties' nominations for essential-use exemptions. Delegates deliberated on deleting references to non-applicability of a number of decisions affecting Article 5 parties vis-à-vis essential-use nominations for the years 1997-2002, 2000 and 2001 and for 2006 and 2007 (Decisions VIII/9, XI/14, XVII/5, respectively), and agreeing on deadlines for promoting industry participation for a smooth and efficient transition away from CFC-based MDIs. Several parties objected to the inclusion of deadlines, suggesting that they did not have appropriate technology, and debated the time required for transition and whether phase-out could be assisted by regulation. Delegates agreed to a number of deadlines, including a deadline of MOP-21, after which no essential uses shall be approved for Article 5 parties, unless they have submitted at least a preliminary plan of action regarding phase-out of MDIs for consideration by OEWG-29. While many Article 5 parties insisted on a 31 December 2009 deadline for approval of MDI inhalers in Article 5 countries to be eligible for consideration for essential-use exemptions, many Article 2 countries preferred 31 December 2008, arguing that it

was counterproductive to approve new products up to the final phase-out date. Delegates could not reach agreement and the meeting was suspended until Thursday to allow time for informal consultations. On Thursday, delegates agreed to compromise language referring to "any chlorofluorocarbon metered-dose inhaler product approved after 31 December 2008, excluding any product in the process of registration and approved by 31 December 2009."

The contact group also considered a proposal by the US for a draft decision on campaign financing. Delegates agreed to a preambular reference acknowledging that while CFC production and consumption in Article 5 countries will cease in 2010, essential-use exemptions will be possible. Delegates also clarified that campaign production constitutes a one-time essential-use exemption for the multi-year period determined by a party to phase out CFC-based MDIs. On Thursday, delegates agreed to forward the decisions on essential-use exemptions for the use of CFCs for the production of MDIs, further study of campaign production of CFCs for MDIs, and on modifications of the terms used in past decisions on essential uses to extend their applicability to Article 5 parties' nominations for essential-use exemptions. The high-level segment approved the decisions without amendment.

Final Decisions: In the decision on nominations for essential use exemptions for the use of CFCs for the production of MDIs (UNEP/OzL.Pro.20/CRP.10), the MOP decides to authorize the levels of production and consumption for 2009 and 2010 necessary to satisfy essential uses of CFCs for MDIs for asthma and chronic obstructive pulmonary disease as specified in the annex to the decision. Non-Article 5 parties, when licensing, authorizing or allocating essential-use exemptions for a manufacturer of MDIs, shall ensure 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. The annex to the decision contains the essential use authorizations for 2009 and 2010 for CFCs for MDIs, namely 22 metric tons in 2009 for the EC; 248 metric tons for the Russian Federation for 2009; and 92 metric tons for the US in 2010.

The decision on further study of campaign production of CFCs for MDIs (UNEP/OzL.Pro.20/CRP.14) acknowledges that CFC consumption and production in Article 5 parties will cease on 1 January 2010, with possible essential-use exemptions; recognizes that campaign production offers potential advantages in lieu of annual essential-use nominations to meet needs for pharmaceutical grade CFCs; and acknowledges that the MTOC requires additional information concerning the operation of a final campaign for Article 5 parties. The parties also request the TEAP present a report to MOP-21, preceded by a preliminary report to OEWG-29, concerning: the potential timing for final campaign production; options for long-term storage, distribution, and management of produced quantities of pharmaceutical-grade CFCs; options for minimizing the potential for too much or too little chlorofluorocarbon production as part of a final campaign; contractual arrangements that may be necessary; and options for reducing production of non-pharmaceutical-grade CFCs as well as options for final disposal of such CFCs. Parties further request the Multilateral Fund Secretariat to report to OEWG-29 on the

status of agreements to convert MDI manufacturing facilities in Article 5 countries and on the implementation of approved projects.

In the decision on modifications of the terms used in past decisions on essential uses to extend their applicability to Article 5 parties' nominations for essential-use exemptions (UNEP/OzL.Pro.20/CRP.17), the MOP decides to make modifications to a number of existing MOP decisions, in some cases to amend the title of decisions and remove the reference to non-Article 5 parties, so as to extend their application to Article 5 parties. The MOP further decides to include new references in:

- MOP Decision XVII/5, requesting Article 5 parties to submit a date to the Ozone Secretariat prior to MOP-22 by which time regulations to determine the non-essentiality of the vast majority of CFCs for MDIs, where the active ingredient is not solely Salbutamol, will have been proposed;
- MOP Decision IX/19, requiring Article 5 parties submitting essential-use nominations for CFCs for MDIs for the treatment of asthma and chronic obstructive pulmonary disease to present to the Ozone Secretariat an initial national or regional transition strategy by 31 January 2010 for circulation to all parties and, where possible, by 31 January 2009;
- MOP Decision XII/2, which states that a CFC MDI product approved after 31 December 2008, excluding any product in the process of registration and approved by 31 December 2009, for treatment of asthma and/or chronic obstructive pulmonary disease in an Article 5 party, is not an essential use; and
- MOP Decision XV/5, which states that no quantity of CFCs for essential uses shall be authorized after the commencement of MOP-21 if the nominating Article 5 party has not submitted to the Ozone Secretariat, in time for consideration by OEWG-29, a preliminary plan of action regarding the phase-out of the domestic use of CFC-containing MDIs where the sole active ingredient is Salbutamol.

The MOP further decides:

- that parties submitting nominations for essential-use exemptions and the TEAP reviewing nominations for essential-use exemptions shall consider the amended decisions when considering essential-use nominations in 2009 and beyond;
- to request the Secretariat to include the changes above in the relevant decisions of the parties contained in the Montreal Protocol Handbook at the time of its next revision; and
- to request the TEAP to reflect this decision in a revised version of the handbook on essential-use nominations and to submit, for consideration by parties, suggestions of any appropriate changes to the handbook and the timing to make such changes.

CONSIDERATION OF METHYL BROMIDE-RELATED ISSUES: On Monday, delegates discussed methyl bromide-related issues, including: nominations for 2009 and 2010 for critical-use exemptions; adjustment to the Montreal Protocol on allowances for production of methyl bromide to meet basic domestic needs; and QPS uses of methyl bromide. A contact group on methyl bromide also met throughout the week to discuss the draft decision on actions by parties to reduce methyl

bromide use for QPS (UNEP/OzL.Pro.20/CRP.5), as well as the proposals by the US and the EC for a decision on methyl bromide critical-use exemptions for 2009-2010 (UNEP/OzL.Pro.20/CRP.9 and UNEP/OzL.Pro.20/CRP.12), which were forwarded to the high-level segment on Thursday and adopted.

Nominations for 2009 and 2010 for critical-use exemptions (CUEs): During plenary, MBTOC Co-Chair Mohamed Besri discussed global consumption of methyl bromide in Article 5 and non-Article 5 parties from 1991 to 2007, and provided an update on the meta-analysis of methyl bromide CUEs for the US. MBTOC Co-Chair Marta Pizano provided an overview of the critical use nominations (CUNs) for methyl bromide, noting a general downward trend.

MBTOC Co-Chair Ian Porter discussed CUNs for methyl bromide's use for soil fumigation, saying that Australia and Canada could reduce CUNs if they adopted regulatory changes that lower methyl bromide dose rates, or adopt barrier films for strawberry runners. MBTOC Co-Chair Michelle Marcotte presented the MBTOC's Report on Quarantine, Structures and Commodities. In the ensuing discussion, Japan highlighted its decision to eliminate the use of methyl bromide by 2013. The EC proposed a draft decision on increasing the rate with which methyl bromide alternatives are used.

In a contact group co-chaired by Barry Reville (Australia) and Gabriel Hakizimana (Burundi), delegates considered alternative proposals for a draft decision on the evaluation of methyl bromide CUNs (UNEP/OzL.Pro.20/CRP.9 and UNEP/OzL.Pro.20/CRP.12). The proposal submitted by the EC built on the original draft decision, and added, *inter alia*, evaluation of efforts to approve alternatives and substitutes. The US proposal contained a more streamlined decision, including a suggestion that the MBTOC develop its recommendations as a single entity in a consensus process. Delegates did not agree on which proposal to work with. Some delegates raised concerns regarding transparency of MBTOC decision making in general, and the need for the MBTOC to provide additional information regarding its decisions in a timely manner, while others stressed the need to ensure that parties provide appropriate guidance to the MBTOC. On Wednesday, participants agreed to merge the US and EC documents into one, which was provisionally approved. On Thursday, the text was forwarded to the high-level segment. During the high-level segment, Australia noted that the decision, as included in the compilation decisions document (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2 MOP Decision XX/O) omitted an operative paragraph. He therefore proposed, and delegates agreed, to adopt the CRP.18/Rev.1.

Adjustment to the Montreal Protocol on allowances for production of methyl bromide to meet basic domestic needs of Article 5 parties (proposal by Kenya and Mauritius):

During plenary, Kenya, with Mauritius, proposed a draft decision (UNEP/OzL.Conv.8/3-UNEP/OzL.Pro.20/3) reducing the maximum production allowance for methyl bromide by half, beginning 1 January 2010. Jordan stated that date farmers, in particular, need to continue using methyl bromide and, supported by Morocco, opposed the proposal citing the economic value of agriculture. Mauritius, opposed by Tunisia, stressed that alternatives to methyl bromide may be available. The US

described recent successes and expressed optimism about further reductions in its use of methyl bromide. The EU supported the proposal, saying that alternatives are available.

Co-Chair Sørensen concluded the discussion on methyl bromide, stating that due to divergent views, the Kenyan proposal would not be considered further at MOP-20.

QPS uses of methyl bromide: In the contact group, participants discussed the draft decision on actions by parties to reduce methyl bromide use for QPS purposes and related emissions (UNEP/OzL.Pro.20/CRP.5), submitted by the EC, Mexico and Switzerland. Initial discussions stalled on the language around the updated definition of pre-shipment, the scope of the data being presented, and requesting the Implementation Committee to consider the reporting of methyl bromide used for QPS applications. Larger concerns also became clear, especially on how much of the data that the TEAP is being requested to analyze is actually available.

Continuing on Tuesday, many parties agreed on the usefulness of more detailed information on the major uses of methyl bromide in QPS. One party opposed additional information collection from parties, when much of the information was already available. Another party questioned whether gathering further information was possible within the required time period. The decision's sponsor maintained that the survey on where and how methyl bromide is used for QPS is vital to identifying alternatives. One Article 5 country said it would be unable to undertake a survey unless it received support from the Multilateral Fund, while others insisted that the Multilateral Fund cannot fund such an effort since methyl bromide use for QPS is exempt and not covered by the Montreal Protocol. Although consensus was not reached on whether a survey would be included in the draft decision, no other aspects of the decision proved contentious.

On Wednesday, after days of discussion around how TEAP would approach a study of methyl bromide uses in QPS, participants gravitated towards a multi-stage approach, beginning with TEAP reviewing all information on volumes and uses of methyl bromide for QPS to establish if it could be used to adequately report specific methyl bromide QPS uses.

On Thursday, the draft decision was forwarded to the high-level segment and adopted.

Final Decisions: In the decision on critical-use exemptions for 2009 and 2010 (UNEP/OzL.Pro.20/CRP.18/Rev.1), the MOP:

- permits the agreed critical-use categories for 2009 set forth in Table A of the annex to the present decision for each party, the levels of production and consumption for 2009 set forth in Table B of the annex, which are necessary to satisfy critical uses, in addition to the amounts permitted in decision XIX/9;
- requests the TEAP to ensure that recent findings with regard to the adoption rate of alternatives are annually updated and reported to the parties in its first report of each year and inform the work of the Panel;
- requests the TEAP to continue publishing annually in its progress report prior to each meeting of the OEWG the stocks of methyl bromide held by each nominating party, as reported in that party's accounting framework report;
- recognizes the continued contribution of the MBTOC's expertise and agrees that the Committee should ensure that

it develops its recommendations in a consensus process that includes full discussion among all available members of the Committee and should ensure that members with relevant expertise are involved in developing its recommendations;

- requests the TEAP to ensure that the critical-use recommendations reported in its annual progress report clearly set out the reasons for recommendations and that, where requests are received from parties for further information, the MBTOC should provide a response within four weeks of submission of such a request; and
- requests the TEAP to ensure that its consideration of nominations analyzes the impact of national, subnational, and local regulations and law on the potential use of methyl bromide alternatives, and include a description of the analysis in the critical-use nomination report.

In the final decision on actions by parties to reduce methyl bromide use for QPS purposes and related emissions (UNEP/OzL.Pro.20/CRP.18/Rev.1), the MOP:

- urges those parties that have not yet done so to report data on the use of methyl bromide for QPS applications, as required under paragraph 3 of Article 7, by April 2009 and to report such data annually thereafter;
- requests the Implementation Committee to consider the reporting of methyl bromide used for QPS applications under paragraph 3 of Article 7, in accordance with the Non-Compliance Procedure of the Montreal Protocol;
- requests the TEAP, in consultation with the International Plant Protection Convention (IPPC) Secretariat, to review all relevant, currently available information on the use of methyl bromide for QPS applications and related emissions, to assess trends in the major uses, available alternatives and other mitigation options, and barriers to the adoption of alternatives or determine what additional information or action may be required to meet those objectives;
- requests the TEAP to present a draft report based on the analysis of the available information to the OEWG-29, indicating areas where the information is not sufficient, explaining, where appropriate, why the data were inadequate and proposing how best to gather the information required for a satisfactory analysis;
- requests the TEAP, in accordance with its terms of reference, to list categories of use it has identified that have been classified as QPS use by some parties but not by others by OEWG-29 and that those parties are requested to provide information on the rationale for doing so to the TEAP in time for inclusion in its final report to MOP-21; and
- encourages parties in accordance with the recommendations of the third meeting of the Commission on Phytosanitary Measures under the IPPC to put in place a national strategy that describes actions that will help them reduce the use of methyl bromide for phytosanitary measures and/or reduce emissions of methyl bromide and make such strategies available to other parties through the Ozone Secretariat, where possible, before MOP-21.

APPLICATION OF TRADE PROVISIONS TO HCFCs:

On Monday, delegates agreed to forward the draft decision, proposed by Australia, on application of trade provisions to HCFCs to the high-level segment and delegates adopted the decision on Thursday.

Final Decision: In the decision on the trade provisions to HCFCs (UNEP/OzL.Conv.8/L.2 - UNEP/OzL.Pro.20/L.2, XX/C), the MOP: acknowledges the accelerated phase-out of HCFCs as determined by decision XIX/6, brings forward control measures for HCFCs for parties operating under paragraph 1 of Article 5 of the Protocol from 2016 to 2013, and agrees to substitute paragraph 1(a) of decision XV/3, which refers to 1 January 2016 as the date on which HCFC production and control measures take effect, so that it now refers to 1 January 2013 as the date.

PROCESS AGENTS: On Tuesday, delegates considered the TEAP's recommendation on process agents, including that three of the ten submitted uses could be added to the list of process agents. China suggested, and delegates agreed, that the issue would be revisited at MOP-21.

UPDATE REPORTS BY TEAP: On Monday in the preparatory segment, delegates heard update reports presented by TEAP members.

CTC emissions and opportunities for reduction: Regarding the task force on CTC emissions, a TEAP member reported that although total production had been slowly declining, recent atmospheric measurements have remained high, resulting in the conclusion that there is a rapidly growing new source that has to be investigated further.

Regional imbalances in respect of halons: On Monday in the preparatory segment, delegates considered TEAP's assessment that there may be regional imbalances in the availability of halons and that TEAP may wish to revisit the issue in 2009.

Scoping study on alternatives to HCFCs for mines and very high temperature conditions: On Monday, in the preparatory segment, delegates heard an update regarding the scoping study of alternatives to HCFCs for mines and very high temperature conditions. Explaining why the report was not ready for MOP-20, Co-Chair Beaumont requested TEAP to complete the study by OEWG-29 in 2009. Kuwait, Saudi Arabia, Jordan, Bahrain and Oman reminded parties of the decision to support the study; highlighted the importance of finding alternatives to HCFCs, especially in countries with very high temperatures; requested country-specific field visits to determine alternatives; and urged TEAP to complete the study as soon as possible. The US stressed the importance of the study in light of the accelerated HCFC phase-out schedule. South Africa supported TEAP field visits, saying it uses HCFCs in mines and is seeking alternatives. TEAP confirmed that the study will be available for review by January 2009, and will be discussed at OEWG-29.

TEAP ADMINISTRATIVE ISSUES: On Monday, TEAP Co-Chair Stephen Andersen presented TEAP administrative issues. He explained that the Panel was requesting a budget of US\$100,000 for 2009 for travel and meeting expenses, noting that actual expenditures for such purposes would require approval by the Panel Co-Chairs and the Ozone Secretariat, and would not include consulting fees or wages.

Regarding membership of the technical options committees, the TEAP proposed Sergey Kopylov (Russian Federation) as a new Co-Chair of the Halons Technical Options Committee. Other expert positions needing to be filled included those for nutsedge control, orchard replant, forestry, and nursery propagation for the Methyl Bromide Technical Options Committee; for aviation fire protection for the Halons Technical Options Committee; and for several refrigeration and air conditioning subsectors for the Refrigeration, Air Conditioning and Heat Pumps Technical Options Committee.

It was agreed that the Secretariat would prepare a draft decision on the nomination of Kopylov for consideration during the high-level segment of the meeting, and a draft decision was adopted on Thursday.

Final Decision: In the decision on endorsement of a new Co-Chair of the Halons Technical Options Committee (UNEP/OzL.Conv.8/L.2 - UNEP/OzL.Pro.20/L.2, XX/R), the COP agrees to endorse Sergey Kopylov (Russian Federation) as the new Co-Chair of the Halons TOC.

COMPLIANCE AND REPORTING ISSUES:

Implementation Committee President Hassan Hannachi (Tunisia) presented the report of the 41st meeting of the Implementation Committee on Tuesday. He described a series of recommendations and seven decisions from the report, covering every stage of the compliance system of the Montreal Protocol. He indicated that the data reporting rate has improved significantly, with 188 parties reporting.

In the ensuing discussion, Bangladesh described steps it has taken to phase out ODS and asked delegates to make an exception so it would not face potential non-compliance from 2007-2009. Pakistan supported Bangladesh and proposed following the transition strategy approved by the Executive Committee. Australia, supported by Switzerland, the US and the EC, suggested that the Implementation Committee reconsider the case of Bangladesh during its next meeting in 2009, noting concern about the lack of a work plan or monitoring.

The President of the Implementation Committee said the matter had already been considered in detail, but did not oppose delaying the decision to allow further consideration. Egypt noted that developing countries generally face difficulties replacing CFCs since alternative technologies are often controlled by multinational corporations and hard to access for national companies.

Final Decision: The MOP adopted eight decisions on compliance and reporting issues. The decisions note non-compliance by Somalia and Ecuador (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, MOP Decision XX/T and XX/V, and potential non-compliance by the Solomon Islands (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, MOP Decision XX/S). Additional decisions relate, *inter alia*, to the report on the establishment of licensing systems under Article 4B (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, MOP Decision XX/X), requests for a change in baseline data by Saudi Arabia (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, MOP Decision XX/V), reports of parties submitted under Article 9 (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, MOP Decision XX/U), Montreal Protocol financial matters (UNEP/OzL.Conv.8/L.2-UNEP/

OzL.Pro.20/L.2, MOP Decision XX/Q), and Article 7 data and information (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, MOP Decision XX/I).

CONSIDERATION OF MEMBERSHIP OF MONTREAL PROTOCOL BODIES FOR 2009: Membership of Montreal Protocol Bodies was considered on Wednesday and Thursday in plenary and then approved by the high-level segment on Thursday afternoon.

Members of the Implementation Committee: In the preparatory segment on Wednesday, Co-Chair Beaumont presented a draft decision on the membership of the Implementation Committee (UNEP/OzL. Pro.20/3, Dec XX/BB), noting the countries nominated for this Committee, the President and the Vice President. The high-level segment approved the draft decision.

Final Decision: In the decision on Implementation Committee membership (UNEP/OzL.Conv.8/L.2 - UNEP/OzL.Pro.20/L.2, MOP Decision XX/F), amended to include country names and new Chairs, the MOP confirms the positions of Jordan, Mauritius, Mexico, New Zealand and the Russian Federation as members of the committee for one additional year, and selects Armenia, Germany, Niger, Nicaragua and Sri Lanka as members of the committee for a two-year period commencing on 1 January 2009. It also selects Robyn Washbourne (New Zealand) to serve as President and Ghazi Odat (Jordan) as Vice-President and Rapporteur for a term of one year commencing on 1 January 2009.

Members of the Executive Committee of the Multilateral Fund: In the preparatory segment on Thursday, Co-Chair Beaumont presented a draft decision (UNEP/OzL.Pro.20/3, MOP Decision XX/G) on the Executive Committee of the Multilateral Fund, nominating a number of Article 5 and non-Article 5 countries as members, and a Chair and Vice-Chair. The high-level segment approved the draft decision on Thursday.

Final Decision: In the decision on the Executive Committee of the Multilateral Fund (UNEP/OzL.Conv.8/L.2 - UNEP/OzL. Pro.20/L.2, Dec XX/G), amended to include country names and new Chairs, members of the Executive Committee include the following Article 5 parties: Georgia, China, Yemen, Dominican Republic, Bolivia, Namibia and Gabon; and non-Article 5 parties: US, Japan, Germany, Belgium, Australia, Sweden and Romania, for one year commencing 1 January 2009. The decision also notes the selection of Husamuddin Ahmadzai (Sweden) as President and a delegate from the Dominican Republic as Vice-Chair of the Executive Committee for one year commencing on 1 January 2009.

Co-Chairs of the OEWG: In the preparatory segment on Thursday, Co-Chair Beaumont presented a draft decision on the Co-Chairs of the OEWG (UNEP/OzL.Pro.20/3, Dec XX/DD). The high-level segment approved the draft decision.

Final Decision: In the decision on OEWG membership (UNEP/OzL.Conv.8/L.2 - UNEP/OzL.Pro.20/L.2, MOP Decision XX/H), amended to include names, the MOP names Martin Sirois (Canada) and Maqsood Akhtar (Pakistan) as Co-Chairs of the OEWG of the Montreal Protocol for 2009.

DATES AND VENUES FOR FUTURE MEETINGS: In Thursday's high-level segment, Egypt announced its offer to host MOP-21 in Sharm el Sheikh, Egypt. Parties endorsed the offer and the decision was adopted Thursday.

With regard to the timing of COP-9, MOP-20 President Toth introduced a draft decision (Decision D, UNEP/OzL.Conv.8/L.2 - UNEP/OzL.Pro.20/L.2) to the high-level segment on Thursday, which the parties adopted.

Final Decisions: In the decision on the timing of COP-9 of the Vienna Convention (UNEP/OzL.Conv.8/L.2 - UNEP/OzL. Pro.20/L.2, COP Decision XX/D), the COP agrees to convene its ninth meeting back-to-back with MOP-23.

In the decision on date and venue of MOP-21 (Decision Y, UNEP/OzL.Conv.8/L.2 - UNEP/OzL.Pro.20/L.2), the MOP agrees to convene MOP-21 in Sharm el Sheikh, Egypt, and to announce a firm date for the meeting as soon as possible.

OTHER MATTERS: Submission by Qatar to adopt a Doha Declaration: On Sunday morning in plenary, Qatar presented its proposal for parties to adopt a Doha Declaration, outlining the achievements of MOP-20. The declaration was discussed informally among delegates throughout the meeting. A draft Doha Declaration (UNEP/OzL.Pro.20/CRP.11) was presented to the plenary on Thursday morning. At the request of the EC, Canada and the US, further informal consultations were convened. On Thursday afternoon, delegates agreed to forward the revised Doha Declaration (UNEP/OzL.Pro.20/CRP.11/Rev.1), including sections on the destruction of ODS, the adoption of a culture of "paperless" conferences and the importance of the replenishment of the Multilateral Fund, to the high-level segment for adoption.

Final Declaration: In the Doha Declaration, the ministers of the environment and heads of delegation note the following:

- On the issue of destruction of ODS: resolve to undertake an initial effort to destroy banks of ODS; commit to undertake further studies to assess the technical and economic feasibility of destroying ODS; commit to undertake pilot projects to generate practical data and experience on management and financing modalities, achieve climate benefits, and explore opportunities to leverage co-financing in order to maximize environmental benefits;
- On the issue of replenishment: underline the commitment to a replenishment of the Multilateral Fund of US\$490 million for the period 2009-2011 with the understanding that these funds will be utilized to enable developing countries to meet their obligations under the Protocol;
- On atmospheric measurements: Urge the governments to seek to ensure full coverage of the relevant data gathering programmes, in order to ensure that the atmosphere, including its stratospheric ozone and its interrelation with climatic change, is kept under continuous observation;
- On the Government of Qatar's initiatives: applaud the two initiatives announced by the Government of Qatar to establish: a monitoring station in Qatar for monitoring the ozone layer and the Earth's stratosphere in collaboration with NASA, and an Ozone Layer and Climate Change Research Center, within Qatar's Science and Technology Park and in collaboration with UNEP; and

- On this and future paperless meetings: recognize the outstanding contribution of the Government of Qatar in embracing and conducting, for the first time in the history of the UN, a very successful paperless meeting, a practice it is hoped will be extended to the conduct of future UN meetings; and express great appreciation to the Government of Qatar for the donation of the computers and paperless system, which will enable future UN meetings to be held in a paperless manner.

Decision on difficulties faced by Iraq: On Tuesday, Iraq introduced a draft decision regarding its difficulties in implementing the Protocol (UNEP/OzL.Pro.20/CRP.1). Iraq suggested that while it has acceded to the Vienna Convention and the Montreal Protocol, it requires technical and financial assistance to control the entry of ODS into Iraq and urged other countries to control exports. Many countries supported Iraq's request, while others wanted to consider it further. Delegates consulted informally throughout the week and on Thursday in plenary, and Iraq introduced a revised draft decision (UNEP/OzL.Pro.20/CRP.1/Rev.1) that included a request to the Executive Committee to show flexibility in considering project proposals. Delegates agreed to forward the decision to the high-level segment with minor amendments. This was adopted during the high-level segment on Thursday afternoon.

Final Decision: In the decision on the difficulties faced by Iraq (UNEP/OzL.Pro.20/CRP.1/Rev.2), the MOP:

- urges all parties to assist Iraq in controlling the export of ODS and ODS-based technologies into Iraq through the control of trade as per the provisions of the Montreal Protocol;
- requests the Executive Committee, when considering project proposals for Iraq to phase out ODS, to take into account the special situation of the party, which might necessitate phase-out of ODS in Annexes A and B beyond 2010 and flexibility in considering the project proposals; and
- requests implementing agencies to provide all possible assistance to Iraq in developing its country programme and national phase-out plans and in continuing its efforts to report to the Secretariat, as soon as possible, data on consumption of ODS in accordance with Montreal Protocol requirements.

Workshop for a dialogue on high-GWP substitutes for ODS: On Tuesday, the US introduced a proposal to hold a workshop on high-GWP substitutes for ODS (UNEP/OzL.Pro.20/CRP.7) and explained that its proposal included a request for TEAP to update its 2005 Supplement to the Special Report on the Ozone Layer and Climate, and convene a half-day open-ended dialogue on high-GWP substitutes to ODS at OEWG-29. The EU, supported by Australia, requested more time for discussion and delegates agreed to continue discussions informally.

On Thursday, the US confirmed that delegates had consulted informally and that a revised CRP (UNEP/OzL.Pro.20/CRP.7/Rev.1) was available. He noted that while the decision had not included language on the provision of funds for the workshop, that there was agreement that funding would be made available to ensure robust participation of Article 5 countries. China said this "gentlemen's agreement" must be included in the meeting report. Co-Chair Sørensen confirmed a budget of US\$150,000.

Delegates agreed to the proposal with minor editorial amendments and it was forwarded to the high-level segment and adopted on Thursday afternoon.

Final Decision: In the final decision on a workshop for a dialogue on high-GWP ODS (UNEP/OzL.Pro.20/CRP.7/Rev.2), the MOP agrees to, *inter alia*:

- request TEAP to update the Panel's 2005 Supplement to the Special Report on the Ozone Layer and Climate and to report on the status of substitutes for HCFCs, including a description of the various use patterns and potential market penetration of alternatives that have high GWPs;
- request the Ozone Secretariat to prepare a report that compiles current control measures, limits and information reporting requirements for compounds that are substitutes for ODS and that are addressed under international agreements relevant to climate change;
- convene a half-day open-ended dialogue on high-GWP substitutes to ODS among parties, including participation by the Assessment Panels, the Ozone Secretariat, and the Multilateral Fund Secretariat, and inviting the Fund's implementing agencies, other relevant multilateral environmental agreement secretariats and non-governmental organizations to discuss technical and policy issues related to high-GWP substitutes to ODS, with a particular focus on HCFCs;
- hold the dialogue on high-GWP substitutes to ODS preceding the OEWG-29 meeting; and
- further request the Secretariat to prepare, in cooperation with the Co-Chairs of the workshop, a summary report of the discussions that take place during the dialogue, and to report on the proceedings to OEWG-29.

CLOSING PLENARY

The closing plenary was held on Thursday evening. In the beginning of the session the preparatory segment reconvened and agreed to forward several outstanding decisions to the high-level segment. Co-Chair Beaumont thanked delegates for their hard work in the preparatory segment and closed the segment.

MOP-20 President Tóth then opened and chaired the high-level segment. He announced the meeting credentials and said the Bureau had approved 94 of the 143 participating parties. He urged parties to submit credentials at the next meeting.

Delegates considered the reports of the joint meeting (UNEP/OzL.Conv.8/L.1- UNEP/OzL.Pro.20/L.1, Add.1, Add.2, and Add.3) and adopted them after a number of minor amendments and statements of clarification.

Tanzania, for the African Group, complemented the Co-Chairs' outstanding leadership, reaffirmed its commitment to the Montreal Protocol and called for further financial support. China thanked the Co-Chairs and looked forward to another 20 years of success under the Montreal Protocol. Qatar thanked delegates for visiting his country and for achieving successful outcomes. President Tóth urged delegates to return their laptops to ensure that paperless meetings could continue into the future. He thanked the Secretariat, the Government of Qatar and participants for their hard work and looked forward to meeting everyone in Egypt in 2009. He gavelled the meeting to a close at 7:37 pm.

A BRIEF ANALYSIS OF THE MEETING

OZONE DEPLETION IN A DESERT SETTING

The city of Doha, Qatar, hosted the eighth meeting of the COP of the Vienna Convention (COP-8) and the 20th meeting of the MOP (MOP-20) of the Montreal Protocol. The desert city provides all the comforts of modern living, perhaps the most important being temperature control. Along with this luxury, comes the challenge of identifying ways to provide cooling and refrigeration for the city without depleting the ozone layer or contributing to ozone's sister issue, climate change.

Delegates in Doha were faced with a number of challenges, including ensuring that the accelerated HCFC phase-out was built into the triennial replenishment of the Multilateral Fund, and addressing the long-standing challenge of the destruction of ozone depleting substances (ODS) that are stored in banks. As MOP-20 demonstrated, in spite of the many successes of the Montreal Protocol there is still much work to be done to protect the ozone layer. This analysis will examine how these key issues were addressed at COP-8 and MOP-20 and how this will affect the road to MOP-21 in Sharm el-Sheikh, Egypt.

LESSONS FROM THE SOUQ

Last year at MOP-19, parties committed to an accelerated phase out of HCFCs, a chemical that was originally seen as a substitute for CFCs but proved to be ozone depleting substances with high global warming potential. In this context, it is also worth recalling that MOP-19 Decision XIX/6 on adjustments to the Montreal Protocol with regard to HCFCs was a carefully crafted compromise. Of utter importance to Article 5 (developing) countries was the reference to stable and sufficient funding to meet all agreed incremental costs to comply with the accelerated phase-out schedule. At MOP-20, participants had to ensure that this ambitious schedule could actually be met.

The Multilateral Fund has often been hailed as the key to the Montreal Protocol's success and is expected to play a similar role in the phase out of HCFCs. The replenishment for the period of 2009-2011 represents the first time that HCFC-related phase-out activities are included in the Multilateral Fund and, therefore, added a new dimension to the triennial debate, especially since they will consume the majority of the allocated funds. Negotiations on replenishment and especially HCFC-related activities started with the two different scenarios set out in the reports of the TEAP Replenishment Task Force: the baseline or lowest cost scenario, assuming high cost effectiveness and modest quantities phased out during the triennium; and the 2012 consumption level scenario, assuming low cost effectiveness and larger quantities to be phased out. Along these lines, the required range of funding in 2009-2011 replenishment for the baseline scenario is US\$338.7 - 387.2 million, and for the 2012 funding scenario is US \$510.6 - 629.8 million. Article 2 (donor) countries rejected the 2012 scenario on the basis that production and consumption of HCFCs is not likely to decrease until 2013, the year stipulated for the freeze of HCFC consumption; and it could lead indirectly to funding increased production, thereby creating a perverse incentive. On the other hand, Article 5 countries insisted that additional funding was required to control and lower the current rate of growth in those industries.

The scene was set for the negotiations on HCFC-related activities when one Article 2 country insisted that the "lowest amount in the baseline scenario was too high" and in turn Article 5 countries countered that the "highest of the 2012 consumption scenarios was too low." As one delegate put it, negotiations became comparable to trading camels in a souq, the traditional Arabian market in Doha, where bargaining is a long perfected art form. As Article 2 and Article 5 countries sat on opposite sides of the negotiating table, one side started off with an offer of under US\$320 million and the other countered with more than double, over US\$700 million. By the evening before the end of the negotiations, after a number of steps and offers, the gap had "narrowed" to US\$400 versus US\$580 million.

In the end it did not come much as a surprise when parties settled on a final replenishment right in the middle – US\$490 million. When deducting the carry-over from the past triennium and the interest accrued over that period, the total amount of new funds is US\$400 million, exactly the same as for the past triennium. Furthermore, the actual contributions of most donor countries will actually decline, due to the fixed-exchange-rate mechanism that has the US dollar at a lower level vis-à-vis other major donor currencies in comparison to the previous replenishment. A number of these parties had arrived in Doha with a mandate allowing for an increase in their contributions, but other parties noted that due to the current financial crisis an increase in contributions was not realistic. Delegates from both Article 5 and Article 2 countries agreed that the outcome of the MOP-20 replenishment negotiations met the stipulation of MOP-19 Decision XIX/6 to ensure stable and sufficient funding to comply with the accelerated HCFC phase-out schedule. Much will depend on the operationalization of HCFC-related activities throughout this replenishment period by the Executive Committee of the Multilateral Fund. Key issues that it will have to address include: second conversions, which are cases where plants have been converted from CFC production to HCFC production and now would seek funding for a further conversion; and the cut-off date determining which level of HCFC consumption and production will be eligible for funding.

A GENIE IN THE BOTTLE – THE DESTRUCTION OF ODS

While the discussion over the funding of HCFC phase-out took center stage at MOP-20, another key debate was also underway: the destruction of ODS. The TEAP, in collaboration with Intergovernmental Panel on Climate Change, estimates that there were approximately 5.2 million tons of ODS stored in global banks in 2002. Within those, 1 million tons are readily available for recovery and destruction.

Destruction mitigates the risk of ODS entering the atmosphere and depleting the ozone layer by breaking ODS down into inert components. Furthermore, since Article 5 countries are expected to completely phase out the production and consumption of CFCs, halons and CTC by 2010, the amount of ODS available for recovery and destruction will continue to grow. Add to that increasing quantities of HCFCs due to the accelerated phase-out and the issue becomes even more pressing.

The task at hand for MOP-20 delegates was to agree to undertake further studies on destruction and on initiating pilot projects including collection, storage and destruction. On the sidelines, and informally, however, delegates were considering

how to fund destruction. While phase-out of ODS falls within the mandate of the Multilateral Fund, there is no mandate to cover costs of destruction for ODS existing in stockpiles and banks. The Multilateral Fund, however, can fund studies and pilot projects, which MOP-20 tasked it to do.

According to several delegates, funding destruction would require an amendment to the Multilateral Fund and, consequently, greater replenishments in the future. While some speculated this was a logical progression for the Montreal Protocol, and Article 5 countries prefer the use of the Multilateral Fund as a primary funding mechanism because of its accessibility and track record, others suggested there may not be sufficient political will for a greater replenishment load. Some delegates cited references of parties to the potential use of the Clean Development Mechanism, or voluntary carbon markets, to fund destruction. Since the cost of destroying HCFCs is potentially very large, selling carbon credits for destruction of ODS with GWP may make it financially viable to operate destruction facilities on a commercial basis. In the decision on destruction of ODS, TEAP was asked to assess the relative economic costs and environmental benefits to both the ozone layer and the climate of destruction versus recycling, reclaiming and re-using such substances. Many delegates commented that destruction is the environmentally preferable option, because recycling, reclaiming and reusing ODS is likely to result in eventual release of ODS into the atmosphere.

Whatever funding mechanisms, or combination of mechanisms, are decided upon, synergies with other conventions will require greater consideration. The ties to UNFCCC and the Kyoto Protocol are clear, since a number of substances covered by the Montreal Protocol have great GWP and their environmentally-sound destruction counteracts both climate change and ozone depletion. In addition, cooperation with the Basel Convention will become more and more important as transboundary transport of ODS will be necessary because destruction facilities are expensive and cannot be constructed in each country. Unless the issue of destruction of ODS is addressed in a speedy and efficient manner through cooperation at all levels, many of the successes under the Protocol could be undone by significant amounts of ODS being released into the atmosphere through leakage.

ON THE DESERT HORIZON

As MOP-20 was gaveled to a close, many suggested that once again the Montreal Protocol lived up to its esteemed reputation as the most successful multilateral environmental agreement. Not only was this the first meeting to forego the usual flurry of white paper documents and go paperless, it also bid farewell to the last production facilities for CFCs in India and China, proving that parties are complying and phase-out schedules can be achieved. The next challenge will be realizing the same result for HCFCs. Now that HCFCs are included in the Multilateral Fund, parties have demonstrated their willingness to meet this challenge.

MOP-20 also laid important groundwork for future work by agreeing to study key issues such as destruction, campaign financing for CFC based MDIs, and examining the use of QPS in an effort to eventually phase out methyl-bromide.

The road ahead, however, remains long. After 21 years, the Montreal Protocol has successfully phased out a significant number of ODS and has effectively addressed production and consumption of others. However, fully mitigating risks to the ozone layer requires two complimentary approaches – phase-out and destruction. As the parties reach the phase-out dates, addressing destruction becomes imperative and the next challenge for the Protocol – one that delegates will tackle again in another desert oasis, Sharm el-Sheikh, Egypt. By then, hopefully, the Protocol will be a few steps closer to blending luxury and sensibility and finding ways to remain cool, without contributing to climate change or the ozone hole.

UPCOMING MEETINGS

INFORMAL WORKSHOP ON STAKEHOLDERS' INFORMATION NEEDS ON CHEMICALS IN ARTICLES/ PRODUCTS: This informal workshop will be held from 2-4 December 2008, in Bangkok, Thailand. For more information, contact the SAICM Secretariat: tel: +41-22-917-12-34; fax: +41-22-797-3460; e-mail: saicm@chemicals.unep.ch; internet: http://www.chem.unep.ch/unepsaicm/cheminprod_dec08/default.htm

EUROPE AND CENTRAL ASIA (ECA) CONTACT GROUP MEETING ON PROGRESS OF TPMP IMPLEMENTATION AND ASSESSMENT OF AWARENESS RAISING ACTIVITIES: This meeting will be held in Chisinau, Moldova, from 2-4 December 2008. For more information, contact UNEP OzonAction Branch: tel: +33-1-44-37 1450; fax: +33-1-44-37-1474; e-mail: ozonaction@unep.fr; internet: <http://www.unep.fr/ozonaction/events/2008%20events.pdf>

STOCKHOLM CONVENTION EXPERT MEETING TO FURTHER DEVELOP THE STANDARDIZED TOOLKIT FOR IDENTIFICATION AND QUANTIFICATION OF DIOXIN AND FURAN RELEASES: This expert meeting will be held from 3-4 December 2008, in Geneva, Switzerland, to prepare proposals for Stockholm Convention COP 4 for revising and updating the Toolkit. For more information, contact: Stockholm Convention Secretariat; tel: +41-22-917-8729; fax: +41-22-917-8098; e-mail: ssc@pops.int; internet: <http://www.pops.int>

FIRST MEETING OF ODS CUSTOMS ENFORCEMENT NETWORK MEETING FOR LATIN AMERICA: This meeting will be held in Panama from 9-11 December 2008. For more information, contact UNEP OzonAction Branch: tel: +33-1-44-37-1450; fax: +33-1-44-37-1474; e-mail: ozonaction@unep.fr; internet: <http://www.unep.fr/ozonaction/events/2008%20events.pdf>

FOURTEENTH CONFERENCE OF THE PARTIES TO THE UNFCCC AND FOURTH MEETING OF THE PARTIES TO THE KYOTO PROTOCOL: This meeting will convene in Poznań, Poland, from 1-12 December 2008. The conference will also include the 29th sessions of the Convention's two subsidiary bodies – Subsidiary Body for Scientific and Technological Advice (SBSTA) and Subsidiary Body for Implementation (SBI) – as well as the 4th session of the *Ad hoc* Working Group on Long Term Cooperative Action (AWG-LCA) and the resumed 6th session of the *Ad Hoc* Working Group on Further Commitments for Annex I Parties

under the Kyoto Protocol (AWG-KP). For more information, contact: UNFCCC Secretariat; tel: +49-228-815-1000; fax: +49-228-815-1999; e-mail: secretariat@unfccc.int; internet: <http://www.unfccc.int>

EASTERN EUROPEAN BRIEFING ON HCFC PHASE-OUT: This briefing will be held in Belgrade in late March 2009, as a joint initiative of United Nations Environment Programme-Division of Technology, Environment and Economics (UNEP-DTIE) and the Serbian Ministry of Environment. The purpose of the meeting is to gain knowledge of HCFC consumption patterns for English speaking countries of the Eastern European Central Asian network. It will focus on policy options and legislation supporting HCFC phase-out. For more information, contact: Dunja Dobric, Ministry of Environment and Spatial Planning, Serbia; tel: +38-164-816-6357; fax: +38-111-313-1394; e-mail: dunja.dobric@ekoserb.sr.gov.yu; internet: <http://www.ekoserb.sr.gov.yu>

SEVENTH SESSION OF THE AWG-KP AND FIFTH SESSION OF THE AWG-LCA: The 5th session of the *Ad hoc* Working Group on Long Term Cooperative Action (AWG-LCA) and the 7th session of the *Ad Hoc* Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP) will meet from 29 March - 8 April 2009 in Bonn, Germany. For more information, contact: UNFCCC Secretariat; tel: +49-228-815-1000; fax: +49-228-815-1999; e-mail: secretariat@unfccc.int; internet: <http://www.unfccc.int>

FOURTH MEETING OF THE CONFERENCE OF THE PARTIES TO THE STOCKHOLM CONVENTION ON PERSISTENT ORGANIC POLLUTANTS: COP 4 will be held from 4-8 May 2009, in Geneva, Switzerland. The meeting will address a non-compliance mechanism, synergies between the Rotterdam, Basel and Stockholm Conventions, and recommendations from the POPs Review Committee to schedule further chemicals under the Convention. For more information, contact: Stockholm Convention Secretariat; tel: +41-22-917-8729; fax: +41-22-917-8098; e-mail: ssc@pops.int; internet: <http://www.pops.int/>

SECOND SESSION OF THE INTERNATIONAL CONFERENCE ON CHEMICALS MANAGEMENT (ICCM-2): This meeting will take place from 11-15 May 2009 in Geneva, Switzerland. For more information, contact: SAICM Secretariat; tel: +41-22-917-8532; fax: +41-22-797-3460; e-mail: saicm@chemicals.unep.ch; internet: <http://www.chem.unep.ch/saicm/iccm/ICCM2/iccm2.htm>

UNFCCC SUBSIDIARY BODIES MEETINGS: The 30th sessions of the UNFCCC Convention subsidiary bodies – SBSTA and SBI – and the 6th session of the *Ad hoc* Working Group on Long Term Cooperative Action (AWG-LCA) and the 8th session of the *Ad Hoc* Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP) will meet from 1-12 June 2009 in Bonn, Germany. For more information, contact: UNFCCC Secretariat; tel: +49-228-815-1000; fax: +49-228-815-1999; e-mail: secretariat@unfccc.int; internet: <http://www.unfccc.int>

42ND MEETING OF THE IMPLEMENTATION COMMITTEE UNDER THE NON-COMPLIANCE PROCEDURE FOR THE MONTREAL PROTOCOL:

This meeting will be held from 15-17 July 2009, in Geneva, Switzerland. For more information, contact: Ozone Secretariat; tel: +254-20-762-3851/3611; fax: +254-20-762-4691/92/93 e-mail: ozoneinfo@unep.org; internet: <http://ozone.unep.org>

WORKSHOP FOR A DIALOGUE ON HIGH-GWP ALTERNATIVES FOR OZONE DEPLETING SUBSTANCES:

This workshop will be held on 19 July 2009, one day before the twenty-ninth Open-ended Working Group of the parties to the Montreal Protocol (OEWG 29) at a venue to be decided by the Ozone Secretariat. This meeting will focus on technical and policy issues related to ODS alternatives and exchanging views on the best ways of using the experience of the Montreal Protocol for addressing the impact of HFCs and maximizing the ozone and climate benefits of the HCFCs early phase-out. For more information, contact: Ozone Secretariat; tel: +254-20-762-3851/3611; fax: +254-20-762-4691/92/93 e-mail: ozoneinfo@unep.org; internet: <http://ozone.unep.org>

29TH MEETING OF THE OPEN-ENDED WORKING GROUP OF THE PARTIES TO THE MONTREAL PROTOCOL ON SUBSTANCES THAT DEplete THE OZONE LAYER:

This meeting will be held from 20-24 July 2009, in Geneva, Switzerland. For more information, contact: Ozone Secretariat; tel: +254-20-762-3851/3611; fax: +254-20-762-4691/92/93 e-mail: ozoneinfo@unep.org; internet: <http://ozone.unep.org>

MONTREAL PROTOCOL MOP-21: The 21st Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer will take place in Sharm el Sheikh, Egypt, at a date to be determined. For more information, contact: Ozone Secretariat; tel: +254-20-762-3851/3611; fax: +254-20-762-4691/92/93 e-mail: ozoneinfo@unep.org; internet: <http://ozone.unep.org>

GLOSSARY

CFC	Chlorofluorocarbons
CTC	Carbon tetrachloride
CUE	Critical-use exemption
CUN	Critical-use nomination
GWP	Global warming potential
HCFC	Hydrochlorofluorocarbons
HFC	Hydrofluorocarbons
MTOC	Medical Technical Options Committee
MBTOC	Methyl Bromide Technical Options Committee
MDI	Metered-dose inhaler
ODS	Ozone depleting substances
OEWG	Open-ended Working Group
ORM	Ozone Research Managers
QPS	Quarantine and pre-shipment
TEAP	Technology and Economic Assessment Panel
WMO	World Meteorological Organization
WMO-GAW	World Meteorological Organization-Global Atmosphere Watch

TWENTIETH MEETING OF THE PARTIES TO THE MONTREAL PROTOCOL ON SUBSTANCES THAT DEplete THE OZONE LAYER: 16 – 20 NOVEMBER 2008

This twentieth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer (MOP-20) begins Sunday in Doha, Qatar, and continues until Thursday, 20 November, in conjunction with the eighth Conference of the Parties to the Vienna Convention. A preparatory segment will take place from Sunday to Tuesday, and the high-level segment will convene on Wednesday and Thursday.

Delegates will consider decisions on a range of issues, *inter alia*: the status of the General Trust Fund for Financing Activities on Research and Systematic Observations Relevant to the Vienna Convention; replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol; environmentally sound disposal of ozone-depleting substances (ODS); issues related to essential uses; methyl bromide-related issues; and the application of trade provisions for hydrochlorofluorocarbons (HCFCs).

During the meeting, delegates will also consider presentations by the assessment panels on the status of their work and a presentation by the Chair of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol on the work of the Executive Committee.

A BRIEF HISTORY OF THE OZONE REGIME

Concerns that the Earth's stratospheric ozone layer could be at risk from CFCs and other anthropogenic substances were first raised in the early 1970s. At that time, scientists warned that the release of these substances into the atmosphere could deplete the ozone layer, hindering its ability to prevent harmful ultraviolet rays from reaching the Earth. This would adversely affect ocean ecosystems, agricultural productivity and animal populations, and harm humans through higher rates of skin cancers, cataracts and weakened immune systems. In response to this growing concern, the United Nations Environment Programme (UNEP) convened a conference in March 1977 that adopted a World Plan of Action on the Ozone Layer and established a Coordinating Committee to guide future international action on ozone protection.

VIENNA CONVENTION: In May 1981, the UNEP Governing Council launched negotiations on an international agreement to protect the ozone layer and, in March 1985, the Vienna Convention for the Protection of the Ozone Layer was

adopted. The Convention called for cooperation on monitoring, research and data exchange, but did not impose obligations to reduce the use of ODS. The Convention now has 193 parties.

MONTREAL PROTOCOL: In September 1987, efforts to negotiate binding obligations to reduce the use of ODS led to the adoption of the Montreal Protocol on Substances that Deplete the Ozone Layer. The Protocol introduced control measures for some CFCs and halons for developed countries (non-Article 5 parties). Developing countries (Article 5 parties) were granted a grace period allowing them to increase their use of these ODS before taking on commitments. The Protocol currently has 193 parties.

Since 1987, several amendments and adjustments to the Protocol have been adopted, adding new obligations and additional ODS, and adjusting existing control schedules. Amendments require ratification by a defined number of parties before they enter into force, while adjustments enter into force automatically.

LONDON AMENDMENT AND ADJUSTMENTS: Delegates to the second Meeting of the Parties (MOP-2), which took place in London, UK, in 1990, tightened control schedules and agreed to add ten more CFCs to the list of ODS, as well as carbon tetrachloride (CTC) and methyl chloroform. To date, 189 parties have ratified the London Amendment. MOP-2 also established the Multilateral Fund, which meets the incremental costs incurred by Article 5 parties in implementing the Protocol's control measures and finances clearinghouse functions, including technical assistance, information, training, and the costs of the Multilateral Fund Secretariat. The Fund is replenished every three years, and has received pledges of over US\$2 billion since its inception.

COPENHAGEN AMENDMENT AND ADJUSTMENTS: At MOP-4, held in Copenhagen, Denmark, in 1992, delegates tightened existing control schedules and added controls on methyl bromide, hydrobromofluorocarbons and HCFCs. MOP-4 also agreed to enact non-compliance procedures and to establish an Implementation Committee. The Implementation Committee examines cases of possible non-compliance by parties, and makes recommendations to the MOP aimed at securing full compliance. To date, 184 parties have ratified the Copenhagen Amendment.

MONTREAL AMENDMENT AND ADJUSTMENTS: At MOP-9, held in Montreal, Canada, in 1997, delegates agreed to a new licensing system for the import and export of ODS, in addition to tightening existing control schedules. They also agreed to a ban on trade in methyl bromide with non-parties to the Copenhagen Amendment. To date, 167 parties have ratified the Montreal Amendment.

BEIJING AMENDMENT AND ADJUSTMENTS: At MOP-11, held in Beijing, China, in 1999, delegates agreed to controls on bromochloromethane and additional controls on HCFCs, and to reporting on methyl bromide for quarantine and pre-shipment (QPS) applications. At present, 144 parties have ratified the Beijing Amendment.

MOPs 14-15: At MOP-14, held in Rome, Italy, in 2002, the MOP's decisions covered such matters as compliance, interaction with the World Trade Organization, and replenishment of the Multilateral Fund with US\$474 million for 2003-2005. MOP-15, held in Nairobi, Kenya, in 2003, resulted in decisions on issues including the implications of the entry into force of the Beijing Amendment. However, disagreements surfaced over exemptions allowing the use of methyl bromide beyond 2004 for "critical" uses where no technically or economically feasible alternatives are available. Delegates could not reach agreement and took the unprecedented step of calling for an "extraordinary" MOP.

FIRST EXTRAORDINARY MOP: The first Extraordinary Meeting of the Parties to the Montreal Protocol (ExMOP-1) took place in March 2004, in Montreal, Canada. Parties agreed to critical-use exemptions (CUEs) for methyl bromide for 2005 only. The introduction of a "double-cap" concept distinguishing between old and new production of methyl bromide was central to this compromise. Parties agreed to a cap for new production of 30% of parties' 1991 baseline levels, meaning that where the capped amount was insufficient for approved critical uses in 2005, parties were required to use existing stockpiles.

MOP-16: MOP-16 took place in Prague, Czech Republic, in November 2004. The parties adopted decisions on the Multilateral Fund, ratification, compliance, trade in ODS and other matters, but work on methyl bromide exemptions for 2006 was not completed. For the second time, parties decided to hold an extraordinary MOP.

SECOND EXTRAORDINARY MOP: ExMOP-2 was held in July 2005, in Montreal, Canada. Parties agreed to supplementary levels of CUEs for 2006 left unresolved at MOP-16. Under this decision, parties also agreed that: CUEs allocated domestically that exceed levels permitted by the MOP must be drawn from existing stocks; methyl bromide stocks must be reported; and parties must "endeavor" to allocate CUEs to the particular use categories specified in the decision.

COP-7/MOP-17: MOP-17 was held jointly with the seventh Conference of the Parties to the Vienna Convention in Dakar, Senegal, in December 2005. Parties approved essential-use exemptions for 2006 and 2007, supplemental CUEs for 2006 and CUEs for 2007, and production and consumption of methyl bromide in non-Article 5 parties for laboratory and analytical critical uses. Other decisions concerned, *inter alia*: submission of information on methyl bromide in space fumigation; replenishment of the Multilateral Fund with US\$470.4 million for 2006-2008; and the terms of reference for a feasibility study on developing a monitoring system for the transboundary movement of controlled ODS.

MOP-18: MOP-18 took place in New Delhi, India, from 30 October - 3 November 2006. Parties adopted decisions on: essential-use exemptions; future work following the Secretariat's workshop on the Special Report of the Intergovernmental Panel on Climate Change and the Technology and Economic Assessment Panel (TEAP); CUEs; difficulties faced by some Article 5 parties manufacturing CFC-based metered-dose inhalers (MDIs); treatment of stockpiled ODS relative to compliance; a feasibility study on developing a system for monitoring the transboundary movement of ODS; and key challenges to be faced by parties in protecting the ozone layer over the next

decade. Parties deferred consideration, until OEWG-27, of multi-year exemptions for CUEs and options for preventing harmful trade in methyl bromide stocks.

MOP-19: MOP-19 took place in Montreal, Canada, from 17-21 September 2007. Delegates adopted 29 decisions, including on: an accelerated phase-out of HCFCs; essential-use nominations and other issues arising out of the 2006 reports of the TEAP; critical-use nominations for methyl bromide; and monitoring transboundary movements and illegal trade in ODS. A Montreal Declaration was also adopted, which acknowledges the historic global cooperation achieved during the last 20 years under the Montreal Protocol, and reaffirms parties' commitment to phase out consumption and production of ODS through a range of actions.

CURRENT ODS CONTROL SCHEDULES: Under the amendments to the Montreal Protocol, non-Article 5 parties were required to phase out production and consumption of: halons by 1994; CFCs, CTC, hydrobromochlorofluorocarbons and methyl chloroform by 1996; bromochloromethane by 2002; and methyl bromide by 2005. The phase-out of HCFC production and consumption by Article 2 countries is set for 2020 and 2030 for Article 5 parties (with interim targets prior to those dates). Production was to be stabilized by 2004 and is to be frozen in 2013. Article 5 parties were required to phase out production and consumption of bromochloromethane by 2002. These parties must still phase out: production and consumption of CFCs, halons and CTC by 2010, and methyl chloroform and methyl bromide by 2015. There are exemptions to these phase-outs to allow for certain uses lacking feasible alternatives or in particular circumstances.

INTERSESSIONAL HIGHLIGHTS

IMPLEMENTATION COMMITTEE: The 40th meeting of the Implementation Committee under the Non-Compliance Procedure convened in Bangkok, Thailand, from 2-4 July 2008. The Implementation Committee considered, information provided by the Secretariat of the Multilateral Fund on relevant decisions of the Executive Committee of the Fund and on activities carried out by implementing agencies, non-compliance related issues, a plan of action for the establishment, and operation of licensing systems for ODS. Its recommendations will be considered at MOP-20.

OPEN-ENDED WORKING GROUP: The 28th meeting of the Montreal Protocol's Open-ended Working Group (OEWG-28) was held at the United Nations Conference Centre in Bangkok, Thailand, from 7-11 July 2008. Delegates agreed to forward eleven draft decisions to MOP-20, including on: HCFCs; reducing stocks and related emissions of ODS; actions to reduce methyl bromide for quarantine; extension of the fixed exchange rate mechanism of the Replenishment Fund; and administrative matters.

TEAP AND TOCs: The TEAP and several of the Technical Options Committees (TOCs) met between January and September 2008 to further their work in the lead-up to MOP-20. These included: the Halons TOC convened from 21-23 January 2008, in Manchester, United Kingdom; the Chemicals TOC convened from 19-21 February 2008, in Shanghai, China; the Medical TOC convened from 1-4 April 2008, in Tokushima, Japan; the Methyl Bromide TOC convened from 14-18 April 2008, in Rehovot, Israel; the TEAP convened from 21-25 April 2008, in Paris, France; and the Refrigeration TOC convened on 7 September 2008, in Copenhagen, Denmark. The work of the TOCs are included in the TEAP's 2008 reports, which will be considered at MOP-20.

COP-8/MOP-20 HIGHLIGHTS: SUNDAY, 16 NOVEMBER 2008

The preparatory segment of the eighth Conference of the Parties (COP-8) to the Vienna Convention and the twentieth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer (MOP-20) opened in Doha, Qatar on Sunday 16 November, 2008.

In the morning, delegates heard opening addresses and considered issues related to the Vienna Convention and the Montreal Protocol. During the afternoon, delegates discussed the replenishment of the Multilateral Fund, reports by the TEAP and issues related to essential uses.

OPENING OF THE PREPARATORY SEGMENT

Preparatory Segment Co-Chair Mikkel Sørensen (Denmark) opened the session. Abdullah bin Mubarak bin Aaboud al-Midhadi, Minister of Environment, Qatar, welcomed participants and announced his country's decision to donate all the computers used at the meeting to UNEP so it can continue to hold environmentally conscious, paper-free meetings.

Marco González, Executive Secretary of the Ozone Secretariat, thanked the Government of Qatar for helping pioneer the use of electronic documentation in the UN system. González also urged support for: parties that have yet to phase out CFCs, halons and carbon tetrachloride (CTC) by 2010; a robust replenishment of Multilateral Fund; a decision on ODS destruction; and working to close the gap in satellite monitoring programmes.

ORGANIZATIONAL MATTERS

Preparatory Segment Co-Chair Judy Beaumont (South Africa) addressed organizational matters. She also highlighted the importance of the replenishment task force, the fixed-exchange-rate mechanism, environmentally-sound disposal of ODS, the election of new office bearers for several committees, and the need for transparency. The agenda for the Preparatory Segment was adopted with the inclusion of proposals by Iraq, Nepal, Mexico, the US and a Qatari proposal to develop a Doha Declaration.

CONSIDERATION OF VIENNA CONVENTION AND COMBINED VIENNA CONVENTION AND MONTREAL PROTOCOL ISSUES

**REPORT OF THE SEVENTH MEETING OF THE
OZONE RESEARCH MANAGERS (ORM) OF THE
PARTIES TO THE VIENNA CONVENTION:** Michael Kurylo, Chairman of the Seventh ORM Meeting, stressed that

ozone depletion and climate change are highly interconnected and that the complexities of ozone and climate science demand new measurement activities. He highlighted several recommendations from the report, including those on: increased research on ozone evolution and monitoring; emissions; banks; and evolution of ODS and substitutes, particularly in developing countries.

**STATUS OF THE GENERAL TRUST FUND FOR
FINANCING ACTIVITIES ON RESEARCH AND
SYSTEMATIC OBSERVATIONS RELEVANT TO THE
VIENNA CONVENTION:** Megumi Seki, Ozone Secretariat, presented a report on the Vienna Convention Trust Fund, explaining that the Trust Fund, established in 2003, provides support to maintain existing World Meteorological Organization-Global Atmosphere Watch (WMO-GAW) satellites. She said the fund had received contributions of US\$179,135.

Geir Braathen, WMO, reported on the Trust Fund activities outlining the ozone observing system of the WMO-GAW and WMO's planned activities for 2009.

In the ensuing discussion, KUWAIT, questioned WMO regarding the possibility of installing an ozone monitoring system covering the Arab Gulf region. INDONESIA requested more support to increase its ozone monitoring capabilities.

CANADA reported on its continued support for ozone monitoring and expressed concern about the upcoming decommissioning of satellites, which might result in a gap in observation of the ozone layer, and called for funding to maintain a strong global monitoring system.

JORDAN requested funding for comprehensive monitoring to cover all regions, especially Western Asia which faces severe risks in regards to ozone depletion. SAUDI ARABIA noted that some Gulf countries still lack monitoring tools and supported increased monitoring at stratospheric and tropospheric levels. Noting several impacts of climate change on the southern hemisphere, ARGENTINA suggested building on synergies between work to protect the ozone layer and combating climate change.

**FINANCIAL REPORTS AND BUDGETS OF THE
TRUST FUNDS FOR THE VIENNA CONVENTION
AND THE MONTREAL PROTOCOL:** Co-Chair Sørensen introduced the agenda item, and delegates agreed to follow the established practice of setting up a subcommittee to prepare a draft recommendation for consideration by parties. France, for the EUROPEAN UNION (EU), called on parties to pay contributions in full and on time.

**STATUS OF RATIFICATION OF THE VIENNA
CONVENTION, THE MONTREAL PROTOCOL AND
THE AMENDMENTS TO THE MONTREAL PROTOCOL:**

Co-Chair Beaumont reported on the ratification status of the Vienna Convention, the Montreal Protocol and the Amendments to the Montreal Protocol. Delegates agreed to amend the respective draft decision VIII/AA and XX/AA (UNEP/OzL.Conv.8/3 and UNEP/OzL.Pro.20/3) and forward it to the high level segment.

DISCUSSION OF MONTREAL PROTOCOL-RELATED ISSUES

REPLENISHMENT OF THE MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL: Presentation and consideration of the supplemental report of the TEAP Replenishment Task Force: TEAP members presented the report, and explained the total funding requirements for the period of 2009-2012 were in the range of US\$399 million to US\$630 million. The presenters outlined issues and costs related to inflation, cut-off dates, institutional strengthening, second conversions, cost-effectiveness factors, climate benefits and demonstration projects.

In the ensuing discussion delegates debated replenishment and the fixed-exchange-rate mechanism.

URUGUAY urged that when considering the Fund's replenishment, delegates also consider synergies with the Kyoto Protocol in order not to "misstep" the goal of mitigating climate change.

The US noted its concern with, *inter alia*, unconstrained production and consumption of HCFC in Article 5 countries until the freeze year of 2013, and instead suggested balanced funding to ensure a steady decline in HCFCs.

CHINA underscored the need for sufficient financial support for institution building and for Article 5 countries to meet their HCFC phase-out schedules.

JAPAN suggested more focused discussion about the replenishment of the Fund. JORDAN highlighted the importance of financial strategies enabling parties to meet cut-off dates, and strengthening institutions. COLOMBIA urged that cut-off dates be flexible and take into account the interests and concerns of Article 5 countries. MOROCCO urged making sufficient funding available to Article 5 countries for destruction, conversion and re-conversion.

ARGENTINA emphasized the importance of financial support for Article 5 countries and of assuring that replacements have the least global warming potential. MALAYSIA said that the total funding estimated by TEAP may be insufficient for the costs of HCFC phase-out. The EU said discussions on whether to make the fixed-exchange-rate mechanism permanent would be useful.

Co-Chair Sørensen suggested, and delegates agreed, that the issue of replenishment be continued in a contact group co-chaired by Laura Berón (Argentina) and Jozef Buys (Belgium). In response to the high degree of interest, delegates agreed the contact group would begin its work as an open-ended group.

ENVIRONMENTALLY SOUND DISPOSAL OF OZONE-DEPLETING SUBSTANCES: Delegates heard a report from the OEWG-28 contact group on ODS disposal explaining the group received comments from seven parties, which included a suggestion to take a step-by-step approach for destruction of ODS banks.

In the ensuing discussion, MEXICO highlighted its conference room paper (CRP) (UNEP/OzL.Pro.20/CRP.3) proposing to finance pilot projects for the destruction of contaminated CFC banks that have been accumulated and which cannot fit into existing banks. The US said it would put forward a CRP proposing a workshop to convene in 2009, for clarifying the goals of the process. The EC noted that they support a step-by-step approach, where the first goal would be to build on

the ongoing work of the implementing agencies or Multilateral Fund, to develop practical experience with the bank management process.

UPDATE REPORTS BY THE TEAP: Delegates heard update reports by TEAP members. Regarding nominations for essential use exemptions for metered-dose inhalers (MDIs) requested by the Russian Federation and the EC for 2009, and the US for 2010, TEAP reluctantly agreed to recommend such essential use exemptions for the EC and the US with the understanding that no further nominations would be forthcoming from them. Regarding the Russian Federation's request for an exemption for the use of CFC-113 for certain aerospace applications, a TEAP member reported that the amounts requested are declining as alternatives are being pursued.

TEAP members explained delays in the TEAP report on regional imbalances in availability of halon due to the limited availability of data and the scoping study on alternatives to HCFCs for mines and very high temperature conditions due to difficulties in collecting actual commercial product data.

Regarding the task force on CTC emissions, a TEAP member reported that although total production had been slowly declining, recent atmospheric measurements have remained high, resulting in the conclusion that there is a rapidly growing new source that has to be investigated further.

A TEAP member requested US\$100,000 for TEAP's 2008 budget for travel and meeting expenses; proposed Sergey Kopylov as the Co-Chair of the Halons Technical Options Committee (HTOC); and noted that positions are available for the Methyl Bromide Technical Options (MBTOC) Committee, HTOC and the Refrigeration, Air conditioning and Heat Pumps Technical Options Committee (RTOC).

ISSUES RELATED TO ESSENTIAL USES: Use of CFC-113 in the aerospace industry in the Russian Federation: Co-Chair Sørensen noted that TEAP authorized the use of 130 tons of CFC-113 in the aerospace industry in the Russian Federation for 2009. The Russian Federation thanked TEAP for its work. The EC and the US requested further details about the TEAP visit to Russia, and a TEAP member explained how they determined the essential use exemption for CFC-113.

2009 and 2010 essential use nominations: Co-Chair Beaumont noted that the EC had reduced its request for MDI essential use exemptions from 38 to 22 tons of CFCs for 2009. The US reduced its request from 182 to 92 tons of CFCs for 2010. The US thanked the MTOC for its work, noted concerns over the MTOC's suggestion of transitioning from epinephrine inhalers to an alternative in 2010, and looked forward to working with the EC on a joint CRP. The EC noted its support for working with the US.

IN THE CORRIDORS

As delegates gathered in the sun-baked city of Doha on Sunday, many drew parallels between the Montreal Protocol's history as a trail-blazer in the world of multilateral environmental agreements and the new "paperless" nature of COP-8/MOP-20. While many were thrilled at the availability of laptops for the duration of the meeting – 900 in total – others seemed perplexed by the challenge of accessing the meeting's dedicated Internet portal. The meeting's IT service was in hot demand, but difficulties seemed to be ironed out by the afternoon.

As participants delved into the agenda, several commended the fast pace of progress on non-controversial issues. While other participants pointed to the negotiations on the Multilateral Fund's replenishment as potentially sticky, a few said there was potential for delegates to meet in the middle. Others said that the next issue on the horizon was the future of HFCs. As countries move away from HCFCs, HFCs are an easy substitute—but existing HFCs have a high global warming potential.

COP-8/MOP-20 HIGHLIGHTS:

MONDAY, 17 NOVEMBER 2008

COP-8 to the Vienna Convention and MOP-20 to the Montreal Protocol convened for its second day in Doha, Qatar, on Monday 17 November, 2008.

In the morning plenary, delegates considered methyl bromide-related issues and essential uses. During the afternoon plenary delegates turned their attention to decisions on TEAP reports and compliance and reporting issues. Contact groups also convened throughout the day.

DISCUSSION OF MONTREAL PROTOCOL-RELATED ISSUES

REPLENISHMENT OF THE MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL: Proposal on extension of the fixed-exchange-rate mechanism: Co-Chair Beaumont opened the floor to comments on a proposed extension of the fixed-exchange-rate mechanism, the US said it only provisionally supported the mechanism, since it remains to be seen how it operates in a weak economy. This issue was referred to the replenishment contact group.

ISSUES RELATED TO ESSENTIAL USES: Essential uses and campaign production of CFCs for MDIs: The OEWG-28 campaign production and essential uses contact group provided an update on its work since OEWG-28, noting, *inter alia*, that the group is still considering final campaign production of CFCs to supply requirements for MDI manufacturing after 2009. Further work was referred to a contact group on the issue.

CONSIDERATION OF METHYL BROMIDE-RELATED ISSUES: Nominations for 2009 and 2010 for critical-use exemptions: Mohamed Besri, Co-Chair MBTOC, discussed global consumption of methyl bromide in Article 5 and non-Article 5 parties from 1991 to 2007, and provided an update on the meta-analysis of methyl bromide critical-use exemptions (CUEs) for the US.

Marta Pizano, Co-Chair MBTOC, provided an overview of the critical use nominations (CUNs) for methyl bromide, noting a general downward trend.

Ian Porter, Co-Chair MBTOC, discussed CUNs for methyl bromide's use for soil fumigation, saying that: Australia and Canada could reduce CUNs if they adopted regulatory changes that lower methyl bromide dose rates, or adopt barrier films for strawberry runners; Israel is considering registration of chloropicrin; and Israel, Japan and the US continue to increase the use of barrier films to reduce dose rates.

Michelle Marcotte, Co-Chair MBTOC, presented the MBTOC's Report on Quarantine, Structures and Commodities. She highlighted that the development of alternatives for high

moisture date crops is being conducted under the aegis of UNIDO. She also noted that applicants with CUNs continue to support research efforts on alternatives in commercial scale trials and adaptations, and make necessary contributions to register alternatives.

In the ensuing discussion, JAPAN, highlighted its decision to eliminate the use of methyl bromide by 2013. The EC proposed a draft decision on increasing the rate with which methyl bromide alternatives are used.

Adjustment to the Montreal Protocol on allowances for production of methyl bromide to meet basic domestic needs: Citing successes already achieved, KENYA, with MAURITIUS, proposed a draft decision reducing the maximum production allowance for methyl bromide by half, beginning January 1, 2010. JORDAN stated that date farmers in particular need to continue using methyl bromide, and opposed the proposal, supported by MOROCCO, citing the economic value of agriculture. MAURITIUS, opposed by TUNISIA, stressed that alternatives to methyl bromide may be available. The US described recent successes and expressed optimism about further reductions in its use of methyl bromide. The EU supported the proposal, saying that alternatives are available.

Quarantine and pre-shipment (QPS) uses of methyl bromide: The EU reiterated its optimism about the availability of alternatives to methyl bromide and the potential for consensus on this issue.

Co-Chair Sørensen concluded the discussion on methyl bromide, stating that due to divergent views, the Kenyan proposal would not be considered further at MOP-20. Delegates agreed to convene a contact group on methyl bromide to address CUNs and QPS.

APPLICATION OF TRADE PROVISIONS TO HCFCs: Delegates agreed to forward the draft decision, proposed by Australia, on application of trade provisions to HCFCs (UNEP/OzL.Conv.8/3-UNEP/OzL.Conv.8 20/3) to the high level segment.

PROCESS AGENTS: Delegates considered the TEAP's recommendation on process agents, including that, three of the ten submitted uses, could be added. CHINA suggested, and delegates agreed, that the issue would be revisited at MOP-21.

UPDATE REPORTS BY TEAP: CTC emissions and opportunities for reduction: The final TEAP report on CTC emissions and opportunities for reduction

Responding to a question by Sweden concerning the rapid growth of CTC emissions, TEAP said they would discuss the issue bilaterally. The US requested to participate, hoping that TEAP's work would be included in its ongoing progress reports.

Regional imbalances of halons: Delegates considered TEAP's assessment that there may be regional imbalances in the availability of halons and that TEAP may wish to revisit the issue in 2009.

Scoping study on alternatives to HCFCs for mines and very high temperature conditions: Co-Chair Beaumont requested TEAP to complete the study by OEWG-29 in 2009. KUWAIT, SAUDI ARABIA, JORDAN, BAHRAIN and OMAN reminded parties of the decision to support the study; highlighted the importance of finding alternatives to HCFCs especially in countries with very high temperatures; requested country-specific field visits to determine alternatives; and urged TEAP to complete the study as soon as possible.

The US stressed the importance of the study, in light of the accelerated HCFC phase-out schedule. SOUTH AFRICA supported TEAP field visits, saying it uses HCFCs in mines and is seeking alternatives.

TEAP confirmed that the study will be available for review by January, 2009, and will be discussed at the OEWG-29.

COMPLIANCE AND REPORTING ISSUES CONSIDERED BY THE IMPLEMENTATION COMMITTEE (IMPCOM):

Implementation Committee President Hassan Hannachi (Tunisia) presented the report of the 41st Implementation Committee. He described a series of recommendations and seven decisions from the report, covering every stage of the compliance system of the Montreal Protocol. He indicated that the data reporting rate has improved significantly, with 188 parties reporting.

In the ensuing discussion, BANGLADESH described steps it has taken to phase out ODS and asked delegates to make an exception so it would not face potential non compliance from 2007 to 2009. PAKISTAN supported Bangladesh and proposed following the transition strategy approved by the Executive Committee. AUSTRALIA, supported by SWITZERLAND, the US and the EC, suggested that the Implementation Committee reconsider the case of Bangladesh, during its next meeting in 2009, noting concern about the lack of a work plan or monitoring. The President of the Implementation Committee said the matter had already been considered in detail, but did not oppose delaying the decision to allow further consideration.

EGYPT noted that developing countries generally face difficulties replacing CFCs since alternative technologies are often controlled by multinational corporations and hard to access for national companies.

OTHER MATTERS

Regarding the proposal to hold a workshop on high-GWP substitutes for ODS (UNEP/OzL.Pro.20/CRP.7), the US elaborated that the CRP contained, *inter alia*, a request for TEAP to update its 2005 Supplement to the Special Report on the Ozone Layer and Climate, and convene a half-day open-ended dialogue on high-GWP substitutes to ODS at OEWG-29. The EU, supported by AUSTRALIA, requested more time for discussion and delegates agreed to continue discussions informally.

Regarding Iraq's proposed draft decision on difficulties in implementing the Protocol (UNEP/OzL.Pro.20/CRP.1), IRAQ suggested that while it has acceded to the Vienna Convention and the Montreal Protocol, it requires technical and financial assistance to control the entry of ODS into Iraq and urged other countries to control exports. Many countries supported Iraq's request, while others wanted to consider it further informally.

CONTACT GROUPS

DESTRUCTION: The contact group, co-chaired by Martin Sirois (Canada) and Agustín Sánchez (Mexico), worked towards a draft decision. Several delegates stressed the need for rapid action. Proposals were made to move in two or three stages: beginning with the most accessible banks, followed by medium-

and high-effort banks. Much discussion covered potential use of the Multilateral Fund to assist Article 5 countries. Delegates also discussed the need for additional data about banks.

REPLENISHMENT OF THE MULTILATERAL FUND: The contact group on replenishment began its morning session by hearing general statements, and delegates commented on the two scenarios set out by the TEAP Replenishment Task Force. Many Article 2 countries preferred to start negotiations from the baseline scenario, while several Article 5 countries expressed their support for the 2012 funding scenario.

Delegates then considered the issues as set out in the executive summary of the supplemental report of the TEAP Replenishment Task Force (UNEP/OzL.Pro.20/6). Regarding taking into account inflation, Article 2 countries pointed to the financial crisis and prospects of deflation and said it was not the time to start accounting for inflation; while Article 5 countries pointed to the preponderance of inflation in their countries. On cut-off dates for HCFCs, many Article 5 countries preferred a later cut-off date while some Article 2 countries noted that an earlier cut-off date would mean that subsequent increases would not be eligible for funding and others suggested spreading eligible funding over more than one triennium. In the afternoon the contact group was closed to allow twelve negotiators each from Article 5 and Article 2 countries to negotiate replenishment details.

METHYL BROMIDE: Barry Reville (Australia) chaired the contact group which convened in the evening. Participants discussed the draft decision on actions by parties to reduce methyl bromide use for QPS purposes and related emissions, submitted by the EC, Mexico and Switzerland. Initial discussions stalled on the language around the updated definition of pre-shipment, the scope of the data being presented, and requesting the Implementation Committee to consider the reporting of methyl bromide used for QPS applications. As delegates moved through the document, larger concerns about the proposed text emerged, especially on how much of the data that the TEAP is being requested to analyze is actually available. These included: QPS applications for which no alternatives are available to date; regulations mandating or promoting the use of methyl bromide for QPS treatment; and regulations banning the use of methyl bromide. Participants agreed to meet bilaterally to discuss the availability of the information before convening tomorrow.

MDI ESSENTIAL USE/CAMPAIGN PRODUCTION: This contact group convened in the afternoon and was chaired by Paul Krajnik (Austria). Participants deliberated on deleting references to non-applicability of a number of decisions affecting Article 5 parties vis-à-vis essential-use nominations for the years 1997-2002, 2000 and 2001 and for 2006 and 2007 (Decisions VIII/9, XI/14, XVII/5 respectively), and agreeing on deadlines for promoting industry participation for a smooth and efficient transition away from CFC-based MDIs (Dec VIII/10). Several parties objected to the inclusion of deadlines, suggesting that they did not have appropriate technology, and debated the time required for transition and whether phase-out could be assisted by regulation.

IN THE CORRIDORS

Contact group negotiations began in earnest on Monday. On replenishment, positions were made plainly obvious as Article 5 and Article 2 countries literally aligned themselves along opposite sides of the negotiating table. In the initial exchange of views it was evident that the groups' starting points for negotiations were similarly opposed. Some delegates commented that this represented initial strategic positioning, necessary to allow enough room for reshuffling of positions and players throughout the week. On destruction, the initial contact group meeting was so well attended that delegates could not fit into the conference room. But with a larger room for its second and third gatherings, delegates physically had ample room and time to air their views, and appeared to be moving toward a draft decision.

COP-8/MOP-20 HIGHLIGHTS: TUESDAY, 18 NOVEMBER 2008

COP-8 to the Vienna Convention and MOP-20 to the Montreal Protocol convened for its third day in Doha, Qatar, on Tuesday, 18 November, 2008.

In the morning, delegates convened briefly in plenary, and for the remainder of the morning, and the afternoon, work continued in contact groups on replenishment, methyl bromide, destruction, budget and MDI essential use and campaign production.

Delegates reconvened in plenary for an evening session, and the conclusion of the preparatory segment.

CONSIDERATION OF VIENNA CONVENTION AND COMBINED VIENNA CONVENTION AND MONTREAL PROTOCOL ISSUES

REPORT OF THE SEVENTH MEETING OF THE OZONE RESEARCH MANAGERS (ORM) OF THE PARTIES TO THE VIENNA CONVENTION: SENEGAL reported on the 7th meeting of the ORM, and urged space agencies and governments to coordinate work on long-term time-series satellite data, citing gaps in monitoring that are likely to occur. The EU expressed general support for research activities and requested time to review draft decisions to ensure all necessary additional details were included. The US expressed surprise at the existence of gaps in satellite data, and urged that attention be directed toward this problem. TEAP responded, saying that a statement has been issued calling attention to the problem, and invited additional discussion.

During the evening plenary, SENEGAL and the US proposed minor amendments to draft decisions on recommendations of the ORM (UNEP/OzL.Conv.8/CRP.1/Rev.1) and on the Trust Fund of the Vienna Convention (UNEP/OzL.Conv.8/CRP.2/Rev.1) respectively. Delegates agreed to forward both draft decisions to the high level segment.

DISCUSSION OF MONTREAL PROTOCOL-RELATED ISSUES

ISSUES RELATED TO ESSENTIAL USES: Essential uses and campaign production of CFCs for MDIs: Co-Chair Sørensen suggested, and delegates agreed to forward the draft decision on essential use exemptions of CFCs for MDIs (UNEP/OzL.Pro.20/CRP.10) to the high level segment.

UPDATE REPORTS BY TEAP: CTC emissions and opportunities for reduction: Delegates briefly discussed the issue of CTC. TEAP stated that it had discussed the issues with SWEDEN and the US, and decided that further study was required on CTC. He said these issues would be taken up by TEAP in 2009, and include consultations with the Multilateral Fund and implementing agencies, on destroying CTC.

OTHER MATTERS

Regarding the draft decision on the workshop for a dialog on high-GWP substitutes for ODS (UNEP/OzL.Conv.8/CRP.7), the US said it had received comments and that discussion on the issue would continue informally.

During the evening plenary, the US explained informal discussions had occurred and several minor issues had been resolved. He explained that the one outstanding issue was whether the Montreal Protocol would convene this workshop alone, or in collaboration with the UNFCCC.

On the draft decision on difficulties faced by Iraq as a new party (UNEP/OzL.Conv.8/CRP.1), IRAQ noted that comments had been received and would be incorporated into a revised CRP. In the evening plenary, IRAQ confirmed that after further consideration, it would not pursue the draft decision at COP-8/MOP-20.

Regarding the draft decision on Nepal's compliance with the Protocol (UNEP/OzL.Conv.8/CRP.2), NEPAL explained that it faced an ongoing challenge of addressing poverty, but said it was aiming to eliminate CFCs by 2010, with the exception of essential uses. In the evening plenary, NEPAL announced its withdrawal of the draft decision, but said it may reintroduce it at OEWG-29.

CONTACT GROUPS

DESTRUCTION: The contact group on destruction responded to plenary in the morning and met in closed session during the afternoon. Co-Chair Agustín Sánchez (Mexico) informed plenary of the group's agenda, including addressing: the importance of short term actions; incentives towards destruction of ODS, and exceptions; illicit trade of ODS; amendments to the indicative list of incremental costs; development of workshops and working groups for future activities; work on national strategies for national legislation on banks and destruction; and the relationship between these

destruction activities and other conventions. He explained that the contact group had covered all of these issues and prepared a draft proposal, to be presented when the group reconvened. Shortly after the beginning of the afternoon session, the contact group was closed to observers, although an exception was made for a representative of the Basel Convention Secretariat.

REPLENISHMENT OF THE MULTILATERAL FUND:

This contact group met throughout the day in a closed-door session. Jozef Buys (Belgium), the Co-Chair of the contact group on replenishment provided an update to the evening plenary on the group's work. He noted progress in analyzing the different components of the replenishment, including the overall level of replenishment. Although the Article 5 and Article 2 countries had not yet agreed on the level of replenishment, Buys said the divergence in views was narrowing. In response to being asked how much more time the group needed, Buys said, "Can I borrow your crystal ball?"

METHYL BROMIDE: The contact group on methyl bromide, co-chaired by Barry Reville (Australia) and Gabriel Hakizimana (Burundi), discussed the proposed draft decision on actions by parties to reduce methyl bromide use for QPS. The main contention within the draft was a request to TEAP to update its analysis of methyl bromide consumption for QPS use. While many parties agreed on the usefulness of more detailed information on the major uses of methyl bromide in QPS, one country opposed additional information collection from parties, when much of the information was already available. Another party questioned whether gathering further information was possible within the required time period. The decision's sponsor maintained that the survey on where, and how, methyl bromide is used for QPS is vital to identifying alternatives. One Article 5 country said it would be unable to undertake a survey unless it received support from the Multilateral Fund, while others insisted that the Multilateral Fund cannot fund such an effort since methyl bromide use for QPS is exempt and not covered by the Montreal Protocol. Although consensus was not reached on whether a survey would be included in the draft decision, no other aspects of the decision proved contentious.

In the late afternoon, delegates considered alternative proposals for a draft decision on the evaluation of methyl bromide critical use nominations (CUNs). The proposal submitted by the EC (UNEP/OzL.Pro.20/CRP.9) built on the original draft decision, and added, *inter alia*, evaluation of efforts to approve alternatives and substitutes. The US proposal contained a more streamlined decision, including a suggestion that MBTOC develop its recommendations as a single entity in a consensus process. Delegates did not agree on which proposal to work with. Some delegates raised concerns regarding transparency of MBTOC decision making in general, and the need for MBTOC to provide additional information regarding its decisions in a timely manner, while others stressed the need to ensure that parties provide appropriate guidance to MBTOC.

MDI ESSENTIAL USE/CAMPAIGN PRODUCTION: The contact group discussed inclusion of Article 5 parties under a number of past decisions on essential use to extend applicability to their essential use nominations. Decisions considered included those on: measures to facilitate a transition from CFC-based

MDIs; promoting the closure of essential-use nominations for MDIs; essential-use exemptions for controlled substances for 2007 and 2008; and essential-use nominations for controlled substances for 2008 and 2009. Following a lengthy debate, delegates agreed that any MDI approved after December 31, 2008, will not constitute an essential use. The group discussed the dates of the submission of essential-use nominations for CFCs for MDIs for the treatment of asthma and chronic obstructive pulmonary disease and agreed to a 2010 date. An Article 2 party noted that there are difficulties in reducing the exports of CFC-based MDIs from Article 5 parties, and that Article 5 parties should take steps to prevent exports. Parties debated the December, 2000 deadline for considering any CFC MDI products for treatment of asthma as an essential use; a transition strategy and plan of action for the CFC-metered dose inhalers; and Salbutomal phase-out, including the availability of alternative options in different countries. Delegates discussed revising the Handbook for Essential Use Nominations, including the role TEAP would play in the process and whether such a revision would pose an additional burden on Article 5 parties. The group then considered the US proposal for a potential draft decision on campaign financing, including a request that the TEAP: assess and report to the parties concerning the potential timing for final campaign production; consider options for long-term storage, distribution and management of produced quantities of pharmaceutical-grade CFCs before they are needed by parties; and options for minimizing the potential for too much or too little CFCs as part of final campaign production. Pointing to medical needs in its population, an Article 5 party expressed concerns about the availability of CFC-based MDIs after 2010. The contact group agreed that two separate CRPs would be prepared, one on campaign production and another on essential uses.

BUDGET: Alessandro Peru (Italy), Co-Chair of the budget contact group, noted that the group had approved the budget for the Montreal Protocol Trust Fund for 2009 and 2010, which is US\$4,276,933 per year. The budget for the Vienna Convention Trust Fund had also been approved and amounts to US\$603,000 for 2009-2011.

IN THE CORRIDORS

While the destruction contact group focused on eliminating banks of ODS stored in relatively accessible refrigerators and air conditioners, buzz in the corridors centered on the potential importance of including HCFCs in destruction activities and the resulting potential contribution to combating climate change. When observers and NGOs were asked to leave the afternoon session of the ODS contact group, those left in the corridors speculated on the nature of sensitive issues. One opinion was that delegates were concerned about perverse incentives for HCFCs, which could conceivably lead producers to produce more, and then receive funds to destroy the new chemicals. Others considered this unfounded, and speculated that key delegations were seeking to prevent a domino effect of cascading chemical regulation, as CFC regulation could give way to HCFC over-regulation, which could give way to HFC regulation, and so forth. Others contended that behind closed doors some parties would pursue agendas to micromanage the Multilateral Fund.

COP-8/MOP-20 HIGHLIGHTS: WEDNESDAY, 19 NOVEMBER 2008

COP-8 to the Vienna Convention and MOP-20 to the Montreal Protocol convened for its fourth day in Doha, Qatar, on Wednesday, 19 November 2008.

In the morning, delegates attended the opening of the high level segment. Delegates then convened in plenary throughout the day where they heard presentations by the assessment panels, the Multilateral Fund, and made country statements. Contact groups on methyl bromide, MDI essential use and campaign production, destruction, replenishment met in parallel throughout the day, the latter two in closed sessions.

OPENING OF THE HIGH LEVEL SEGMENT

Abdullah bin Mubarak bin Aaboud al-Midhadi, Minister of Environment, Qatar, and MOP-19 President, highlighted activities undertaken in Qatar on ozone protection, including launching a stratospheric ozone monitoring station along with National Aeronautics and Space Administration, and a center for applied research for creating ozone alternatives in cooperation with United Nations Environment Programme.

Djibo Leity Ka, Minister of Environment, Senegal, and President of the Bureau, explained that the Bureau had undertaken major activities since its last meeting three years ago in Dakar, Senegal, including strengthening of ozone monitoring and research networks.

Congratulating the Government of Qatar on a groundbreaking meeting, Marco González, Executive Secretary, Ozone Secretariat, underscored the importance of the paperless initiative, and the need for its extension to the global environmental system starting with the upcoming climate change negotiations in Poznan, Poland in December 2008.

ORGANIZATIONAL MATTERS

Abdullah bin Mubarak bin Aaboud al-Midhadi introduced nominations for officers, and delegates elected Róbert Tóth, Hungary, as MOP-20 President and Patali Ranawaka, Minister of Environment, Sri Lanka, as COP-8 President, by acclamation. Delegates adopted the agenda of the COP-8/MOP-20 high level segment without amendment.

PRESENTATIONS BY ASSESSMENT PANELS

A.R. Ravishankara (US), Co-Chair Scientific Assessment Panel, discussed levels and trends of ODS, with an emphasis on HCFCs.

Jan van der Leun (Netherlands), Co-Chair Environmental Assessment Panel, recounted the interactions between ozone depletion and climate change, and discussed ultraviolet radiation and skin cancer as some of the side effects of the ozone hole.

Lambert Kuijpers (Netherlands), Co-Chair of the Technology and Economic Assessment Panel, updated the timelines for the Panel's work including on halons, QPS and methyl bromide.

PRESENTATION BY THE MULTILATERAL FUND

Albert Rombonot (Gabon), Chair, Executive Committee of the Multilateral Fund, described the Multilateral Fund's work to phase out ODS and recognized several implementation agencies, including UNDP and UNIDO, for their in-country work. He enumerated that the Multilateral Fund has 50 agreements with national governments and has disbursed US\$140 million to phase out ODS.

STATEMENTS BY HEADS OF DELEGATIONS

EGYPT highlighted the development of its halon bank, and announced that Egypt will host MOP-21, in Sharm el-Sheikh. Noting the accelerated phase-out of HCFCs, INDIA said that one of the challenges in meeting the freeze by 2013 is that alternatives without a high-GWP remain elusive.

BOSNIA AND HERZEGOVINA noted his country's effort since 2000 to reduce ODS, saying it is now on track to reach zero consumption of CFCs by 2010. SRI LANKA explained that its next challenge was to phase out HCFCs, especially since consumption is increasing.

Highlighting its efforts towards ozone protection, UGANDA described the challenge of containing illegal trade in ODS where countries have porous borders, and advocated for transfer of technology to Article 5 countries for phasing out ODS.

MAURITIUS highlighted the urgent need to make bold decisions on destruction of ODS banks and replenishment of the Multilateral Fund. IRAQ described its project to phase out HCFCs and its establishment of a national ozone committee. DJIBOUTI noted the need for availability of HCFC substitutes and for financial assistance from the Multilateral Fund.

The DOMINICAN REPUBLIC highlighted specific activities in his country including training of refrigeration technicians. Noting that the Montreal Protocol benefits both ozone layer and climate system, the US stressed the need to destroy ODS banks and to find ways of replacing HCFCs with substances with low, or neutral, GWP.

SOUTH AFRICA suggested that Basel Convention Regional Coordinating Centers should also undertake work on implementation of the Montreal Protocol.

The EU urged delegates to avoid resting on past achievements, and said the Multilateral Fund should avoid indirectly funding production of HCFCs and avoid products with high GWP. JORDAN said it had eliminated 70 percent of ODS and that it was initiating a renewable energy fund. LEBANON

informed delegates it had exceeded the requirements of the Vienna Convention and Montreal Protocol, and advocated for the establishment of a pan-Arab body to address ozone issues.

TANZANIA said it has phased out 80 percent of its CFC consumption, and that training of professionals to organize recovery and recycling programs is necessary. LAO PEOPLE'S DEMOCRATIC REPUBLIC stated that it has established an import/export licensing system to regulate trade in ODS.

CAMEROON described its awareness campaign to inform the public about ozone issues and its capacity-building workshops for phytosanitary specialists who use ODS, but stated that illicit trafficking of ODS remains a problem. YEMEN recounted its successful phase-out of CFCs from aerosols and fire extinguishers. MACEDONIA described its elimination of CFCs in government departments. BURUNDI described its efforts to phase out CFCs. UNITED ARAB EMIRATES outlined work to combat illegal trade in ODS including enacting laws on importing and licensing of ODS. BURKINA FASO highlighted its need for technical and financial support for the development of an HCFC management plan.

JAPAN said there is a need to focus on facilitating the phase-out of HCFC in Article 5 countries and said it would assist through technology transfer. BANGLADESH explained that the transition to non-CFC based MDIs is a time consuming process and that a CFC free MDI is not yet available.

A representative of FINLAND, on behalf of Expert Group of Technology Transfer of the UNFCCC, said that if HCFCs increase as a result of the Montreal Protocol, it will contribute to climate change and urged cooperation between the Montreal Protocol and the UNFCCC.

MOZAMBIQUE explained it has reduced CFC and methyl bromide imports, but was seeking further partnerships in technology transfer, institutional capacity building and financial support. CROATIA highlighted its efforts to phase out ODS, but said an efficient system for recovery, recycling and destruction of ODS was required. INDONESIA urged ODS producers to do more to prevent the export of banned ODS. In response to the historic agreement on HCFCs at MOP-19, SERBIA announced that it is convening a high level briefing on the HCFC phase out, scheduled to convene in Belgrade, in March, 2009.

BRUNEI DARUSSALAM informed delegates that it is on-track to meet its commitments, and thanked implementing agencies. CAMBODIA stressed that capacity building of personnel in the national ozone unit was a priority. IRAN said it had established a national ozone network, including comprehensive training on appreciation of the data and ODS tracking.

ARMENIA stated it has achieved an 85 percent reduction in CFC consumption, and is working toward a total phase out of CFCs by 2010. MALAYSIA reported its CFC consumption in 2007 was well below its commitments under the Montreal Protocol. KENYA described how most remaining ODS are contained in functioning and still-needed refrigerators and air conditioners, which will make them difficult to collect.

VENEZUELA noted the need to fight illicit trade in ODS, and for clear and specific actions regarding methyl bromide regulation. KUWAIT called for regulations and a schedule for the phase out of HCFCs.

CHINA said that there is a lack of mature and feasible alternatives to HCFCs, and thus total HCFC phase out would be a long process. BRAZIL reported that it has eliminated about 90 percent of ODS, and noted the value of programmes to collect, transport, and store ODS. TRINIDAD and TOBAGO said they have a multi-sectoral policy approach for phasing out ODS, which includes the implementation of the freeze and quota systems for CFCs. CUBA noted that it was leading an energy revolution in phasing out CFCs in domestic refrigerators.

AFGHANISTAN requested the Multilateral Fund to consider the difficulties faced by Afghanistan and Iraq to achieve targets set out for the ODS phase out. PHILIPPINES noted its work to reduce CFCs and phase out of HCFCs. PAKISTAN explained that with support from the Multilateral Fund, refrigeration and foam based industries in Pakistan have switched from use of CFCs to ozone friendly technologies. TURKEY stated that it does not produce ODS, has banned all CFC imports, and is ready to implement an accelerated phase-out schedule for HCFCs.

CONTACT GROUPS

METHYL BROMIDE: The contact group on methyl bromide met throughout Wednesday and discussed the draft decision on actions by Parties to reduce methyl bromide use for QPS (UNEP/OZL.PRO.20/CRP.5), and the proposals by the US and the EC for a draft decision on methyl bromide critical use exemptions for 2009-2010 (UNEP/OzL.Pro.20/CRP.9 and UNEP/OzL.Pro.20/CRP.12). After days of circular discussion around how TEAP would approach a study of methyl bromide uses in QPS, participants gravitated towards a multi-stage approach, beginning with TEAP reviewing all information on volumes and uses of methyl bromide for QPS, to establish if it could be used to adequately report specific methyl bromide QPS uses. Regarding CUEs, participants agreed to merge the US and EC documents into one, which has been provisionally approved.

MDI ESSENTIAL USE/CAMPAIGN PRODUCTION:

The contact group first discussed the remaining preambular paragraphs in the draft decision on campaign financing proposed by the US. Delegates agreed to acknowledge that while CFC production and consumption in Article 5 countries will cease in 2010, essential use exemptions will be possible. Delegates also clarified that campaign production constitutes a one-time essential use exemption for the multi-year period determined by a party to phase out CFC-based MDIs. Delegates then returned to the draft decision on amendment of the terms used in past decisions on essential uses to extend their applicability to Article 5 parties' nominations for essential use exemptions. They agreed to a deadline of MOP-21, after which no essential uses shall be approved for Article 5 parties, unless they have submitted at least a preliminary plan of action regarding phase out of MDIs for consideration by OEWG-29. While many Article 5 parties insisted on a December 31, 2009, deadline for approval of MDI inhalers in Article 5 countries to be eligible for consideration for essential use exemptions, many Article 2 countries preferred December 31, 2008, arguing that it was counterproductive to approve new products up to the final phase-out date. Delegates could not reach agreement and the meeting was suspended until Thursday to allow time for informal consultations.

IN THE CORRIDORS

Delegates attending the first day of the high level segment listened to repetitious calls for adequate financial assistance from the Multilateral Fund to phase out HCFCs and destroy ODS. Those sipping coffee in the corridors were heard muttering that their fingers were crossed for a good outcome on replenishment of the Multilateral Fund. The twenty four members of the replenishment contact group and the two Co-Chairs, however, remained behind closed doors and suffice it to say that by the time they broke for the gala dinner, the Article 5 and Article 2 group positions stood at US\$580 million versus US\$400 million.

ENB SUMMARY AND ANALYSIS: The *Earth Negotiations Bulletin* summary and analysis of COP 8 and MOP 20 will be available on Sunday, 23 November 2008, online at: <http://www.iisd.ca/ozone/mop20/>

**SUMMARY OF THE TWENTIETH MEETING OF THE PARTIES TO THE MONTREAL PROTOCOL AND EIGHTH MEETING OF THE CONFERENCE OF THE PARTIES TO THE VIENNA CONVENTION:
16-20 NOVEMBER 2008**

The eighth Conference of the Parties to the Vienna Convention for the Protection of the Ozone Layer and the twentieth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer (COP-8/MOP-20) took place in Doha, Qatar, from 16-20 November 2008. The joint meeting was attended by over 500 participants representing governments, UN agencies, intergovernmental and non-governmental organizations, academia, industry and the agricultural sector.

COP-8/MOP-20 opened with a preparatory segment from Sunday to Tuesday, 16-18 November, that addressed the COP/MOP's substantive agenda items and related draft decisions. This was followed by a high-level segment, which convened from Wednesday to Thursday, 19-20 November, and adopted the decisions forwarded to it by the preparatory segment. As the preparatory segment did not conclude its work on a number of contentious issues by Tuesday, it reconvened several times during the high-level segment to address outstanding issues, including replenishment of the Multilateral Fund, destruction of ozone depleting substances (ODS), and essential uses of metered dose inhalers.

COP-8/MOP-20 adopted a Doha Declaration and 29 decisions, including: replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol; ratification; compliance; methyl bromide; destruction of ODS; essential- and critical-use exemptions; process agents; and financial and administrative matters. Despite an extensive agenda, the hard work of delegates in plenary, contact groups and informal bilateral discussions, led to the resolution of all items, and enabled the meeting to conclude, as scheduled, on Thursday evening.

A BRIEF HISTORY OF THE OZONE REGIME

Concerns that the Earth's stratospheric ozone layer could be at risk from CFCs and other anthropogenic substances were first raised in the early 1970s. At that time, scientists warned that the release of these substances into the atmosphere could deplete the ozone layer, hindering its ability to prevent harmful ultraviolet rays from reaching the Earth. This would adversely affect ocean ecosystems, agricultural productivity and animal populations, and harm humans through higher rates of skin cancers, cataracts and weakened immune systems. In response to this growing concern, the United Nations Environment Programme (UNEP) convened a conference in March 1977 that adopted a World Plan of Action on the Ozone Layer and established a Coordinating Committee to guide future international action on ozone protection.

VIENNA CONVENTION: In May 1981, the UNEP Governing Council launched negotiations on an international agreement to protect the ozone layer and, in March 1985, the Vienna Convention for the Protection of the Ozone Layer was adopted. The Convention called for cooperation on monitoring, research and data exchange, but did not impose obligations to reduce the use of ODS. The Convention now has 193 parties.

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MONTREAL PROTOCOL: In September 1987, efforts to negotiate binding obligations to reduce the use of ODS led to the adoption of the Montreal Protocol on Substances that Deplete the Ozone Layer. The Protocol introduced control measures for some CFCs and halons for developed countries (non-Article 5 parties). Developing countries (Article 5 parties) were granted a grace period allowing them to increase their use of these ODS before taking on commitments. The Protocol currently has 193 parties.

Since 1987, several amendments and adjustments to the Protocol have been adopted, adding new obligations and additional ODS, and adjusting existing control schedules. Amendments require ratification by a defined number of parties before they enter into force, while adjustments enter into force automatically.

LONDON AMENDMENT AND ADJUSTMENTS:

Delegates to the second Meeting of the Parties (MOP-2), which took place in London, UK, in 1990, tightened control schedules and agreed to add ten more CFCs to the list of ODS, as well as carbon tetrachloride (CTC) and methyl chloroform. To date, 189 parties have ratified the London Amendment. MOP-2 also established the Multilateral Fund, which meets the incremental costs incurred by Article 5 parties in implementing the Protocol's control measures and finances clearinghouse functions, including technical assistance, information, training, and the costs of the Multilateral Fund Secretariat. The Fund is replenished every three years, and has received pledges of over US\$2 billion since its inception.

COPENHAGEN AMENDMENT AND ADJUSTMENTS:

At MOP-4, held in Copenhagen, Denmark, in 1992, delegates tightened existing control schedules and added controls on methyl bromide, hydrobromofluorocarbons and hydrochlorofluorocarbons (HCFCs). MOP-4 also agreed to enact non-compliance procedures and to establish an Implementation Committee. The Implementation Committee examines cases of possible non-compliance by parties, and makes recommendations to the MOP aimed at securing full compliance. To date, 184 parties have ratified the Copenhagen Amendment.

MONTREAL AMENDMENT AND ADJUSTMENTS: At MOP-9, held in Montreal, Canada, in 1997, delegates agreed to a new licensing system for the import and export of ODS, in addition to tightening existing control schedules. They also agreed to a ban on trade in methyl bromide with non-parties to the Copenhagen Amendment. To date, 167 parties have ratified the Montreal Amendment.

BEIJING AMENDMENT AND ADJUSTMENTS: At MOP-11, held in Beijing, China, in 1999, delegates agreed to controls on bromochloromethane and additional controls on HCFCs, and to reporting on methyl bromide for quarantine and pre-shipment (QPS) applications. At present, 144 parties have ratified the Beijing Amendment.

MOPs 14-15: At MOP-14, held in Rome, Italy, in 2002, the MOP's decisions covered such matters as compliance, interaction with the World Trade Organization, and replenishment of the Multilateral Fund with US\$474 million for 2003-2005. MOP-15, held in Nairobi, Kenya, in 2003, resulted in decisions on issues including the implications of the entry into force of the Beijing Amendment. However, disagreements surfaced over exemptions allowing the use of methyl bromide beyond 2004 for critical

uses where no technically or economically feasible alternatives are available. Delegates could not reach agreement and took the unprecedented step of calling for an "extraordinary" MOP.

FIRST EXTRAORDINARY MOP: The first Extraordinary Meeting of the Parties to the Montreal Protocol (ExMOP-1) took place in March 2004, in Montreal, Canada. Parties agreed to critical-use exemptions (CUEs) for methyl bromide for 2005 only. The introduction of a "double-cap" concept distinguishing between old and new production of methyl bromide was central to this compromise. Parties agreed to a cap for new production of 30% of parties' 1991 baseline levels, meaning that where the capped amount was insufficient for approved critical uses in 2005, parties were required to use existing stockpiles.

MOP-16: MOP-16 took place in Prague, Czech Republic, in November 2004. The parties adopted decisions on the Multilateral Fund, ratification, compliance, trade in ODS and other matters, but work on methyl bromide exemptions for 2006 was not completed. For the second time, parties decided to hold an extraordinary MOP.

SECOND EXTRAORDINARY MOP: ExMOP-2 was held in July 2005, in Montreal, Canada. Parties agreed to supplementary levels of CUEs for 2006 left unresolved at MOP-16. Under this decision, parties also agreed that: CUEs allocated domestically that exceed levels permitted by the MOP must be drawn from existing stocks; methyl bromide stocks must be reported; and parties must "endeavor" to allocate CUEs to the particular use categories specified in the decision.

COP-7/MOP-17: MOP-17 was held jointly with the seventh Conference of the Parties to the Vienna Convention in Dakar, Senegal, in December 2005. Parties approved essential-use exemptions for 2006 and 2007, supplemental CUEs for 2006 and CUEs for 2007, and production and consumption of methyl bromide in non-Article 5 parties for laboratory and analytical critical uses. Other decisions concerned, *inter alia*: submission of information on methyl bromide in space fumigation; replenishment of the Multilateral Fund with US\$470.4 million for 2006-2008; and the terms of reference for a feasibility study on developing a monitoring system for the transboundary movement of controlled ODS.

MOP-18: MOP-18 took place in New Delhi, India, from 30 October - 3 November 2006. Parties adopted decisions on: essential-use exemptions; future work following the Secretariat's workshop on the Special Report of the Intergovernmental Panel on Climate Change and the Technology and Economic Assessment Panel (TEAP); CUEs; difficulties faced by some Article 5 parties manufacturing CFC-based metered-dose inhalers (MDIs); treatment of stockpiled ODS relative to compliance; a feasibility study on developing a system for monitoring the transboundary movement of ODS; and key challenges to be faced by parties in protecting the ozone layer over the next decade. Parties deferred consideration, until the 27th meeting of the Open-ended Working Group (OEWG) of the Parties to the Montreal Protocol, of multi-year exemptions for CUEs and options for preventing harmful trade in methyl bromide stocks.

MOP-19: MOP-19 took place in Montreal, Canada, from 17-21 September 2007. Delegates adopted 29 decisions, including on: an accelerated phase-out of HCFCs; essential-use nominations and other issues arising out of the 2006 reports of

the TEAP; critical-use nominations for methyl bromide; and monitoring transboundary movements and illegal trade in ODS. A Montreal Declaration was also adopted, which acknowledges the historic global cooperation achieved during the last 20 years under the Montreal Protocol, and reaffirms parties' commitment to phase out consumption and production of ODS through a range of actions.

CURRENT ODS CONTROL SCHEDULES: Under the amendments to the Montreal Protocol, non-Article 5 parties were required to phase out production and consumption of: halons by 1994; CFCs, CTC, hydrobromochlorofluorocarbons and methyl chloroform by 1996; bromochloromethane by 2002; and methyl bromide by 2005. The phase-out of HCFC production and consumption by Article 2 countries is set for 2020 and 2030 for Article 5 parties (with interim targets prior to those dates). Production was to be stabilized by 2004 and is to be frozen in 2013. Article 5 parties were required to phase out production and consumption of bromochloromethane by 2002. These parties must still phase out: production and consumption of CFCs, halons and CTC by 2010, and methyl chloroform and methyl bromide by 2015. There are exemptions to these phase-outs to allow for certain uses lacking feasible alternatives or in particular circumstances.

COP-8/MOP-20 REPORT

PREPARATORY SEGMENT

On Sunday morning, 16 November 2008, the eighth Conference of the Parties to the Vienna Convention for the Protection of the Ozone Layer and the twentieth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer (COP-8/MOP-20) preparatory segment was opened by preparatory segment Co-Chair Mikkel Sørensen (Denmark). Preparatory segment Co-Chair Judy Beaumont (South Africa) highlighted the importance of the Replenishment Task Force, the fixed-exchange-rate mechanism, environmentally-sound disposal of ozone depleting substances (ODS), the election of new officers for several committees, and the need for transparency.

MOP-19 President Abdullah bin Mubarak bin Aaboud al-Midhadi, Minister of Environment, Qatar, welcomed participants and announced that this was the first paper-free meeting of the Montreal Protocol and the UN system, and that his country had decided to donate all the computers used at this meeting to UNEP so it can continue to hold environmentally conscious, paper-free meetings.

Marco González, Executive Secretary of the Ozone Secretariat, thanked the Government of Qatar for helping pioneer the use of electronic documentation in the UN system. He also urged support for: parties that have yet to phase out chlorofluorocarbons (CFCs), halons and carbon tetrachloride (CTC) by 2010; a robust replenishment of Multilateral Fund; a decision on ODS destruction; and working to close the gap in satellite monitoring programmes.

Co-Chair Beaumont introduced the agenda for the preparatory segment (UNEP/OzL.Conv.8/1-UNEP/OzL.Pro.20/1), and delegates adopted it with the inclusion of proposals by Iraq, Nepal, Mexico and the US, as well as a Qatari proposal to develop a Doha Declaration. Parties also agreed to the organization of work.

Throughout COP-8/MOP-20, delegates discussed agenda items and corresponding draft decisions in plenary, contact groups and bilateral consultations. Rather than addressing agenda items in numerical order, issues likely to lead to the establishment of contact groups were addressed first, in an effort to ensure as little overlap between contact groups as possible. Draft decisions were approved by the preparatory segment and forwarded to the high-level segment for adoption on Thursday afternoon. The description of the negotiations, the summary of the decisions and other outcomes can be found below.

HIGH-LEVEL SEGMENT

On Wednesday morning, delegates attended the opening of the high-level segment. MOP-19 President Abdullah bin Mubarak bin Aaboud al-Midhadi, Minister of Environment, Qatar, highlighted activities undertaken in Qatar on ozone protection, including launching a stratospheric ozone monitoring station along with the US National Aeronautics and Space Administration (NASA), and a center for applied research for creating ozone alternatives in cooperation with United Nations Environment Programme (UNEP).

Djibo Leity Ka, Minister of Environment, Senegal, and President of the Bureau of the Vienna Convention, explained that the Bureau had undertaken major activities since its last meeting three years ago in Dakar, Senegal, including strengthening of ozone monitoring and research networks.

Congratulating the Government of Qatar on a groundbreaking meeting, Executive Secretary Marco González underscored the importance of the paperless initiative, and the need for its extension to the global environmental system, including at the UNEP Governing Council meeting in February 2009.

Abdullah bin Mubarak bin Aaboud al-Midhadi introduced nominations for officers, and delegates elected Róbert Tóth (Hungary) as MOP-20 President and Patali Ranawaka (Sri Lanka) as COP-8 President by acclamation. Delegates adopted the agenda of the COP-8/MOP-20 high-level segment (UNEP/OzL.Conv.8/1-UNEP/OzL.Pro.20/1) without amendment.

PRESENTATIONS BY THE ASSESSMENT PANELS: Delegates heard presentations from the assessment panels on Wednesday.

Scientific Assessment Panel: A.R. Ravishankara (US), Co-Chair of the Scientific Assessment Panel, discussed levels and trends of ODS, with an emphasis on HCFCs. He also gave a bird's eye view of the Panel's coming 2010 assessment and a timeline of its planned work through 2011, and discussed the current level of atmospheric ozone and its trends and the current understanding of atmospheric science.

Environmental Effects Assessment Panel: Jan van der Leun (Netherlands), Co-Chair of the Environmental Effects Assessment Panel, recounted the interactions between ozone depletion and climate change, and discussed ultraviolet radiation and skin cancer as some of the side effects of the ozone hole. He discussed several studies documenting these issues and showing their highly interconnected nature. He said that a progress report on the Panel's work will appear soon.

Technology and Economic Assessment Panel (TEAP): Lambert Kuijpers (Netherlands), Co-Chair of the TEAP, updated the timelines for the Panel's work including on halons, quarantine and preshipment (QPS) and methyl bromide. He

recounted timelines for the Panel's work up to 2010, and listed many of the issues it will cover in its six technical options committees, which produce several series of reports. He discussed halons, supply and demand, and remaining challenges for total phase out of CFC-based metered-dose inhalers (MDIs).

PRESENTATION BY THE MULTILATERAL FUND ON THE WORK OF THE EXECUTIVE COMMITTEE:

On Wednesday, Albert Rombonot (Gabon), Chair of the Executive Committee of the Multilateral Fund, described the Multilateral Fund's work to phase out ODS and recognized several implementation agencies, including the United Nations Development Programme (UNDP) and the United Nations Industrial Development Organization (UNIDO), for their in-country work. He enumerated that the Multilateral Fund has 50 agreements with national governments and has disbursed US\$140 million to phase out ODS. He analyzed the capacity of countries to honor their commitments, and success towards the phase-out of CFCs by 2010. He said that 2008 is a transition year for moving on the issue of HCFCs and helping Article 5 countries stay on schedule.

COUNTRY STATEMENTS: On Wednesday and Thursday, delegates heard statements from senior officials and heads of delegations. Egypt announced that it will host MOP-21 in Sharm el-Sheikh, Egypt. Many countries spoke regarding their efforts and challenges in phasing out HCFCs. India said that one of the challenges in meeting, the freeze by 2013 is that HCFC alternatives without a high-global warming potential (GWP) remain elusive. Sri Lanka explained that its next challenge was to phase out HCFCs, especially since consumption is increasing. Iraq described its project to phase out HCFCs and its establishment of a national ozone committee. Djibouti noted the need for availability of HCFC substitutes and for financial assistance from the Multilateral Fund. Noting that the Montreal Protocol benefits both the ozone layer and climate system, the US stressed the need to destroy ODS banks and to find ways of replacing HCFCs with substances with low, or neutral, GWP.

Burkina Faso highlighted its need for technical and financial support for the development of an HCFC management plan. Japan said there is a need to focus on facilitating the phase-out of HCFCs in Article 5 countries and said it would assist through technology transfer. Venezuela noted the need to fight illicit trade in ODS, and for clear and specific actions regarding methyl bromide regulation. Kuwait called for regulations and a schedule for the phase-out of HCFCs. China said that there is a lack of mature and feasible alternatives to HCFCs, and thus total HCFC phase-out would be a long process. Syria said that they have removed 90% of the halons and are looking forward towards accelerated HCFC phase-out. A representative of Finland, on behalf of the Expert Group on Technology Transfer of the United Nations Framework Convention on Climate Change (UNFCCC), said that if HCFCs increase as a result of the Montreal Protocol it will contribute to climate change, and urged cooperation between the Montreal Protocol and the UNFCCC. In response to the historic agreement on HCFCs at MOP-19, Serbia announced that it is convening a high-level briefing on the HCFC phase-out, scheduled to convene in Belgrade in March 2009. The Philippines noted its work to reduce CFCs and phase out HCFCs.

Many countries highlighted activities towards ozone protection. Bosnia and Herzegovina noted his country's effort since 2000 to reduce ODS, saying it is now on track to reach zero consumption of CFCs by 2010. Highlighting its efforts towards ozone protection, Uganda described the challenge of containing illegal trade in ODS, and advocated for technology transfer to Article 5 countries for phasing out ODS. The Dominican Republic highlighted training of refrigeration technicians. South Africa suggested that Basel Regional and Coordinating Centers should also undertake work on implementation of the Montreal Protocol. The EU urged delegates to avoid resting on past achievements and said the Multilateral Fund should avoid indirectly funding production of HCFCs and avoid products with high GWP. Jordan said it had eliminated 70% of ODS and that it was initiating a renewable energy fund. Lebanon informed delegates it had exceeded the requirements of the Vienna Convention and Montreal Protocol, and advocated for the establishment of a pan-Arab body to address ozone issues. Tanzania said it has phased out 80% of its CFC consumption, and that training of professionals to organize recovery and recycling programmes is necessary.

The Lao People's Democratic Republic stated that it has established an import/export licensing system to regulate trade in ODS. Cameroon described its awareness-raising campaign to inform the public about ozone issues and its capacity-building workshops for phytosanitary specialists who use ODS, but stated that illicit trafficking of ODS remains a problem. Yemen recounted its successful phase-out of CFCs from aerosols and halons from fire extinguishers. Macedonia described its elimination of CFCs in government departments. Burundi described its efforts to phase out CFCs. The United Arab Emirates outlined work to combat illegal trade in ODS, including enacting laws on importing and licensing of ODS. Bangladesh explained that the transition to non-CFC based MDIs is a time consuming process and that CFC-free MDIs are not yet available in his country. Mozambique explained it has reduced CFC and methyl bromide imports, but was seeking further partnerships in technology transfer, institutional capacity building and financial support. Croatia highlighted its efforts to phase out ODS, but said an efficient system for recovery, recycling and destruction of ODS was required. Indonesia urged ODS producers to do more to prevent the export of banned ODS.

Brunei Darussalam informed delegates that it is on-track to meet its commitments, and thanked the implementing agencies. Cambodia stressed that capacity building of personnel in the national ozone unit was a priority. Iran said it had established a national ozone network, including comprehensive training on appreciation of ozone-related data and ODS tracking. Armenia stated it has achieved an 85% reduction in CFC consumption, and is working towards a total phase-out of CFCs by 2010. Malaysia reported its CFC consumption in 2007 was well below its commitments under the Montreal Protocol. Kenya described how most remaining ODS are contained in functioning and still-needed refrigerators and air conditioners, which will make them difficult to collect. Brazil reported that it has eliminated about 90% of ODS, and acknowledged the value of programmes to collect, transport and store ODS. Trinidad and Tobago said they have a multi-sectoral policy approach for phasing out

ODS, which includes the implementation of the freeze and quota systems for CFCs. Cuba noted that it was leading an energy revolution in phasing out CFCs in domestic refrigerators. Afghanistan requested the Multilateral Fund to consider the difficulties faced by Afghanistan in achieving the targets for ODS phase-out. Pakistan explained that with support from the Multilateral Fund, refrigeration and foam-based industries in Pakistan have switched from use of CFCs to ozone-friendly technologies. Turkey stated that it does not produce ODS, has banned all CFC imports, and is ready to implement an accelerated phase-out schedule for HCFCs.

Sudan suggested that there is a need to expand ozone monitoring stations, ground monitoring and observation stations, and deal with stockpiles. Myanmar said environmental protection is a high priority, and that they are implementing a country programme for phasing out CFCs with the help of UNIDO. Malawi noted that while the consumption of CFCs is decreasing, big challenges remain, including lack of capacity for destroying stockpiles of ODS. The Federated States of Micronesia welcomed discussion on the decision for destruction of ODS banks. The Basel Convention highlighted the importance of synergies between chemicals and waste-related conventions and the need for greater participation of the Basel Convention in the Montreal Protocol. Mauritius highlighted the urgent need to make bold decisions on the destruction of ODS banks and replenishment of the Multilateral Fund.

Greenpeace said the growth of the ozone hole is a stark reminder of the need to eliminate ODS, and that parties need to phase out HCFCs utilizing safe destruction methods. The International Institute of Refrigeration noted efforts must continue to eliminate CFCs in refrigerators and said that alternatives such as solar or magnetic refrigeration are now available. The Institute for Governance and Sustainable Development supported consideration of destruction of ODS banks and addressing HCFC phase-out.

COP-8/MOP-20 OUTCOMES AND DECISIONS

OZONE RESEARCH MANAGERS REPORT: Participants discussed the report of the 7th meeting of the Ozone Research Managers (ORM) on Sunday and Tuesday.

Michael Kurylo, Chair of the 7th ORM meeting, said ozone depletion and climate change are highly interconnected and the complexities of ozone and climate science demand new measurement activities. He highlighted several recommendations from the report, including those on increased research on ozone evolution and monitoring. Senegal urged space agencies and governments to coordinate work on long-term time-series satellite data, citing gaps in monitoring ozone that are likely to occur.

The EU expressed general support for research activities and requested time to review the draft decisions to ensure all necessary additional details were included. The US expressed surprise at the existence of gaps in satellite data, and urged that attention be directed towards this problem. TEAP responded, saying that a statement has been issued calling attention to the problem, and invited additional discussion. On Thursday, during the evening plenary, Senegal proposed minor amendments to the draft decision. The preparatory segment forwarded the decision to the high-level segment, where the decision was adopted.

Final Decision: The decision on the report of seventh meeting of the ORM (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, COP Decision XX/A) takes note of the report of the seventh meeting of the ORM and endorses the recommendations adopted by the ORM at its meeting. The decision requests all parties to make a renewed effort to implement the actions recommended by the ORM, particularly those adopted at its seventh meeting, with a view to:

- address uncertainties and new questions, including actual quantification of the extent to which chemical and dynamical processes are responsible for ozone production, loss, transport and distribution;
- maintain and expand surface observation networks where gaps in geographical coverage result in data deficiencies in order to ensure the continuity and improvement of ground-based *in situ* observations of ozone depleting substances, their substitutes and greenhouse gases as well as the networks that provide altitude profile information for ozone and climate related species;
- ensure that data acquired through observation are of the highest possible quality and include the metadata necessary to make them valuable to users today and in the future; and
- strengthen the capacity of developing countries and countries with economies in transition to enable them to maintain existing instruments and networks, acquire new observational capabilities and increase their participation in scientific research and assessments.

STATUS OF THE GENERAL TRUST FUND FOR FINANCING ACTIVITIES ON RESEARCH AND SYSTEMATIC OBSERVATIONS:

On Sunday, Megumi Seki, Ozone Secretariat, presented a report on the Vienna Convention Trust Fund, explaining that the Trust Fund provides support to maintain existing World Meteorological Organization-Global Atmosphere Watch (WMO-GAW) satellites. She said the Fund had received contributions of US\$179,135. Geir Braathen, WMO, reported on the Trust Fund's activities outlining the ozone observing system of the WMO-GAW and WMO's planned activities for 2009.

In the ensuing discussion, Kuwait questioned WMO regarding the possibility of installing an ozone monitoring system covering the Arab Gulf region. Indonesia requested more support to increase its ozone monitoring capabilities. Canada reported on its continued support for ozone monitoring and expressed concern about the upcoming decommissioning of satellites, which might result in a gap in observation of the ozone layer, and called for funding to maintain a strong global monitoring system.

Jordan requested funding for comprehensive monitoring to cover all regions, especially Western Asia, which faces severe risks from ozone depletion. Saudi Arabia noted that some Gulf countries still lack monitoring tools and supported increased monitoring at stratospheric and tropospheric levels. Noting several impacts of climate change on the southern hemisphere, Argentina suggested building on synergies between efforts to protect the ozone layer and to combat climate change.

On Wednesday, delegates agreed to minor amendments to the draft decision and forwarded it to the high-level segment, where the decision was adopted Thursday afternoon.

Final Decision: In the decision on the trust fund for research and observations relevant to the Convention (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, COP Decision XX/B), the COP, *inter alia*:

- urges all parties and relevant international organizations to make voluntary financial contributions to the Trust Fund to enable the continuation and enhancement of monitoring and research activities in developing countries, taking into account the need for balanced global coverage;
- requests the Secretariat to continue to invite parties and relevant international organizations annually to make voluntary contributions to the Fund and with each successive invitation to the parties to report on the prior years' contributions, funded activities and planned future activities;
- requests the Secretariat and the WMO to continue their cooperation in respect of the Trust Fund pursuant to the terms of the memorandum of understanding between the two bodies and to alert the parties to amend the memorandum of understanding to take into consideration evolving needs and conditions; and
- reminds the Secretariat and the WMO of the request that they strive for regional balance in the activities supported by the Fund and to make an effort to leverage other sources of funding.

FINANCIAL REPORTS AND BUDGETS OF THE TRUST FUNDS FOR THE VIENNA CONVENTION AND THE MONTREAL PROTOCOL: Preparatory Segment Co-Chair Sørensen introduced the agenda item (UNEP/OzL.Conv.8/4-UNEP/OzL.Pro.20/4) on Sunday and delegates agreed to follow the established practice of setting up a subcommittee to prepare a draft recommendation for consideration by parties. France, for the European Community and its member states (EU), called on parties to pay contributions in full and on time.

The budget group discussed the trust funds further on Wednesday, and it was decided that the budget would require no increase and budget levels would remain level for at least two years for the Montreal Protocol and at least three years for the Vienna Convention. The decision was forwarded to the high-level segment and adopted Thursday.

Final Decision: In the decision on the financial reports and budgets of the trust funds for the Vienna Convention and the Montreal Protocol (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, COP Decision XX/C), the COP, *inter alia*:

- takes note with appreciation of the financial statement of the Trust Fund for the biennium 2006-2007 and the report on the actual expenditures for 2007 as compared to the approvals for that year;
- approves the revised 2008 budget for the Trust Fund in the amount of US\$1,213,142, the amount of US\$699,897 for 2009, the amount of US\$717,901 for 2010, and the amount of US\$1,268,489 for 2011;
- authorizes the Secretariat to draw down an amount of US\$96,897, US\$114,901 and US\$665,489 in years 2009, 2010 and 2011, respectively, from the Fund's balance;
- ensures, as a consequence of the draw-downs, that the contributions to be paid by the parties amount to US\$603,000 for the years 2009, 2010 and 2011;
- urges all parties to pay their outstanding contributions as well

- as their future contributions promptly and in full; and
- requests the Executive Director to extend the Vienna Convention Trust Fund until 31 December 2015.

The budget tables are contained in an annex to the decision document.

STATUS OF RATIFICATIONS: Preparatory Segment Co-Chair Beaumont reported on the ratification status of the Vienna Convention, the Montreal Protocol and the Amendments to the Montreal Protocol on Monday. Delegates agreed to amend the respective draft decisions, VIII/AA and XX/AA (UNEP/OzL.Conv.8/3 and UNEP/OzL.Pro.20/3), and forward them to the high-level segment, where they were adopted on Thursday.

Final Decision: In the decision on ratification of the Montreal Protocol and Vienna Convention (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, COP/MOP Decision VIII/E and XX/E), the COP/MOP agrees to:

- note with satisfaction the number of countries that have ratified the Vienna Convention and the Montreal Protocol;
- note that, as of 15 November 2008, 189 parties had ratified the London Amendment to the Montreal Protocol, 184 parties had ratified the Copenhagen Amendment to the Montreal Protocol, 167 parties had ratified the Montreal Amendment to the Montreal Protocol and 144 parties had ratified the Beijing Amendment to the Montreal Protocol; and
- urge all states that have not yet done so to ratify, approve or accede to the Vienna Convention and the Montreal Protocol and its amendments, taking into account that universal participation is necessary to ensure the protection of the ozone layer.

REPLENISHMENT OF THE MULTILATERAL FUND: This issue was discussed in plenary on Sunday through Thursday and negotiations took place in a contact group from Sunday evening until Thursday at noon.

The plenary discussion on replenishment started off with a presentation by TEAP members on the basis of the reports of the TEAP Replenishment Task Force on Assessment of the Funding Requirement for the Replenishment of the Multilateral Fund 2009-2011. TEAP members explained that the total funding requirements for the period were in the range of US\$399 million to US\$630 million. The presenters outlined issues and costs related to inflation, cut-off dates, institutional strengthening, second conversions, cost-effectiveness factors, climate benefits and demonstration projects.

In the ensuing discussion, delegates debated replenishment and the fixed-exchange-rate mechanism. Uruguay urged that when considering the Fund's replenishment, delegates also consider synergies with the Kyoto Protocol in order not to "misstep" the goal of mitigating climate change. The US noted its concern with, *inter alia*, unconstrained production and consumption of HCFC in Article 5 countries until the freeze year of 2013, and instead suggested balanced funding to ensure a steady decline in HCFCs. China underscored the need for sufficient financial support for institution building and for Article 5 countries to meet their HCFC phase-out schedules. Japan suggested more focused discussion about the replenishment of the Fund. Jordan highlighted the importance of financial strategies enabling parties to meet cut-off dates, and strengthening institutions. Colombia urged that cut-off dates

be flexible and take into account the interests and concerns of Article 5 countries. Morocco urged making sufficient funding available to Article 5 countries for destruction, conversion and re-conversion. Argentina emphasized the importance of financial support for Article 5 countries and of assuring that replacements have the least GWP. Malaysia said that the total funding estimated by TEAP may be insufficient for the costs of HCFC phase-out.

Regarding the fixed-exchange-rate mechanism, the US said that it only provisionally supported the mechanism, since it remains to be seen how it operates in a weak economy. The EU said discussions on whether to make the fixed-exchange-rate mechanism permanent would be useful.

In plenary on Wednesday, Albert Rombonot (Gabon), Chair, Executive Committee of the Multilateral Fund, described the Multilateral Fund's work to phase out ODS. He enumerated that the Multilateral Fund has 50 agreements with national governments and has disbursed US\$140 million to phase out ODS.

The contact group was co-chaired by Laura Berón (Argentina) and Jozef Buys (Belgium). In response to the high degree of interest, delegates agreed the contact group would begin its work as an open-ended group. Delegates first discussed whether the contact group should return to the previously used working modality of only having 12 members from Article 2 countries and 12 members from Article 5 countries negotiate. They agreed to return to this working modality on Monday afternoon and closed the meeting to observers.

On Monday morning, delegates gave general opening statements, focusing mainly on two scenarios for HCFC-related activities set out by the TEAP Replenishment Task Force, namely: the baseline or lowest cost scenario, assuming modest quantities of HCFCs will be phased out during the triennium; and the 2012 consumption level scenario, assuming larger quantities will have to be phased out due to increased production. Many Article 2 countries preferred to start negotiations from the baseline scenario, while several Article 5 countries expressed their support for the 2012 funding scenario.

Delegates then considered the issues as set out in the executive summary of the supplemental report of the TEAP Replenishment Task Force (UNEP/OzL.Pro.20/6). Regarding taking inflation into account, Article 2 countries pointed to the financial crisis and prospects of deflation and said it was not the time to start accounting for inflation; while Article 5 countries pointed to the preponderance of inflation in their countries. On cut-off dates for HCFCs, many Article 5 countries preferred a later cut-off date while some Article 2 countries noted that an earlier cut-off date would mean that subsequent increases would not be eligible for funding and others suggested spreading eligible funding over more than one triennium.

In the closed session Monday afternoon, the contact group considered all budget items proposed by the TEAP, except those relating to HCFCs and destruction of ODS. They considered those items line by line, asking for additional clarification by the TEAP, and agreed to a total amount of US\$158 million for compliance-related activities.

The contact group then considered HCFC-related activities, which were to be included in the replenishment for the first time and were likely to make up nearly two-thirds of the overall allocation. Delegates agreed not to consider this item line by line, due to the wide range in funding estimates and uncertainties with regard to inclusion of second conversions and cut-off dates. They agreed instead to negotiate the overall allocation, based on the TEAP scenarios and the total funding for the 2009-2011 replenishment. They agreed that the required range of funding for the baseline scenario was US\$338.7 - 387.2 million, and for the 2012 funding scenario was US\$510.6 - US\$629.8 million. Negotiations started off with one Article 2 party commenting that "the lowest allocation was too high" and Article 5 parties countering that "the highest allocation was too low," suggesting an overall allocation of over US\$700 million. By Wednesday evening, Article 2 parties were suggesting a total allocation of US\$400 million and Article 5 countries were insisting on a minimum of US\$580 million. The contact group concluded its negotiations on Thursday at noon agreeing to a total allocation of US\$490 million.

In plenary on Thursday, Contact Group Co-Chair Buys reported that the group agreed to a replenishment of US\$490 million, including a US\$73 million carry over and US\$17 million in interest earned over the past triennium. As a result, the new contributions amount to US\$400 million. Co-Chairs Buys and Béron thanked delegates for their willingness to cooperate and said the decision was historic, especially in a time of financial crisis.

Delegates considered the draft decision on the 2009-2011 replenishment of the Multilateral Fund with an annex containing the contributions by parties to the Seventh Replenishment of the Multilateral Fund according to the UN scale of assessments (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, MOP Decision XX/A). Germany agreed to this decision, noting that as a formality it still had to seek parliamentary ratification, which could be done after the decision was adopted. Delegates sought some clarification about the scale of assessments for the contributions, and Contact Group Co-Chair Béron explained that the numbers in the annex would be checked and corrected if necessary. Japan thanked delegates for their cooperation in resolving this difficult issue. The US clarified that it could not use the fixed-exchange-rate system, since it made its contribution in US dollars. The decision was amended and forwarded to the high-level segment where it was adopted on Thursday evening.

Delegates also considered the decision on the fixed-exchange-rate system (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, COP Decision XX/D), which was forwarded to the high-level segment and adopted on Thursday evening.

Final Decisions: In the decision on the 2009-2011 replenishment of the Multilateral Fund (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, MOP Decision XX/A), parties agreed to adopt a budget for the Multilateral Fund for the Implementation of the Montreal Protocol for 2009-2011 of US\$490,000,000. Parties noted outstanding contributions from some parties with economies in transition in the period 2006-2008 stand at US\$5,604,438. Parties further adopted the scale of contributions based on a replenishment of US\$133,333,334 for 2009, US\$133,333,333 for 2010, and US\$133,333,333 for 2011. Parties

also requested the Executive Committee of the Multilateral Fund to take action to ensure that the entire budget for 2009-2011 is committed by the end of 2011, and that parties not operating under paragraph 1 of Article 5 should make timely payments. An annex contains the contributions by parties to the seventh replenishment of the Multilateral Fund, according to the UN scale of assessments.

The decision on the extension of the fixed-exchange-rate mechanism to the 2009-2011 replenishment of the Multilateral Fund (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2 MOP Decision XX/D) agrees to: direct the Treasurer to extend the fixed-exchange-rate mechanism to the period 2009-2011; and urge parties to pay their contributions to the Multilateral Fund in full and as early as possible.

The MOP further agreed that: parties choosing to pay their contributions to the Multilateral Fund in national currencies will calculate their contributions based on the average UN exchange rate for the six-month period commencing 1 January 2008; parties not choosing to pay in national currencies pursuant to the fixed-exchange-rate mechanism will continue to pay in US dollars; only parties with inflation rate fluctuations of less than 10% for the preceding triennium will be eligible to utilize the fixed-exchange-rate mechanism; and if the fixed-exchange-rate mechanism is to be used for the replenishment period 2012-2014, parties choosing to pay their contributions in national currencies will calculate their contributions based on the average UN exchange rate for the six-month period commencing 1 January 2011.

ENVIRONMENTALLY SOUND DISPOSAL OF ODS:

This issue was introduced in plenary on Sunday, and then discussed in a contact group co-chaired by Martin Sirois (Canada) and Agustín Sánchez (Mexico) throughout the week, and in closed session beginning on Tuesday. In plenary, delegates initiated discussion on this issue and heard a report from the OEWG-28 contact group on ODS disposal (UNEP/OzL.Conv.8/3-UNEP/OzL.Pro.20/3) explaining the group received comments from seven parties, which included a suggestion to take a step-by-step approach for destruction of ODS banks. Mexico highlighted its CRP (UNEP/OzL.Pro.20/CRP.3) proposing to finance pilot projects for the destruction of contaminated CFC banks that have been accumulated and that cannot fit into existing banks. The European Commission (EC) noted that they support a step-by-step approach, where the first goal would be to build upon the ongoing work of the implementing agencies or the Multilateral Fund to develop practical experience with the ODS bank management process.

Several delegates stressed the need for rapid action on environmentally sound disposal of ODS. Proposals were made to move in two or three stages: beginning with the most accessible banks, followed by medium and high-effort banks. Much discussion covered potential use of the Multilateral Fund to assist Article 5 countries. Delegates also discussed the need for additional data about banks.

The contact group completed its work on Wednesday and announced it had reached consensus. The EU welcomed the work on destruction but expressed concern about a reference to the term "net GWP", saying that the use of that term should

by no means be used as a precedent for future work. Delegates agreed to forward the draft decision (UNEP/OzL.Pro.20/CRP.16) to the high-level segment, where it was adopted.

Final Decision: In the final decision (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2 MOP Decision XX/B), the MOP, *inter alia*:

- invites parties and international funding agencies, including the Multilateral Fund, the Global Environment Facility (GEF) and other interested agents, to enable practical solutions for the purpose of gaining better knowledge on mitigating ODS emissions and destroying ODS 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;
- requests the Executive Committee of the Multilateral Fund to consider commencing pilot projects that may cover the collection, transport, storage and destruction of ODS. As an initial priority, the Executive Committee might consider projects with a focus on assembled stocks of ODS with high net global warming potential, in a representative sample of regionally diverse Article 5 parties;
- encourages 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 ODS by ensuring proper recovery of ODS from equipment containing ODS, the use of best practices and performance standards;
- encourages all parties to develop or consider improvements in national or regional strategies for the management of banks, including provisions to combat illegal trade;
- invites parties to submit their strategies and subsequent updates to the Ozone Secretariat as soon as possible;
- requests the TEAP to conduct a comprehensive cost-benefit analysis of destroying banks of ODS, taking into consideration the relative economic costs and environmental benefits to the ozone layer and the climate, of destruction versus recycling, reclaiming and re-using such substances;
- requests the TEAP to provide an interim report in time for dissemination one month before OEWG-29 and to provide the final report one month before MOP-21; and
- requests the Ozone Secretariat, with the assistance of the Multilateral Fund Secretariat, to consult with experts from the UNFCCC, GEF, Executive Board of the Clean Development Mechanism and the World Bank to develop a report on possible funding opportunities for the management and destruction of ODS banks and report to OEWG-29.

ISSUES RELATED TO ESSENTIAL USES: Delegates considered both essential-use nominations for MDIs and for the use of CFC-113 for certain aerospace applications.

CFC-113 for certain aerospace applications: Discussions on this issue took place on Monday. The Russian Federation made a request for the use of 130 tons of CFC-113 in the aerospace industry for 2009. The TEAP had authorized this request and a TEAP representative determined that their visit to the Russian Federation had stated that alternatives are being actively sought and amounts for exemptions are decreasing. The Russian Federation thanked TEAP for its work. The EC and the US requested further details about the TEAP visit to Russia, and

a TEAP member explained how they determined the essential use exemption for CFC-113. The parties agreed to confirm the allocation in 2008 of 140 tons and in 2009 of the 130 tons agreed to by MOP-19 for that use.

Essential uses and campaign production of CFCs for MDIs: Delegates discussed essential-use nominations for MDIs (UNEP/OzL.Conv.8/3-UNEP/OzL.Pro.20/3) in plenary on Sunday, Monday, Tuesday and Wednesday. A contact group convened from Monday until Thursday.

In plenary, delegates heard update reports by TEAP members, regarding nominations for essential-use exemptions for MDIs requested by the Russian Federation and the EC for 2009, and the US for 2010. TEAP reluctantly agreed to recommend such essential-use exemptions for the EC and the US with the understanding that no further nominations would be forthcoming from them. Preparatory Segment Co-Chair Beaumont noted that the EC had reduced its request for MDI essential-use exemptions from 38 to 22 tons of CFCs for 2009. The US reduced its request from 182 to 92 tons of CFCs for 2010. The US thanked the Medical Technical Options Committee (MTOC) for its work, noted concerns over the MTOC's suggestion of transitioning from epinephrine inhalers to an alternative in 2010, and looked forward to working with the EC on a joint CRP. The EC noted its support for working with the US. Preparatory Segment Co-Chair Sørensen suggested, and delegates agreed, to forward the proposal of the EC and US for a draft decision on essential-use exemptions of CFCs for MDIs (UNEP/OzL.Pro.20/CRP.10) to the high-level segment.

Delegates heard a report by the OEWG-28 campaign production and essential uses contact group providing an update on its work since OEWG-28 (UNEP/OzL.Pro.20/INF/9), noting, *inter alia*, that the group is still considering final campaign production of CFCs to supply requirements for MDI manufacturing after 2009. Further work was referred to a contact group on the issue.

The contact group was chaired by Paul Krajnik (Austria). Participants first considered the submission by the OEWG-28 contact group on MDIs regarding modifications of the terms used in past decisions on essential uses to extend their applicability to Article 5 parties' nominations for essential-use exemptions. Delegates deliberated on deleting references to non-applicability of a number of decisions affecting Article 5 parties vis-à-vis essential-use nominations for the years 1997-2002, 2000 and 2001 and for 2006 and 2007 (Decisions VIII/9, XI/14, XVII/5, respectively), and agreeing on deadlines for promoting industry participation for a smooth and efficient transition away from CFC-based MDIs. Several parties objected to the inclusion of deadlines, suggesting that they did not have appropriate technology, and debated the time required for transition and whether phase-out could be assisted by regulation. Delegates agreed to a number of deadlines, including a deadline of MOP-21, after which no essential uses shall be approved for Article 5 parties, unless they have submitted at least a preliminary plan of action regarding phase-out of MDIs for consideration by OEWG-29. While many Article 5 parties insisted on a 31 December 2009 deadline for approval of MDI inhalers in Article 5 countries to be eligible for consideration for essential-use exemptions, many Article 2 countries preferred 31 December 2008, arguing that it

was counterproductive to approve new products up to the final phase-out date. Delegates could not reach agreement and the meeting was suspended until Thursday to allow time for informal consultations. On Thursday, delegates agreed to compromise language referring to "any chlorofluorocarbon metered-dose inhaler product approved after 31 December 2008, excluding any product in the process of registration and approved by 31 December 2009.

The contact group also considered a proposal by the US for a draft decision on campaign financing. Delegates agreed to a preambular reference acknowledging that while CFC production and consumption in Article 5 countries will cease in 2010, essential-use exemptions will be possible. Delegates also clarified that campaign production constitutes a one-time essential-use exemption for the multi-year period determined by a party to phase out CFC-based MDIs. On Thursday, delegates agreed to forward the decisions on essential-use exemptions for the use of CFCs for the production of MDIs, further study of campaign production of CFCs for MDIs, and on modifications of the terms used in past decisions on essential uses to extend their applicability to Article 5 parties' nominations for essential-use exemptions. The high-level segment approved the decisions without amendment.

Final Decisions: In the decision on nominations for essential use exemptions for the use of CFCs for the production of MDIs (UNEP/OzL.Pro.20/CRP.10), the MOP decides to authorize the levels of production and consumption for 2009 and 2010 necessary to satisfy essential uses of CFCs for MDIs for asthma and chronic obstructive pulmonary disease as specified in the annex to the decision. Non-Article 5 parties, when licensing, authorizing or allocating essential-use exemptions for a manufacturer of MDIs, shall ensure 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. The annex to the decision contains the essential use authorizations for 2009 and 2010 for CFCs for MDIs, namely 22 metric tons in 2009 for the EC; 248 metric tons for the Russian Federation for 2009; and 92 metric tons for the US in 2010.

The decision on further study of campaign production of CFCs for MDIs (UNEP/OzL.Pro.20/CRP.14) acknowledges that CFC consumption and production in Article 5 parties will cease on 1 January 2010, with possible essential-use exemptions; recognizes that campaign production offers potential advantages in lieu of annual essential-use nominations to meet needs for pharmaceutical grade CFCs; and acknowledges that the MTOC requires additional information concerning the operation of a final campaign for Article 5 parties. The parties also request the TEAP present a report to MOP-21, preceded by a preliminary report to OEWG-29, concerning: the potential timing for final campaign production; options for long-term storage, distribution, and management of produced quantities of pharmaceutical-grade CFCs; options for minimizing the potential for too much or too little chlorofluorocarbon production as part of a final campaign; contractual arrangements that may be necessary; and options for reducing production of non-pharmaceutical-grade CFCs as well as options for final disposal of such CFCs. Parties further request the Multilateral Fund Secretariat to report to OEWG-29 on the

status of agreements to convert MDI manufacturing facilities in Article 5 countries and on the implementation of approved projects.

In the decision on modifications of the terms used in past decisions on essential uses to extend their applicability to Article 5 parties' nominations for essential-use exemptions (UNEP/OzL.Pro.20/CRP.17), the MOP decides to make modifications to a number of existing MOP decisions, in some cases to amend the title of decisions and remove the reference to non-Article 5 parties, so as to extend their application to Article 5 parties. The MOP further decides to include new references in:

- MOP Decision XVII/5, requesting Article 5 parties to submit a date to the Ozone Secretariat prior to MOP-22 by which time regulations to determine the non-essentiality of the vast majority of CFCs for MDIs, where the active ingredient is not solely Salbutamol, will have been proposed;
- MOP Decision IX/19, requiring Article 5 parties submitting essential-use nominations for CFCs for MDIs for the treatment of asthma and chronic obstructive pulmonary disease to present to the Ozone Secretariat an initial national or regional transition strategy by 31 January 2010 for circulation to all parties and, where possible, by 31 January 2009;
- MOP Decision XII/2, which states that a CFC MDI product approved after 31 December 2008, excluding any product in the process of registration and approved by 31 December 2009, for treatment of asthma and/or chronic obstructive pulmonary disease in an Article 5 party, is not an essential use; and
- MOP Decision XV/5, which states that no quantity of CFCs for essential uses shall be authorized after the commencement of MOP-21 if the nominating Article 5 party has not submitted to the Ozone Secretariat, in time for consideration by OEWG-29, a preliminary plan of action regarding the phase-out of the domestic use of CFC-containing MDIs where the sole active ingredient is Salbutamol.

The MOP further decides:

- that parties submitting nominations for essential-use exemptions and the TEAP reviewing nominations for essential-use exemptions shall consider the amended decisions when considering essential-use nominations in 2009 and beyond;
- to request the Secretariat to include the changes above in the relevant decisions of the parties contained in the Montreal Protocol Handbook at the time of its next revision; and
- to request the TEAP to reflect this decision in a revised version of the handbook on essential-use nominations and to submit, for consideration by parties, suggestions of any appropriate changes to the handbook and the timing to make such changes.

CONSIDERATION OF METHYL BROMIDE-RELATED ISSUES: On Monday, delegates discussed methyl bromide-related issues, including: nominations for 2009 and 2010 for critical-use exemptions; adjustment to the Montreal Protocol on allowances for production of methyl bromide to meet basic domestic needs; and QPS uses of methyl bromide. A contact group on methyl bromide also met throughout the week to discuss the draft decision on actions by parties to reduce methyl

bromide use for QPS (UNEP/OzL.Pro.20/CRP.5), as well as the proposals by the US and the EC for a decision on methyl bromide critical-use exemptions for 2009-2010 (UNEP/OzL.Pro.20/CRP.9 and UNEP/OzL.Pro.20/CRP.12), which were forwarded to the high-level segment on Thursday and adopted.

Nominations for 2009 and 2010 for critical-use exemptions (CUEs): During plenary, MBTOC Co-Chair Mohamed Besri discussed global consumption of methyl bromide in Article 5 and non-Article 5 parties from 1991 to 2007, and provided an update on the meta-analysis of methyl bromide CUEs for the US. MBTOC Co-Chair Marta Pizano provided an overview of the critical use nominations (CUNs) for methyl bromide, noting a general downward trend.

MBTOC Co-Chair Ian Porter discussed CUNs for methyl bromide's use for soil fumigation, saying that Australia and Canada could reduce CUNs if they adopted regulatory changes that lower methyl bromide dose rates, or adopt barrier films for strawberry runners. MBTOC Co-Chair Michelle Marcotte presented the MBTOC's Report on Quarantine, Structures and Commodities. In the ensuing discussion, Japan highlighted its decision to eliminate the use of methyl bromide by 2013. The EC proposed a draft decision on increasing the rate with which methyl bromide alternatives are used.

In a contact group co-chaired by Barry Reville (Australia) and Gabriel Hakizimana (Burundi), delegates considered alternative proposals for a draft decision on the evaluation of methyl bromide CUNs (UNEP/OzL.Pro.20/CRP.9 and UNEP/OzL.Pro.20/CRP.12). The proposal submitted by the EC built on the original draft decision, and added, *inter alia*, evaluation of efforts to approve alternatives and substitutes. The US proposal contained a more streamlined decision, including a suggestion that the MBTOC develop its recommendations as a single entity in a consensus process. Delegates did not agree on which proposal to work with. Some delegates raised concerns regarding transparency of MBTOC decision making in general, and the need for the MBTOC to provide additional information regarding its decisions in a timely manner, while others stressed the need to ensure that parties provide appropriate guidance to the MBTOC. On Wednesday, participants agreed to merge the US and EC documents into one, which was provisionally approved. On Thursday, the text was forwarded to the high-level segment. During the high-level segment, Australia noted that the decision, as included in the compilation decisions document (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2 MOP Decision XX/O) omitted an operative paragraph. He therefore proposed, and delegates agreed, to adopt the CRP.18/Rev.1.

Adjustment to the Montreal Protocol on allowances for production of methyl bromide to meet basic domestic needs of Article 5 parties (proposal by Kenya and Mauritius):

During plenary, Kenya, with Mauritius, proposed a draft decision (UNEP/OzL.Conv.8/3-UNEP/OzL.Pro.20/3) reducing the maximum production allowance for methyl bromide by half, beginning 1 January 2010. Jordan stated that date farmers, in particular, need to continue using methyl bromide and, supported by Morocco, opposed the proposal citing the economic value of agriculture. Mauritius, opposed by Tunisia, stressed that alternatives to methyl bromide may be available. The US

described recent successes and expressed optimism about further reductions in its use of methyl bromide. The EU supported the proposal, saying that alternatives are available.

Co-Chair Sørensen concluded the discussion on methyl bromide, stating that due to divergent views, the Kenyan proposal would not be considered further at MOP-20.

QPS uses of methyl bromide: In the contact group, participants discussed the draft decision on actions by parties to reduce methyl bromide use for QPS purposes and related emissions (UNEP/OzL.Pro.20/CRP.5), submitted by the EC, Mexico and Switzerland. Initial discussions stalled on the language around the updated definition of pre-shipment, the scope of the data being presented, and requesting the Implementation Committee to consider the reporting of methyl bromide used for QPS applications. Larger concerns also became clear, especially on how much of the data that the TEAP is being requested to analyze is actually available.

Continuing on Tuesday, many parties agreed on the usefulness of more detailed information on the major uses of methyl bromide in QPS. One party opposed additional information collection from parties, when much of the information was already available. Another party questioned whether gathering further information was possible within the required time period. The decision's sponsor maintained that the survey on where and how methyl bromide is used for QPS is vital to identifying alternatives. One Article 5 country said it would be unable to undertake a survey unless it received support from the Multilateral Fund, while others insisted that the Multilateral Fund cannot fund such an effort since methyl bromide use for QPS is exempt and not covered by the Montreal Protocol. Although consensus was not reached on whether a survey would be included in the draft decision, no other aspects of the decision proved contentious.

On Wednesday, after days of discussion around how TEAP would approach a study of methyl bromide uses in QPS, participants gravitated towards a multi-stage approach, beginning with TEAP reviewing all information on volumes and uses of methyl bromide for QPS to establish if it could be used to adequately report specific methyl bromide QPS uses.

On Thursday, the draft decision was forwarded to the high-level segment and adopted.

Final Decisions: In the decision on critical-use exemptions for 2009 and 2010 (UNEP/OzL.Pro.20/CRP.18/Rev.1), the MOP:

- permits the agreed critical-use categories for 2009 set forth in Table A of the annex to the present decision for each party, the levels of production and consumption for 2009 set forth in Table B of the annex, which are necessary to satisfy critical uses, in addition to the amounts permitted in decision XIX/9;
- requests the TEAP to ensure that recent findings with regard to the adoption rate of alternatives are annually updated and reported to the parties in its first report of each year and inform the work of the Panel;
- requests the TEAP to continue publishing annually in its progress report prior to each meeting of the OEWS the stocks of methyl bromide held by each nominating party, as reported in that party's accounting framework report;
- recognizes the continued contribution of the MBTOC's expertise and agrees that the Committee should ensure that

it develops its recommendations in a consensus process that includes full discussion among all available members of the Committee and should ensure that members with relevant expertise are involved in developing its recommendations;

- requests the TEAP to ensure that the critical-use recommendations reported in its annual progress report clearly set out the reasons for recommendations and that, where requests are received from parties for further information, the MBTOC should provide a response within four weeks of submission of such a request; and
- requests the TEAP to ensure that its consideration of nominations analyzes the impact of national, subnational, and local regulations and law on the potential use of methyl bromide alternatives, and include a description of the analysis in the critical-use nomination report.

In the final decision on actions by parties to reduce methyl bromide use for QPS purposes and related emissions (UNEP/OzL.Pro.20/CRP.18/Rev.1), the MOP:

- urges those parties that have not yet done so to report data on the use of methyl bromide for QPS applications, as required under paragraph 3 of Article 7, by April 2009 and to report such data annually thereafter;
- requests the Implementation Committee to consider the reporting of methyl bromide used for QPS applications under paragraph 3 of Article 7, in accordance with the Non-Compliance Procedure of the Montreal Protocol;
- requests the TEAP, in consultation with the International Plant Protection Convention (IPPC) Secretariat, to review all relevant, currently available information on the use of methyl bromide for QPS applications and related emissions, to assess trends in the major uses, available alternatives and other mitigation options, and barriers to the adoption of alternatives or determine what additional information or action may be required to meet those objectives;
- requests the TEAP to present a draft report based on the analysis of the available information to the OEWS-29, indicating areas where the information is not sufficient, explaining, where appropriate, why the data were inadequate and proposing how best to gather the information required for a satisfactory analysis;
- requests the TEAP, in accordance with its terms of reference, to list categories of use it has identified that have been classified as QPS use by some parties but not by others by OEWS-29 and that those parties are requested to provide information on the rationale for doing so to the TEAP in time for inclusion in its final report to MOP-21; and
- encourages parties in accordance with the recommendations of the third meeting of the Commission on Phytosanitary Measures under the IPPC to put in place a national strategy that describes actions that will help them reduce the use of methyl bromide for phytosanitary measures and/or reduce emissions of methyl bromide and make such strategies available to other parties through the Ozone Secretariat, where possible, before MOP-21.

APPLICATION OF TRADE PROVISIONS TO HCFCs:

On Monday, delegates agreed to forward the draft decision, proposed by Australia, on application of trade provisions to HCFCs to the high-level segment and delegates adopted the decision on Thursday.

Final Decision: In the decision on the trade provisions to HCFCs (UNEP/OzL.Conv.8/L.2 - UNEP/OzL.Pro.20/L.2, XX/C), the MOP: acknowledges the accelerated phase-out of HCFCs as determined by decision XIX/6, brings forward control measures for HCFCs for parties operating under paragraph 1 of Article 5 of the Protocol from 2016 to 2013, and agrees to substitute paragraph 1(a) of decision XV/3, which refers to 1 January 2016 as the date on which HCFC production and control measures take effect, so that it now refers to 1 January 2013 as the date.

PROCESS AGENTS: On Tuesday, delegates considered the TEAP's recommendation on process agents, including that three of the ten submitted uses could be added to the list of process agents. China suggested, and delegates agreed, that the issue would be revisited at MOP-21.

UPDATE REPORTS BY TEAP: On Monday in the preparatory segment, delegates heard update reports presented by TEAP members.

CTC emissions and opportunities for reduction: Regarding the task force on CTC emissions, a TEAP member reported that although total production had been slowly declining, recent atmospheric measurements have remained high, resulting in the conclusion that there is a rapidly growing new source that has to be investigated further.

Regional imbalances in respect of halons: On Monday in the preparatory segment, delegates considered TEAP's assessment that there may be regional imbalances in the availability of halons and that TEAP may wish to revisit the issue in 2009.

Scoping study on alternatives to HCFCs for mines and very high temperature conditions: On Monday, in the preparatory segment, delegates heard an update regarding the scoping study of alternatives to HCFCs for mines and very high temperature conditions. Explaining why the report was not ready for MOP-20, Co-Chair Beaumont requested TEAP to complete the study by OEWG-29 in 2009. Kuwait, Saudi Arabia, Jordan, Bahrain and Oman reminded parties of the decision to support the study; highlighted the importance of finding alternatives to HCFCs, especially in countries with very high temperatures; requested country-specific field visits to determine alternatives; and urged TEAP to complete the study as soon as possible. The US stressed the importance of the study in light of the accelerated HCFC phase-out schedule. South Africa supported TEAP field visits, saying it uses HCFCs in mines and is seeking alternatives. TEAP confirmed that the study will be available for review by January 2009, and will be discussed at OEWG-29.

TEAP ADMINISTRATIVE ISSUES: On Monday, TEAP Co-Chair Stephen Andersen presented TEAP administrative issues. He explained that the Panel was requesting a budget of US\$100,000 for 2009 for travel and meeting expenses, noting that actual expenditures for such purposes would require approval by the Panel Co-Chairs and the Ozone Secretariat, and would not include consulting fees or wages.

Regarding membership of the technical options committees, the TEAP proposed Sergey Kopylov (Russian Federation) as a new Co-Chair of the Halons Technical Options Committee. Other expert positions needing to be filled included those for nutsedge control, orchard replant, forestry, and nursery propagation for the Methyl Bromide Technical Options Committee; for aviation fire protection for the Halons Technical Options Committee; and for several refrigeration and air conditioning subsectors for the Refrigeration, Air Conditioning and Heat Pumps Technical Options Committee.

It was agreed that the Secretariat would prepare a draft decision on the nomination of Kopylov for consideration during the high-level segment of the meeting, and a draft decision was adopted on Thursday.

Final Decision: In the decision on endorsement of a new Co-Chair of the Halons Technical Options Committee (UNEP/OzL.Conv.8/L.2 - UNEP/OzL.Pro.20/L.2, XX/R), the COP agrees to endorse Sergey Kopylov (Russian Federation) as the new Co-Chair of the Halons TOC.

COMPLIANCE AND REPORTING ISSUES:

Implementation Committee President Hassan Hannachi (Tunisia) presented the report of the 41st meeting of the Implementation Committee on Tuesday. He described a series of recommendations and seven decisions from the report, covering every stage of the compliance system of the Montreal Protocol. He indicated that the data reporting rate has improved significantly, with 188 parties reporting.

In the ensuing discussion, Bangladesh described steps it has taken to phase out ODS and asked delegates to make an exception so it would not face potential non-compliance from 2007-2009. Pakistan supported Bangladesh and proposed following the transition strategy approved by the Executive Committee. Australia, supported by Switzerland, the US and the EC, suggested that the Implementation Committee reconsider the case of Bangladesh during its next meeting in 2009, noting concern about the lack of a work plan or monitoring.

The President of the Implementation Committee said the matter had already been considered in detail, but did not oppose delaying the decision to allow further consideration. Egypt noted that developing countries generally face difficulties replacing CFCs since alternative technologies are often controlled by multinational corporations and hard to access for national companies.

Final Decision: The MOP adopted eight decisions on compliance and reporting issues. The decisions note non-compliance by Somalia and Ecuador (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, MOP Decision XX/T and XX/V, and potential non-compliance by the Solomon Islands (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, MOP Decision XX/S). Additional decisions relate, *inter alia*, to the report on the establishment of licensing systems under Article 4B (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, MOP Decision XX/X), requests for a change in baseline data by Saudi Arabia (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, MOP Decision XX/V), reports of parties submitted under Article 9 (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, MOP Decision XX/U), Montreal Protocol financial matters (UNEP/OzL.Conv.8/L.2-UNEP/

OzL.Pro.20/L.2, MOP Decision XX/Q), and Article 7 data and information (UNEP/OzL.Conv.8/L.2-UNEP/OzL.Pro.20/L.2, MOP Decision XX/I).

CONSIDERATION OF MEMBERSHIP OF MONTREAL PROTOCOL BODIES FOR 2009: Membership of Montreal Protocol Bodies was considered on Wednesday and Thursday in plenary and then approved by the high-level segment on Thursday afternoon.

Members of the Implementation Committee: In the preparatory segment on Wednesday, Co-Chair Beaumont presented a draft decision on the membership of the Implementation Committee (UNEP/OzL. Pro.20/3, Dec XX/BB), noting the countries nominated for this Committee, the President and the Vice President. The high-level segment approved the draft decision.

Final Decision: In the decision on Implementation Committee membership (UNEP/OzL.Conv.8/L.2 - UNEP/OzL.Pro.20/L.2, MOP Decision XX/F), amended to include country names and new Chairs, the MOP confirms the positions of Jordan, Mauritius, Mexico, New Zealand and the Russian Federation as members of the committee for one additional year, and selects Armenia, Germany, Niger, Nicaragua and Sri Lanka as members of the committee for a two-year period commencing on 1 January 2009. It also selects Robyn Washbourne (New Zealand) to serve as President and Ghazi Odat (Jordan) as Vice-President and Rapporteur for a term of one year commencing on 1 January 2009.

Members of the Executive Committee of the Multilateral Fund: In the preparatory segment on Thursday, Co-Chair Beaumont presented a draft decision (UNEP/OzL.Pro.20/3, MOP Decision XX/G) on the Executive Committee of the Multilateral Fund, nominating a number of Article 5 and non-Article 5 countries as members, and a Chair and Vice-Chair. The high-level segment approved the draft decision on Thursday.

Final Decision: In the decision on the Executive Committee of the Multilateral Fund (UNEP/OzL.Conv.8/L.2 - UNEP/OzL.Pro.20/L.2, Dec XX/G), amended to include country names and new Chairs, members of the Executive Committee include the following Article 5 parties: Georgia, China, Yemen, Dominican Republic, Bolivia, Namibia and Gabon; and non-Article 5 parties: US, Japan, Germany, Belgium, Australia, Sweden and Romania, for one year commencing 1 January 2009. The decision also notes the selection of Husamuddin Ahmadzai (Sweden) as President and a delegate from the Dominican Republic as Vice-Chair of the Executive Committee for one year commencing on 1 January 2009.

Co-Chairs of the OEWG: In the preparatory segment on Thursday, Co-Chair Beaumont presented a draft decision on the Co-Chairs of the OEWG (UNEP/OzL.Pro.20/3, Dec XX/DD). The high-level segment approved the draft decision.

Final Decision: In the decision on OEWG membership (UNEP/OzL.Conv.8/L.2 - UNEP/OzL.Pro.20/L.2, MOP Decision XX/H), amended to include names, the MOP names Martin Sirois (Canada) and Maqsood Akhtar (Pakistan) as Co-Chairs of the OEWG of the Montreal Protocol for 2009.

DATES AND VENUES FOR FUTURE MEETINGS: In Thursday's high-level segment, Egypt announced its offer to host MOP-21 in Sharm el Sheikh, Egypt. Parties endorsed the offer and the decision was adopted Thursday.

With regard to the timing of COP-9, MOP-20 President Toth introduced a draft decision (Decision D, UNEP/OzL.Conv.8/L.2 - UNEP/OzL.Pro.20/L.2) to the high-level segment on Thursday, which the parties adopted.

Final Decisions: In the decision on the timing of COP-9 of the Vienna Convention (UNEP/OzL.Conv.8/L.2 - UNEP/OzL.Pro.20/L.2, COP Decision XX/D), the COP agrees to convene its ninth meeting back-to-back with MOP-23.

In the decision on date and venue of MOP-21 (Decision Y, UNEP/OzL.Conv.8/L.2 - UNEP/OzL.Pro.20/L.2), the MOP agrees to convene MOP-21 in Sharm el Sheikh, Egypt, and to announce a firm date for the meeting as soon as possible.

OTHER MATTERS: Submission by Qatar to adopt a Doha Declaration: On Sunday morning in plenary, Qatar presented its proposal for parties to adopt a Doha Declaration, outlining the achievements of MOP-20. The declaration was discussed informally among delegates throughout the meeting. A draft Doha Declaration (UNEP/OzL.Pro.20/CRP.11) was presented to the plenary on Thursday morning. At the request of the EC, Canada and the US, further informal consultations were convened. On Thursday afternoon, delegates agreed to forward the revised Doha Declaration (UNEP/OzL.Pro.20/CRP.11/Rev.1), including sections on the destruction of ODS, the adoption of a culture of "paperless" conferences and the importance of the replenishment of the Multilateral Fund, to the high-level segment for adoption.

Final Declaration: In the Doha Declaration, the ministers of the environment and heads of delegation note the following:

- On the issue of destruction of ODS: resolve to undertake an initial effort to destroy banks of ODS; commit to undertake further studies to assess the technical and economic feasibility of destroying ODS; commit to undertake pilot projects to generate practical data and experience on management and financing modalities, achieve climate benefits, and explore opportunities to leverage co-financing in order to maximize environmental benefits;
- On the issue of replenishment: underline the commitment to a replenishment of the Multilateral Fund of US\$490 million for the period 2009-2011 with the understanding that these funds will be utilized to enable developing countries to meet their obligations under the Protocol;
- On atmospheric measurements: Urge the governments to seek to ensure full coverage of the relevant data gathering programmes, in order to ensure that the atmosphere, including its stratospheric ozone and its interrelation with climatic change, is kept under continuous observation;
- On the Government of Qatar's initiatives: applaud the two initiatives announced by the Government of Qatar to establish: a monitoring station in Qatar for monitoring the ozone layer and the Earth's stratosphere in collaboration with NASA, and an Ozone Layer and Climate Change Research Center, within Qatar's Science and Technology Park and in collaboration with UNEP; and

• On this and future paperless meetings: recognize the outstanding contribution of the Government of Qatar in embracing and conducting, for the first time in the history of the UN, a very successful paperless meeting, a practice it is hoped will be extended to the conduct of future UN meetings; and express great appreciation to the Government of Qatar for the donation of the computers and paperless system, which will enable future UN meetings to be held in a paperless manner.

Decision on difficulties faced by Iraq: On Tuesday, Iraq introduced a draft decision regarding its difficulties in implementing the Protocol (UNEP/OzL.Pro.20/CRP.1). Iraq suggested that while it has acceded to the Vienna Convention and the Montreal Protocol, it requires technical and financial assistance to control the entry of ODS into Iraq and urged other countries to control exports. Many countries supported Iraq's request, while others wanted to consider it further. Delegates consulted informally throughout the week and on Thursday in plenary, and Iraq introduced a revised draft decision (UNEP/OzL.Pro.20/CRP.1/Rev.1) that included a request to the Executive Committee to show flexibility in considering project proposals. Delegates agreed to forward the decision to the high-level segment with minor amendments. This was adopted during the high-level segment on Thursday afternoon.

Final Decision: In the decision on the difficulties faced by Iraq (UNEP/OzL.Pro.20/CRP.1/Rev.2), the MOP:

- urges all parties to assist Iraq in controlling the export of ODS and ODS-based technologies into Iraq through the control of trade as per the provisions of the Montreal Protocol;
- requests the Executive Committee, when considering project proposals for Iraq to phase out ODS, to take into account the special situation of the party, which might necessitate phase-out of ODS in Annexes A and B beyond 2010 and flexibility in considering the project proposals; and
- requests implementing agencies to provide all possible assistance to Iraq in developing its country programme and national phase-out plans and in continuing its efforts to report to the Secretariat, as soon as possible, data on consumption of ODS in accordance with Montreal Protocol requirements.

Workshop for a dialogue on high-GWP substitutes for ODS: On Tuesday, the US introduced a proposal to hold a workshop on high-GWP substitutes for ODS (UNEP/OzL.Pro.20/CRP.7) and explained that its proposal included a request for TEAP to update its 2005 Supplement to the Special Report on the Ozone Layer and Climate, and convene a half-day open-ended dialogue on high-GWP substitutes to ODS at OEWG-29. The EU, supported by Australia, requested more time for discussion and delegates agreed to continue discussions informally.

On Thursday, the US confirmed that delegates had consulted informally and that a revised CRP (UNEP/OzL.Pro.20/CRP.7/Rev.1) was available. He noted that while the decision had not included language on the provision of funds for the workshop, that there was agreement that funding would be made available to ensure robust participation of Article 5 countries. China said this "gentlemen's agreement" must be included in the meeting report. Co-Chair Sørensen confirmed a budget of US\$150,000.

Delegates agreed to the proposal with minor editorial amendments and it was forwarded to the high-level segment and adopted on Thursday afternoon.

Final Decision: In the final decision on a workshop for a dialogue on high-GWP ODS (UNEP/OzL.Pro.20/CRP.7/Rev.2), the MOP agrees to, *inter alia*:

- request TEAP to update the Panel's 2005 Supplement to the Special Report on the Ozone Layer and Climate and to report on the status of substitutes for HCFCs, including a description of the various use patterns and potential market penetration of alternatives that have high GWPs;
- request the Ozone Secretariat to prepare a report that compiles current control measures, limits and information reporting requirements for compounds that are substitutes for ODS and that are addressed under international agreements relevant to climate change;
- convene a half-day open-ended dialogue on high-GWP substitutes to ODS among parties, including participation by the Assessment Panels, the Ozone Secretariat, and the Multilateral Fund Secretariat, and inviting the Fund's implementing agencies, other relevant multilateral environmental agreement secretariats and non-governmental organizations to discuss technical and policy issues related to high-GWP substitutes to ODS, with a particular focus on HCFCs;
- hold the dialogue on high-GWP substitutes to ODS preceding the OEWG-29 meeting; and
- further request the Secretariat to prepare, in cooperation with the Co-Chairs of the workshop, a summary report of the discussions that take place during the dialogue, and to report on the proceedings to OEWG-29.

CLOSING PLENARY

The closing plenary was held on Thursday evening. In the beginning of the session the preparatory segment reconvened and agreed to forward several outstanding decisions to the high-level segment. Co-Chair Beaumont thanked delegates for their hard work in the preparatory segment and closed the segment.

MOP-20 President Tóth then opened and chaired the high-level segment. He announced the meeting credentials and said the Bureau had approved 94 of the 143 participating parties. He urged parties to submit credentials at the next meeting.

Delegates considered the reports of the joint meeting (UNEP/OzL.Conv.8/L.1- UNEP/OzL.Pro.20/L.1, Add.1, Add.2, and Add.3) and adopted them after a number of minor amendments and statements of clarification.

Tanzania, for the African Group, complemented the Co-Chairs' outstanding leadership, reaffirmed its commitment to the Montreal Protocol and called for further financial support. China thanked the Co-Chairs and looked forward to another 20 years of success under the Montreal Protocol. Qatar thanked delegates for visiting his country and for achieving successful outcomes. President Tóth urged delegates to return their laptops to ensure that paperless meetings could continue into the future. He thanked the Secretariat, the Government of Qatar and participants for their hard work and looked forward to meeting everyone in Egypt in 2009. He gavelled the meeting to a close at 7:37 pm.

A BRIEF ANALYSIS OF THE MEETING

OZONE DEPLETION IN A DESERT SETTING

The city of Doha, Qatar, hosted the eighth meeting of the COP of the Vienna Convention (COP-8) and the 20th meeting of the MOP (MOP-20) of the Montreal Protocol. The desert city provides all the comforts of modern living, perhaps the most important being temperature control. Along with this luxury, comes the challenge of identifying ways to provide cooling and refrigeration for the city without depleting the ozone layer or contributing to ozone's sister issue, climate change.

Delegates in Doha were faced with a number of challenges, including ensuring that the accelerated HCFC phase-out was built into the triennial replenishment of the Multilateral Fund, and addressing the long-standing challenge of the destruction of ozone depleting substances (ODS) that are stored in banks. As MOP-20 demonstrated, in spite of the many successes of the Montreal Protocol there is still much work to be done to protect the ozone layer. This analysis will examine how these key issues were addressed at COP-8 and MOP-20 and how this will affect the road to MOP-21 in Sharm el-Sheikh, Egypt.

LESSONS FROM THE SOUQ

Last year at MOP-19, parties committed to an accelerated phase out of HCFCs, a chemical that was originally seen as a substitute for CFCs but proved to be ozone depleting substances with high global warming potential. In this context, it is also worth recalling that MOP-19 Decision XIX/6 on adjustments to the Montreal Protocol with regard to HCFCs was a carefully crafted compromise. Of utter importance to Article 5 (developing) countries was the reference to stable and sufficient funding to meet all agreed incremental costs to comply with the accelerated phase-out schedule. At MOP-20, participants had to ensure that this ambitious schedule could actually be met.

The Multilateral Fund has often been hailed as the key to the Montreal Protocol's success and is expected to play a similar role in the phase out of HCFCs. The replenishment for the period of 2009-2011 represents the first time that HCFC-related phase-out activities are included in the Multilateral Fund and, therefore, added a new dimension to the triennial debate, especially since they will consume the majority of the allocated funds. Negotiations on replenishment and especially HCFC-related activities started with the two different scenarios set out in the reports of the TEAP Replenishment Task Force: the baseline or lowest cost scenario, assuming high cost effectiveness and modest quantities phased out during the triennium; and the 2012 consumption level scenario, assuming low cost effectiveness and larger quantities to be phased out. Along these lines, the required range of funding in 2009-2011 replenishment for the baseline scenario is US\$338.7 - 387.2 million, and for the 2012 funding scenario is US \$510.6 - 629.8 million. Article 2 (donor) countries rejected the 2012 scenario on the basis that production and consumption of HCFCs is not likely to decrease until 2013, the year stipulated for the freeze of HCFC consumption; and it could lead indirectly to funding increased production, thereby creating a perverse incentive. On the other hand, Article 5 countries insisted that additional funding was required to control and lower the current rate of growth in those industries.

The scene was set for the negotiations on HCFC-related activities when one Article 2 country insisted that the "lowest amount in the baseline scenario was too high" and in turn Article 5 countries countered that the "highest of the 2012 consumption scenarios was too low." As one delegate put it, negotiations became comparable to trading camels in a souq, the traditional Arabian market in Doha, where bargaining is a long perfected art form. As Article 2 and Article 5 countries sat on opposite sides of the negotiating table, one side started off with an offer of under US\$320 million and the other countered with more than double, over US\$700 million. By the evening before the end of the negotiations, after a number of steps and offers, the gap had "narrowed" to US\$400 versus US\$580 million.

In the end it did not come much as a surprise when parties settled on a final replenishment right in the middle – US\$490 million. When deducting the carry-over from the past triennium and the interest accrued over that period, the total amount of new funds is US\$400 million, exactly the same as for the past triennium. Furthermore, the actual contributions of most donor countries will actually decline, due to the fixed-exchange-rate mechanism that has the US dollar at a lower level vis-à-vis other major donor currencies in comparison to the previous replenishment. A number of these parties had arrived in Doha with a mandate allowing for an increase in their contributions, but other parties noted that due to the current financial crisis an increase in contributions was not realistic. Delegates from both Article 5 and Article 2 countries agreed that the outcome of the MOP-20 replenishment negotiations met the stipulation of MOP-19 Decision XIX/6 to ensure stable and sufficient funding to comply with the accelerated HCFC phase-out schedule. Much will depend on the operationalization of HCFC-related activities throughout this replenishment period by the Executive Committee of the Multilateral Fund. Key issues that it will have to address include: second conversions, which are cases where plants have been converted from CFC production to HCFC production and now would seek funding for a further conversion; and the cut-off date determining which level of HCFC consumption and production will be eligible for funding.

A GENIE IN THE BOTTLE – THE DESTRUCTION OF ODS

While the discussion over the funding of HCFC phase-out took center stage at MOP-20, another key debate was also underway: the destruction of ODS. The TEAP, in collaboration with Intergovernmental Panel on Climate Change, estimates that there were approximately 5.2 million tons of ODS stored in global banks in 2002. Within those, 1 million tons are readily available for recovery and destruction.

Destruction mitigates the risk of ODS entering the atmosphere and depleting the ozone layer by breaking ODS down into inert components. Furthermore, since Article 5 countries are expected to completely phase out the production and consumption of CFCs, halons and CTC by 2010, the amount of ODS available for recovery and destruction will continue to grow. Add to that increasing quantities of HCFCs due to the accelerated phase-out and the issue becomes even more pressing.

The task at hand for MOP-20 delegates was to agree to undertake further studies on destruction and on initiating pilot projects including collection, storage and destruction. On the sidelines, and informally, however, delegates were considering

how to fund destruction. While phase-out of ODS falls within the mandate of the Multilateral Fund, there is no mandate to cover costs of destruction for ODS existing in stockpiles and banks. The Multilateral Fund, however, can fund studies and pilot projects, which MOP-20 tasked it to do.

According to several delegates, funding destruction would require an amendment to the Multilateral Fund and, consequently, greater replenishments in the future. While some speculated this was a logical progression for the Montreal Protocol, and Article 5 countries prefer the use of the Multilateral Fund as a primary funding mechanism because of its accessibility and track record, others suggested there may not be sufficient political will for a greater replenishment load. Some delegates cited references of parties to the potential use of the Clean Development Mechanism, or voluntary carbon markets, to fund destruction. Since the cost of destroying HCFCs is potentially very large, selling carbon credits for destruction of ODS with GWP may make it financially viable to operate destruction facilities on a commercial basis. In the decision on destruction of ODS, TEAP was asked to assess the relative economic costs and environmental benefits to both the ozone layer and the climate of destruction versus recycling, reclaiming and re-using such substances. Many delegates commented that destruction is the environmentally preferable option, because recycling, reclaiming and reusing ODS is likely to result in eventual release of ODS into the atmosphere.

Whatever funding mechanisms, or combination of mechanisms, are decided upon, synergies with other conventions will require greater consideration. The ties to UNFCCC and the Kyoto Protocol are clear, since a number of substances covered by the Montreal Protocol have great GWP and their environmentally-sound destruction counteracts both climate change and ozone depletion. In addition, cooperation with the Basel Convention will become more and more important as transboundary transport of ODS will be necessary because destruction facilities are expensive and cannot be constructed in each country. Unless the issue of destruction of ODS is addressed in a speedy and efficient manner through cooperation at all levels, many of the successes under the Protocol could be undone by significant amounts of ODS being released into the atmosphere through leakage.

ON THE DESERT HORIZON

As MOP-20 was gaveled to a close, many suggested that once again the Montreal Protocol lived up to its esteemed reputation as the most successful multilateral environmental agreement. Not only was this the first meeting to forego the usual flurry of white paper documents and go paperless, it also bid farewell to the last production facilities for CFCs in India and China, proving that parties are complying and phase-out schedules can be achieved. The next challenge will be realizing the same result for HCFCs. Now that HCFCs are included in the Multilateral Fund, parties have demonstrated their willingness to meet this challenge.

MOP-20 also laid important groundwork for future work by agreeing to study key issues such as destruction, campaign financing for CFC based MDIs, and examining the use of QPS in an effort to eventually phase out methyl-bromide.

The road ahead, however, remains long. After 21 years, the Montreal Protocol has successfully phased out a significant number of ODS and has effectively addressed production and consumption of others. However, fully mitigating risks to the ozone layer requires two complimentary approaches – phase-out and destruction. As the parties reach the phase-out dates, addressing destruction becomes imperative and the next challenge for the Protocol – one that delegates will tackle again in another desert oasis, Sharm el-Sheikh, Egypt. By then, hopefully, the Protocol will be a few steps closer to blending luxury and sensibility and finding ways to remain cool, without contributing to climate change or the ozone hole.

UPCOMING MEETINGS

INFORMAL WORKSHOP ON STAKEHOLDERS' INFORMATION NEEDS ON CHEMICALS IN ARTICLES/ PRODUCTS: This informal workshop will be held from 2-4 December 2008, in Bangkok, Thailand. For more information, contact the SAICM Secretariat: tel: +41-22-917-12-34; fax: +41-22-797-3460; e-mail: saicm@chemicals.unep.ch; internet: http://www.chem.unep.ch/unepsaicm/cheminprod_dec08/default.htm

EUROPE AND CENTRAL ASIA (ECA) CONTACT GROUP MEETING ON PROGRESS OF TPMP IMPLEMENTATION AND ASSESSMENT OF AWARENESS RAISING ACTIVITIES: This meeting will be held in Chisinau, Moldova, from 2-4 December 2008. For more information, contact UNEP OzonAction Branch: tel: +33-1-44-37 1450; fax: +33-1-44-37-1474; e-mail: ozonaction@unep.fr; internet: <http://www.unep.fr/ozonaction/events/2008%20events.pdf>

STOCKHOLM CONVENTION EXPERT MEETING TO FURTHER DEVELOP THE STANDARDIZED TOOLKIT FOR IDENTIFICATION AND QUANTIFICATION OF DIOXIN AND FURAN RELEASES: This expert meeting will be held from 3-4 December 2008, in Geneva, Switzerland, to prepare proposals for Stockholm Convention COP 4 for revising and updating the Toolkit. For more information, contact: Stockholm Convention Secretariat; tel: +41-22-917-8729; fax: +41-22-917-8098; e-mail: ssc@pops.int; internet: <http://www.pops.int>

FIRST MEETING OF ODS CUSTOMS ENFORCEMENT NETWORK MEETING FOR LATIN AMERICA: This meeting will be held in Panama from 9-11 December 2008. For more information, contact UNEP OzonAction Branch: tel: +33-1-44-37-1450; fax: +33-1-44-37-1474; e-mail: ozonaction@unep.fr; internet: <http://www.unep.fr/ozonaction/events/2008%20events.pdf>

FOURTEENTH CONFERENCE OF THE PARTIES TO THE UNFCCC AND FOURTH MEETING OF THE PARTIES TO THE KYOTO PROTOCOL: This meeting will convene in Poznań, Poland, from 1-12 December 2008. The conference will also include the 29th sessions of the Convention's two subsidiary bodies – Subsidiary Body for Scientific and Technological Advice (SBSTA) and Subsidiary Body for Implementation (SBI) – as well as the 4th session of the *Ad hoc* Working Group on Long Term Cooperative Action (AWG-LCA) and the resumed 6th session of the *Ad Hoc* Working Group on Further Commitments for Annex I Parties

under the Kyoto Protocol (AWG-KP). For more information, contact: UNFCCC Secretariat; tel: +49-228-815-1000; fax: +49-228-815-1999; e-mail: secretariat@unfccc.int; internet: <http://www.unfccc.int>

EASTERN EUROPEAN BRIEFING ON HCFC PHASE-OUT: This briefing will be held in Belgrade in late March 2009, as a joint initiative of United Nations Environment Programme-Division of Technology, Environment and Economics (UNEP-DTIE) and the Serbian Ministry of Environment. The purpose of the meeting is to gain knowledge of HCFC consumption patterns for English speaking countries of the Eastern European Central Asian network. It will focus on policy options and legislation supporting HCFC phase-out. For more information, contact: Dunja Dobric, Ministry of Environment and Spatial Planning, Serbia; tel: +38-164-816-6357; fax: +38-111-313-1394; e-mail: dunja.dobric@ekoserb.sr.gov.yu; internet: <http://www.ekoserb.sr.gov.yu>

SEVENTH SESSION OF THE AWG-KP AND FIFTH SESSION OF THE AWG-LCA: The 5th session of the *Ad hoc* Working Group on Long Term Cooperative Action (AWG-LCA) and the 7th session of the *Ad Hoc* Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP) will meet from 29 March - 8 April 2009 in Bonn, Germany. For more information, contact: UNFCCC Secretariat; tel: +49-228-815-1000; fax: +49-228-815-1999; e-mail: secretariat@unfccc.int; internet: <http://www.unfccc.int>

FOURTH MEETING OF THE CONFERENCE OF THE PARTIES TO THE STOCKHOLM CONVENTION ON PERSISTENT ORGANIC POLLUTANTS: COP 4 will be held from 4-8 May 2009, in Geneva, Switzerland. The meeting will address a non-compliance mechanism, synergies between the Rotterdam, Basel and Stockholm Conventions, and recommendations from the POPs Review Committee to schedule further chemicals under the Convention. For more information, contact: Stockholm Convention Secretariat; tel: +41-22-917-8729; fax: +41-22-917-8098; e-mail: ssc@pops.int; internet: <http://www.pops.int/>

SECOND SESSION OF THE INTERNATIONAL CONFERENCE ON CHEMICALS MANAGEMENT (ICCM-2): This meeting will take place from 11-15 May 2009 in Geneva, Switzerland. For more information, contact: SAICM Secretariat; tel: +41-22-917-8532; fax: +41-22-797-3460; e-mail: saicm@chemicals.unep.ch; internet: <http://www.chem.unep.ch/saicm/iccm/ICCM2/iccm2.htm>

UNFCCC SUBSIDIARY BODIES MEETINGS: The 30th sessions of the UNFCCC Convention subsidiary bodies – SBSTA and SBI – and the 6th session of the *Ad hoc* Working Group on Long Term Cooperative Action (AWG-LCA) and the 8th session of the *Ad Hoc* Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP) will meet from 1-12 June 2009 in Bonn, Germany. For more information, contact: UNFCCC Secretariat; tel: +49-228-815-1000; fax: +49-228-815-1999; e-mail: secretariat@unfccc.int; internet: <http://www.unfccc.int>

42ND MEETING OF THE IMPLEMENTATION COMMITTEE UNDER THE NON-COMPLIANCE PROCEDURE FOR THE MONTREAL PROTOCOL:

This meeting will be held from 15-17 July 2009, in Geneva, Switzerland. For more information, contact: Ozone Secretariat; tel: +254-20-762-3851/3611; fax: +254-20-762-4691/92/93 e-mail: ozoneinfo@unep.org; internet: <http://ozone.unep.org>

WORKSHOP FOR A DIALOGUE ON HIGH-GWP ALTERNATIVES FOR OZONE DEPLETING SUBSTANCES:

This workshop will be held on 19 July 2009, one day before the twenty-ninth Open-ended Working Group of the parties to the Montreal Protocol (OEWG 29) at a venue to be decided by the Ozone Secretariat. This meeting will focus on technical and policy issues related to ODS alternatives and exchanging views on the best ways of using the experience of the Montreal Protocol for addressing the impact of HFCs and maximizing the ozone and climate benefits of the HCFCs early phase-out. For more information, contact: Ozone Secretariat; tel: +254-20-762-3851/3611; fax: +254-20-762-4691/92/93 e-mail: ozoneinfo@unep.org; internet: <http://ozone.unep.org>

29TH MEETING OF THE OPEN-ENDED WORKING GROUP OF THE PARTIES TO THE MONTREAL PROTOCOL ON SUBSTANCES THAT DEplete THE OZONE LAYER:

This meeting will be held from 20-24 July 2009, in Geneva, Switzerland. For more information, contact: Ozone Secretariat; tel: +254-20-762-3851/3611; fax: +254-20-762-4691/92/93 e-mail: ozoneinfo@unep.org; internet: <http://ozone.unep.org>

MONTREAL PROTOCOL MOP-21: The 21st Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer will take place in Sharm el Sheikh, Egypt, at a date to be determined. For more information, contact: Ozone Secretariat; tel: +254-20-762-3851/3611; fax: +254-20-762-4691/92/93 e-mail: ozoneinfo@unep.org; internet: <http://ozone.unep.org>

GLOSSARY

CFC	Chlorofluorocarbons
CTC	Carbon tetrachloride
CUE	Critical-use exemption
CUN	Critical-use nomination
GWP	Global warming potential
HCFC	Hydrochlorofluorocarbons
HFC	Hydrofluorocarbons
MTOC	Medical Technical Options Committee
MBTOC	Methyl Bromide Technical Options Committee
MDI	Metered-dose inhaler
ODS	Ozone depleting substances
OEWG	Open-ended Working Group
ORM	Ozone Research Managers
QPS	Quarantine and pre-shipment
TEAP	Technology and Economic Assessment Panel
WMO	World Meteorological Organization
WMO-GAW	World Meteorological Organization-Global Atmosphere Watch

附件六

Report of the Seventh Meeting of
the Ozone Research Managers of the
Parties to the Vienna Convention
for the Protection of the Ozone
Layer (ORM)



7th ORM Report

Report of the Seventh Meeting of the Ozone Research Managers of the Parties to the Vienna Convention for the Protection of the Ozone Layer

Michael J. Kurylo
Chairman, 7th ORM Meeting



8th COP / 20th MOP; Doha, Qatar; 16-20 November, 2008



7th ORM Report

Background:

- The 7th meeting of Ozone Research Managers of the Parties to the Vienna Convention was held in Geneva (18-21 May, 2008) in accordance with decisions I/6 and III/8 of the COP.
- ORM Reports and the WMO-UNEP Scientific Assessments have different purposes:
 - *All are required under the Vienna Convention and Montreal Protocol*
 - *The Assessments enable the Parties to evaluate control measures under the Montreal Protocol and are communication devices between the research community (striving for better understanding) and decision makers (seeking informed action)*
 - *The Assessments are neither policy recommendations nor research planning documents but provide input for both*
 - *The ORM Reports, on the other hand, specifically address research and monitoring needs in light of scientific understanding and make specific recommendations to the Parties regarding international actions for improved research coordination and networking*



8th COP / 20th MOP; Doha, Qatar; 16-20 November, 2008





7th ORM Report

Implementation:

- **Agenda Items for 7th ORM Meeting Included**
 - *A review of recommendations from the 6th ORM*
 - *Presentations on the state of the ozone layer and interactions with climate change*
 - *Updates on international monitoring programs*
 - *Satellite research and monitoring programs (present status and outlooks for the future)*
 - *Regional reports on ozone research and monitoring taking into account the available national reports*
 - *Recommendations in four principal areas (research needs, systematic observations, data archiving, and capacity building)*



8th COP / 20th MOP; Doha, Qatar; 16-20 November, 2008



7th ORM Report

Recommendations

The recommendations were set against the following background from the Scientific Assessment of Ozone Depletion: 2006

- Stratospheric ozone will remain vulnerable to chemical depletion by chlorine and bromine chemicals for much of the current century
 - Ozone-depleting chemicals are projected to return to their “pre-ozone-depletion” levels by the middle of this century for mid-latitudes, with polar regions following suit about 20 years later
- While the rate of ozone depletion at mid-latitudes has slowed in recent years due to the decline in EESC, polar ozone loss remains large and is highly variable
 - projections of a changing climate will impact the stratospheric ozone layer and its recovery
 - the connections between these two issues are currently being explored by the science community



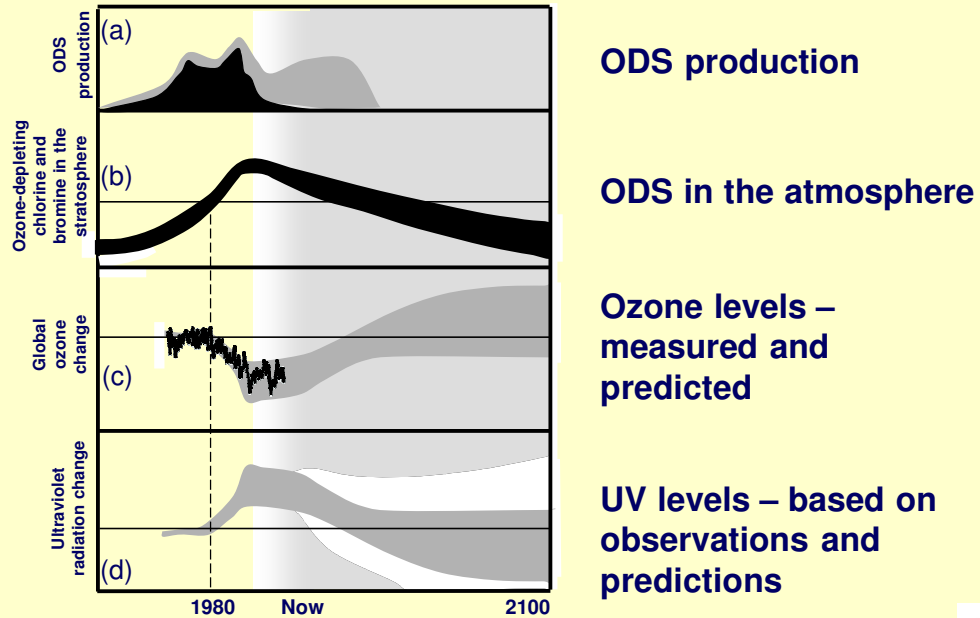
8th COP / 20th MOP; Doha, Qatar; 16-20 November, 2008





7th ORM Report

Recommendations: Background from the Scientific Assessment of Ozone Depletion: 2006



8th COP / 20th MOP; Doha, Qatar; 16-20 November, 2008



7th ORM Report

Recommendations: Background

The complexities of ozone and UV science require:

- Continuation and expansion of systematic measurement and analysis capabilities for tracking the evolution of ozone- and climate-related source gases and parameters.
- Detection and tracking the stabilization and expected recovery of stratospheric ozone.
- Attribution of changes in radiation forcing to changes in the ozone profile or to other atmospheric changes.
- Derivation of a global record of ground-level UV radiation.



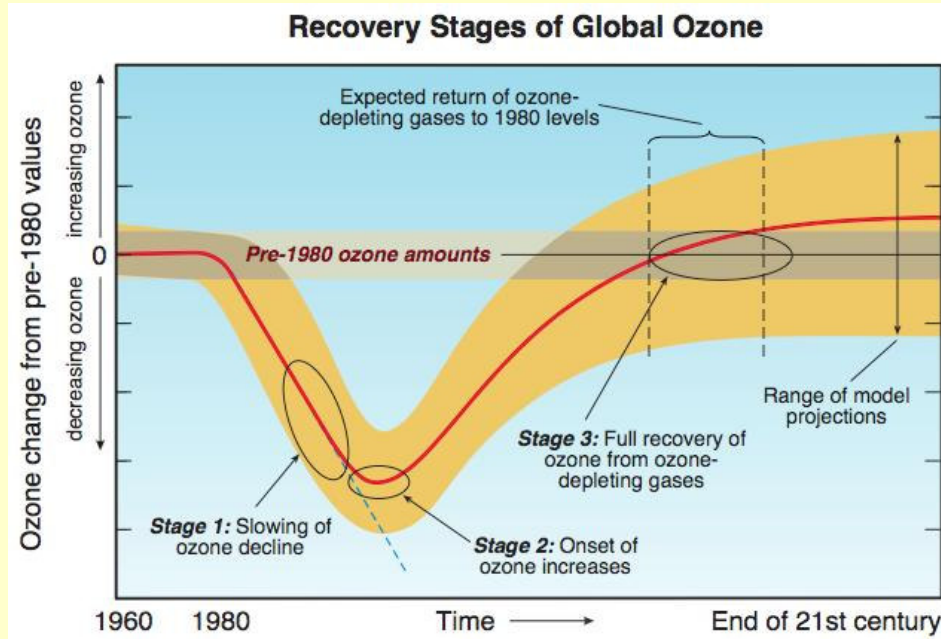
8th COP / 20th MOP; Doha, Qatar; 16-20 November, 2008





7th ORM Report

Recommendations: Background from the Scientific Assessment of Ozone Depletion: 2006



8th COP / 20th MOP; Doha, Qatar; 16-20 November, 2008



7th ORM Report

Recommendations: Research Needs

There are a number of new questions with respect to expected ozone recovery from the influence of ODSs and the interrelationship between ozone and climate variability and change. These require

- Studies to quantify the chemical, radiative, and dynamical factors contributing to ozone layer evolution in a changing atmosphere (including studies of the consequences of climate change mitigation and adaptation strategies)
- Laboratory studies relating to ozone evolution and monitoring
- Studies to understand the emissions (natural and anthropogenic), banks, and atmospheric evolution of ODSs, ODS substitutes, and other climate-related trace gases (effects of climate change on sources, sinks, and lifetimes)



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Recommendations: Research Needs (continued)

- Studies to investigate the role and impact of changes in stratospheric ozone and ODSs on surface climate and on tropospheric processes
- Studies to investigate the influence of factors other than ozone (such as cloud cover, aerosol abundance, albedo, and temperature) on surface UV
- Studies of the effects of UV radiation exposure on human health, ecosystems, and materials
- Development of new and innovative instrumentation, algorithms, and analyses as a means of reducing measurement uncertainty and increasing global observational capacity for ozone, UV, ODSs, and related variables



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Recommendations: Systematic Observations

Such observations are critical to understanding and monitoring long term changes in ozone and surface UV.

Surface Networks – Priorities

- Expansion in tropics, central Asia, and southern mid-latitudes through the redistribution of measurements from highly represented areas
- Preference for Brewers for new ozone and UV monitoring expansion
- Expansion of Umkehr sites for upper stratospheric time series
- Continuity of in situ observations of ODSs, ODS substitutes, and GHGs as well as of networks providing altitude profile information for ozone- and climate-related species
- Increase in balloon sonde networks for ozone and water vapor



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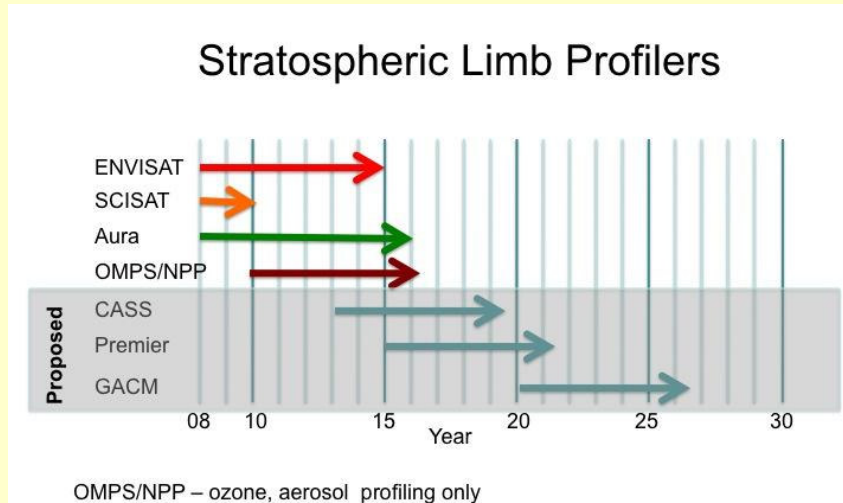




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Recommendations: Systematic Observations (contin.)

Satellite Networks – Priorities (recognition of a serious near term gap in measurements of ozone and ozone- / climate-related species)



CASS – Proposed Canadian ACE and SAGE III, solar occultation
 Premier – Proposed IR limb imager, competing with 4 other ESA missions
 GACM – Payload not defined but will include a multi-constituent limb sounder



7th ORM Report

Recommendations: Systematic Observations (continued)

Satellite Networks – Priorities (recognition of a serious near term gap in measurements of ozone and ozone- / climate-related species)

- Continuation of solar backscatter UV observations (ozone trends)
- High vertical resolution profiles for ozone and key molecules via limb viewing (need to understand ΔO_3 vs. ΔODS in a changing climate)
- Gap filling missions between current limb observations and future missions (e.g. solar occultation FTS or limb viewing microwave for high vertical resolution measurements of ozone and ozone-related parameters)





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Recommendations: Systematic Observations (continued)

Data Records – Priorities

- Systematic effort to understand differences between data sets derived using different observational techniques
- Intercomparison campaigns to reduce systematic differences in observations using identical and different techniques
- Analysis / archiving of existing (unanalyzed) data sets
- Reanalysis of data sets based on algorithm or analysis improvements
- Workshop in 2009/2010 on total ozone time series



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Recommendations: Systematic Observations (continued)

Additional Priorities

- Infusion of new (more sophisticated) instruments in network observations (establishment of Standard Operating Procedures)
- Documentation of spectroscopic parameters used for data analysis; improved measurements of cross-sections for ozone and related species
- Increased level of collaboration and coordination among various observational networks
- International calibration structure for UV networks – NDACC protocol example; improved coordination under SAG for UV Monitoring



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7th ORM Report

Recommendations: Data Archiving

Before being archived, data must be quality assured (i.e., of highest possible quality and includes metadata required by users).

- Fully implement 6th ORM recommendations
 - Prompt data submission to WOUDC
 - Funding for archiving of raw data
 - Support for the re-evaluation of historical data sets
- Salvage (recovery and assessment) of historical data
- Development of standard data quality assurance procedures
- Enhance linkage among data centers (O₃, UV, GHG, met products, etc.) to ensure availability for validation and modeling efforts
- Archiving of data obtained from regional process studies for improved accessibility



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7th ORM Report

Recommendations: Capacity Building

There is an insufficient number of regional centers for research, calibration, and training (especially in developing countries). Need to expand global networks and develop competence and expertise in developing countries and CEITs. Specifically,

- Extend global expertise in O₃ and UV observations and research
- Increase participation in regional and international research and assessments
 - Mechanisms for extended visits to institutions in developed countries
 - Participation in regional and international validation /intercomparison campaigns
 - Support for attendance at conferences and workshops
- Provide resources for sustainable, long term operation of regional centers



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7th ORM Report

Recommendations: Capacity Building

- Continued contributions to the Trust Fund for Observation and Research (extended by Decision VII/2)
 - Monetary and in-kind contributions
 - Quantify in-kind contributions targeted at ozone and UV activities
- Encourage submission of proposals for funding from the Trust Fund or other relevant in-kind support
 - Proposal submission throughout the year
 - Proposal evaluation assisted by WMO/GAW Scientific Advisory Group
- Include support for capacity building in ozone observations under UNEP's Compliance Assistance Programme



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7th ORM Report

The full report of the Seventh Meeting of the Ozone Research Managers along with the detailed recommendations stemming from this meeting is available as:

WMO Global Ozone Research and Monitoring Project, Report No. 51

- Report No. 51 includes all of the submitted national reports
- The recommendations have been produced as a meeting document in the 6 UN languages – UNEP/OzL.Conv.8/6



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附件七

蒙特婁議定書

締約國名單

Status of Ratification

蒙特婁議定書締約國名單 Status of Ratification

至2008/9/10 為止，締約情形如下：

Ratification of:	Vienna Convention	Montreal Protocol	London Amendment	Copenhagen Amendment	Montreal Amendment	Beijing Amendment
Total number of countries	193	193	189	184	167	143

	Signature	Signature	Ratification*	Ratification*	Ratification*	Ratification*	Ratification*	Ratification*
Party	Vienna Convention	Montreal Protocol	Vienna Convention	Montreal Protocol	London Amendment	Copenhagen Amendment	Montreal Amendment	Beijing Amendment
Afghanistan			17.06.2004(Ac)	17.06.2004(Ac)	17.06.2004(Ac)	17.06.2004(Ac)	17.06.2004(Ac)	17.06.2004(Ac)
Albania			08.10.1999(Ac)	08.10.1999(Ac)	25.05.2006(Ac)	25.05.2006(Ac)	25.05.2006(Ac)	25.05.2006(Ac)
Algeria			20.10.1992(Ac)	20.10.1992(Ac)	20.10.1992(Ac)	31.05.2000(R)	06.08.2007(R)	06.08.2007(R)
Angola			17.05.2000(Ac)	17.05.2000(Ac)				
Antigua and Barbuda			03.12.1992(Ac)	03.12.1992(Ac)	23.02.1993(Ac)	19.07.1993(Ac)	10.02.2000(R)	
Argentina ¹	22.03.1985	29.06.1988	18.01.1990(R)	18.09.1990(R)	04.12.1992(R)	20.04.1995(Ac)	15.02.2001(R)	28.08.2006(R)
Armenia			01.10.1999(Ac)	01.10.1999(Ac)	26.11.2003(Ac)	26.11.2003(Ac)		
Australia		08.06.1988	16.09.1987(Ac)	19.05.1989(R)	11.08.1992(At)	30.06.1994(At)	05.01.1999(At)	17.08.2005(At)
Austria	16.09.1985	29.08.1988	19.08.1987(R)	03.05.1989(R)	11.12.1992(R)	19.09.1996(Ap)	07.08.2000(R)	23.09.2004(R)
Azerbaijan			12.06.1996(Ac)	12.06.1996(Ac)	12.06.1996(Ac)	12.06.1996(Ac)	28.09.2000(Ap)	
Bahamas			01.04.1993(Ac)	04.05.1993(Ac)	04.05.1993(Ac)	04.05.1993(Ac)	16.03.2005(At)	16.03.2005(At)
Bahrain ²			27.04.1990(Ac)	27.04.1990(Ac)	23.12.1992(At)	13.03.2001(R)	13.03.2001(R)	
Bangladesh			02.08.1990(Ac)	02.08.1990(Ac)	18.03.1994(R)	27.11.2000(At)	27.07.2001(At)	
Barbados			16.10.1992(Ac)	16.10.1992(Ac)	20.07.1994(At)	20.07.1994(At)	10.12.2002(Ac)	10.12.2002(Ac)
Belarus	22.03.1985	22.01.1988	20.06.1986(At)	31.10.1988(At)	10.06.1996(R)	13.03.2007(At)	13.03.2007(At)	13.03.2007(At)
Belgium	22.03.1985	16.09.1987	17.10.1988(R)	30.12.1988(R)	05.10.1993(R)	07.08.1997(R)	11.08.2004(R)	06.04.2006(R)
Belize			06.06.1997(Ac)	09.01.1998(Ac)	09.01.1998(Ac)	09.01.1998(Ac)	17.01.2008(Ap)	17.01.2008(Ap)
Benin			01.07.1993(Ac)	01.07.1993(Ac)	21.06.2000(R)	21.06.2000(R)	16.11.2007(At)	16.11.2007(At)
Bhutan			23.08.2004(Ac)	23.08.2004(Ac)	23.08.2004(Ac)	23.08.2004(Ac)	23.08.2004(Ac)	23.08.2004(Ac)
Bolivia			03.10.1994(Ac)	03.10.1994(Ac)	03.10.1994(Ac)	03.10.1994(Ac)	12.04.1999(Ac)	
Bosnia and Herzegovina			01.09.1993(Sc)	01.09.1993(Sc)	11.08.2003(Ac)	11.08.2003(Ac)	11.08.2003(Ac)	
Botswana			04.12.1991(Ac)	04.12.1991(Ac)	13.05.1997(Ac)	13.05.1997(Ac)		
Brazil			19.03.1990(Ac)	19.03.1990(Ac)	01.10.1992(At)	25.06.1997(R)	30.06.2004(R)	30.06.2004(R)
Brunei Darussalam			26.07.1990(Ac)	27.05.1993(Ac)				
Bulgaria			20.11.1990(Ac)	20.11.1990(Ac)	28.04.1999(R)	28.04.1999(R)	24.11.1999(R)	15.04.2002(R)
Burkina Faso	12.12.1985	14.09.1988	30.03.1989(R)	20.07.1989(R)	10.06.1994(R)	12.12.1995(R)	11.11.2002(R)	11.11.2002(R)
Burundi			06.01.1997(Ac)	06.01.1997(Ac)	18.10.2001(At)	18.10.2001(At)	18.10.2001(At)	18.10.2001(At)
Cambodia			27.06.2001(Ac)	27.06.2001(Ac)	31.01.2007(Ac)	31.01.2007(Ac)	31.01.2007(Ac)	31.01.2007(Ac)
Cameroon			30.08.1989(Ac)	30.08.1989(Ac)	08.06.1992(At)	25.06.1996(At)		
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Cape Verde			31.07.2001(Ac)	31.07.2001(Ac)	31.07.2001(Ac)	31.07.2001(Ac)	31.07.2001(Ac)	
Central African Republic			29.03.1993(Ac)	29.03.1993(Ac)	29.05.2008(R)	29.05.2008(R)	29.05.2008(R)	29.05.2008(R)
Chad			18.05.1989(Ac)	07.06.1994(R)	30.05.2001(R)	30.05.2001(R)	30.05.2001(R)	
Chile ³	22.03.1985	14.06.1988	06.03.1990(R)	26.03.1990(R)	09.04.1992(At)	14.01.1994(R)	17.06.1998(R)	03.05.2000(R)
China ⁴			11.09.1989(Ac)	14.06.1991(Ac)	14.06.1991(Ac)	22.04.2003(Ac)		

Colombia			16.07.1990(Ac)	06.12.1993(Ac)	06.12.1993(Ac)	05.08.1997(At)	16.06.2003(Ac)	15.09.2006(Ac)
Comoros			31.10.1994(Ac)	31.10.1994(Ac)	31.10.1994(Ac)	02.12.2002(Ac)	02.12.2002(Ac)	02.12.2002(Ac)
Congo		15.09.1988	16.11.1994(Ac)	16.11.1994(Ac)	16.11.1994(R)	19.10.2001(Ac)	19.10.2001(Ac)	19.10.2001(Ac)
Cook Islands			22.12.2003(Ac)	22.12.2003(Ac)	22.12.2003(Ac)	22.12.2003(Ac)	22.12.2003(Ac)	22.12.2003(Ac)
Costa Rica			30.07.1991(Ac)	30.07.1991(Ac)	11.11.1998(R)	11.11.1998(R)	01.12.2005(R)	
Côte d'Ivoire			05.04.1993(Ac)	05.04.1993(Ac)	18.05.1994(R)	08.10.2003(R)		
Croatia			21.09.1992(Sc)	21.09.1992(Sc)	15.10.1993(R)	11.02.1997(R)	08.09.2000(R)	25.04.2002(R)
Cuba			14.07.1992(Ac)	14.07.1992(Ac)	19.10.1998(R)	19.10.1998(Ap)	12.09.2005(At)	12.09.2005(At)
Cyprus			28.05.1992(Ac)	28.05.1992(Ac)	11.10.1994(At)	02.06.2003(At)	02.06.2003(At)	02.09.2004(R)
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Democratic People's Republic of Korea			24.01.1995(Ac)	24.01.1995(Ac)	17.06.1999(Ac)	17.06.1999(Ac)	13.12.2001(Ac)	13.12.2001(Ac)
Democratic Republic of the Congo			30.11.1994(Ac)	30.11.1994(Ac)	30.11.1994(Ac)	30.11.1994(Ac)	23.03.2005(Ac)	23.03.2005(Ac)
Denmark ⁵	22.03.1985	16.09.1987	29.09.1988(R)	16.12.1988(R)	20.12.1991(Ac)	21.12.1993(At)	24.09.2003(At)	24.09.2003(At)
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Ecuador			10.04.1990(Ac)	30.04.1990(Ac)	23.02.1993(R)	24.11.1993(At)	16.02.2007(Ac)	
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El Salvador			02.10.1992(Ac)	02.10.1992(Ac)	08.12.2000(Ac)	08.12.2000(Ac)	08.12.2000(Ac)	13.11.2007(Ac)
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Eritrea			10.03.2005(Ac)	10.03.2005(Ac)	05.07.2005(Ac)	05.07.2005(Ac)	05.07.2005(Ac)	05.07.2005(Ac)
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Ethiopia			11.10.1994(Ac)	11.10.1994(Ac)				
European Community	22.03.1985	16.09.1987	17.10.1988(Ap)	16.12.1988(Ap)	20.12.1991(Ap)	20.11.1995(Ap)	17.11.2000(Ap)	25.03.2002(Ap)
Fiji			23.10.1989(Ac)	23.10.1989(Ac)	09.12.1994(Ac)	17.05.2000(Ac)	19.02.2007(Ac)	19.02.2007(Ac)
Finland	22.03.1985	16.09.1987	26.09.1986(R)	23.12.1988(R)	20.12.1991(Ac)	16.11.1993(At)	18.06.2001(At)	18.06.2001(At)
France	22.03.1985	16.09.1987	04.12.1987(Ap)	28.12.1988(Ap)	12.02.1992(Ap)	03.01.1996(Ap)	25.07.2003(Ap)	25.07.2003(Ap)
Gabon			09.02.1994(Ac)	09.02.1994(Ac)	04.12.2000(Ac)	04.12.2000(Ac)	04.12.2000(Ac)	04.12.2000(Ac)
Gambia			25.07.1990(Ac)	25.07.1990(Ac)	13.03.1995(R)	30.04.2008(R)	30.04.2008(R)	30.04.2008(R)
Georgia			21.03.1996(Ac)	21.03.1996(Ac)	12.07.2000(Ac)	12.07.2000(Ac)	12.07.2000(Ac)	
Germany ⁶	22.03.1985	16.09.1987	30.09.1988(R)	16.12.1988(R)	27.12.1991(R)	28.12.1993(R)	05.01.1999(R)	28.10.2002(R)
Ghana		16.09.1987	24.07.1989(Ac)	24.07.1989(R)	24.07.1992(R)	09.04.2001(R)	08.08.2005(Ac)	08.08.2005(Ac)
Greece	22.03.1985	29.10.1987	29.12.1988(R)	29.12.1988(R)	11.05.1993(R)	30.01.1995(R)	27.01.2006(R)	27.01.2006(R)
Grenada			31.03.1993(Ac)	31.03.1993(Ac)	07.12.1993(Ac)	20.05.1999(Ac)	20.05.1999(Ac)	12.01.2004(Ac)
Guatemala			11.09.1987(Ac)	07.11.1989(Ac)	21.01.2002(Ac)	21.01.2002(Ac)	21.01.2002(Ac)	21.01.2002(Ac)
Guinea			25.06.1992(Ac)	25.06.1992(Ac)	25.06.1992(Ac)			
Guinea-Bissau			12.11.2002(Ac)	12.11.2002(Ac)	12.11.2002(Ac)	12.11.2002(Ac)	12.11.2002(Ac)	12.11.2002(Ac)
Guyana			12.08.1993(Ac)	12.08.1993(Ac)	23.07.1999(At)	23.07.1999(At)	23.07.1999(At)	02.06.2008(At)
Haiti			29.03.2000(Ac)	29.03.2000(Ac)	29.03.2000(Ac)	29.03.2000(Ac)	29.03.2000(Ac)	
Holy See			05.05.2008(Ac)	05.05.2008(Ac)	05.05.2008(Ac)	05.05.2008(Ac)	05.05.2008(Ac)	05.05.2008(Ac)
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Iceland			29.08.1989(Ac)	29.08.1989(Ac)	16.06.1993(Ac)	15.03.1994(R)	08.02.2000(R)	31.03.2004(R)
India			18.03.1991(Ac)	19.06.1992(Ac)	19.06.1992(Ac)	03.03.2003(Ac)	03.03.2003(Ac)	03.03.2003(Ac)

Indonesia		21.07.1988	26.06.1992(Ac)	26.06.1992(R)	26.06.1992(Ac)	10.12.1998(Ac)	26.01.2006(R)	26.01.2006(R)
Iran (Islamic Republic of)			03.10.1990(Ac)	03.10.1990(Ac)	04.08.1997(At)	04.08.1997(At)	17.10.2001(At)	
Iraq			25.06.2008(Ac)	25.06.2008(Ac)	25.06.2008(Ac)	25.06.2008(Ac)	25.06.2008(Ac)	25.06.2008(Ac)
Ireland		15.09.1988	15.09.1988(Ac)	16.12.1988(R)	20.12.1991(At)	16.04.1996(At)	06.10.2005(At)	06.10.2005(At)
Israel ⁷		14.01.1988	30.06.1992(Ac)	30.06.1992(R)	30.06.1992(R)	05.04.1995(R)	28.05.2003(R)	15.04.2004(R)
Italy	22.03.1985	16.09.1987	19.09.1988(R)	16.12.1988(R)	21.02.1992(Ap)	04.01.1995(R)	01.05.2001(R)	22.10.2004(R)
Jamaica			31.03.1993(Ac)	31.03.1993(Ac)	31.03.1993(Ac)	06.11.1997(R)	24.09.2003(Ac)	24.09.2003(Ac)
Japan		16.09.1987	30.09.1988(Ac)	30.09.1988(At)	04.09.1991(At)	20.12.1994(At)	30.08.2002(At)	30.08.2002(At)
Jordan			31.05.1989(Ac)	31.05.1989(Ac)	12.11.1993(R)	30.06.1995(R)	03.02.1999(R)	01.02.2001(R)
Kazakhstan			26.08.1998(Ac)	26.08.1998(Ac)	26.07.2001(Ac)			
Kenya		16.09.1987	09.11.1988(Ac)	09.11.1988(R)	27.09.1994(R)	27.09.1994(R)	12.07.2000(R)	
Kiribati			07.01.1993(Ac)	07.01.1993(Ac)	09.08.2004(Ac)	09.08.2004(Ac)	09.08.2004(Ac)	09.08.2004(Ac)
Kuwait			23.11.1992(Ac)	23.11.1992(Ac)	22.07.1994(Ac)	22.07.1994(Ac)	13.06.2003(Ac)	30.07.2007(Ac)
Kyrgyzstan			31.05.2000(Ac)	31.05.2000(Ac)	13.05.2003(R)	13.05.2003(R)	13.05.2003(R)	05.10.2005(R)
Lao People's Democratic Republic			21.08.1998(Ac)	21.08.1998(Ac)	28.06.2006(Ac)	28.06.2006(Ac)	28.06.2006(Ac)	28.06.2006(Ac)
Latvia			28.04.1995(Ac)	28.04.1995(Ac)	02.11.1998(At)	02.11.1998(At)	14.06.2002(At)	09.07.2004(At)
Lebanon			30.03.1993(Ac)	31.03.1993(Ac)	31.03.1993(Ac)	31.07.2000(Ac)	31.07.2000(Ac)	
Lesotho			25.03.1994(Ac)	25.03.1994(Ac)				
Liberia			15.01.1996(Ac)	15.01.1996(Ac)	15.01.1996(Ac)	15.01.1996(Ac)	30.11.2004(Ac)	30.11.2004(Ac)
Libyan Arab Jamahiriya			11.07.1990(Ac)	11.07.1990(Ac)	12.07.2001(Ac)	24.09.2004(Ac)		
Liechtenstein			08.02.1989(Ac)	08.02.1989(Ac)	24.03.1994(R)	22.11.1996(Ac)	23.12.2003(At)	23.12.2003(At)
Lithuania			18.01.1995(Ac)	18.01.1995(Ac)	03.02.1998(R)	03.02.1998(R)	17.03.2004(At)	17.03.2004(At)
Luxembourg	17.04.1985	29.01.1988	17.10.1988(R)	17.10.1988(R)	20.05.1992(R)	09.05.1994(R)	08.02.1999(R)	22.01.2001(R)
Madagascar			07.11.1996(Ac)	07.11.1996(Ac)	16.01.2002(Ac)	16.01.2002(Ac)	16.01.2002(Ac)	16.01.2002(Ac)
Malawi			09.01.1991(Ac)	09.01.1991(Ac)	08.02.1994(At)	28.02.1994(Ac)		
Malaysia			29.08.1989(Ac)	29.08.1989(Ac)	16.06.1993(Ac)	05.08.1993(Ac)	26.10.2001(R)	26.10.2001(R)
Maldives		12.07.1988	26.04.1988(Ac)	16.05.1989(R)	31.07.1991(R)	27.09.2001(R)	27.09.2001(R)	03.09.2002(Ac)
Mali			28.10.1994(Ac)	28.10.1994(Ac)	28.10.1994(Ac)	07.03.2003(At)	07.03.2003(At)	25.03.2004(At)
Malta		15.09.1988	15.09.1988(Ac)	29.12.1988(R)	04.02.1994(Ap)	22.12.2003(At)	22.12.2003(At)	22.12.2003(At)
Marshall Islands			11.03.1993(Ac)	11.03.1993(Ac)	11.03.1993(Ac)	24.05.1993(Ac)	27.01.2003(Ac)	19.05.2004(Ac)
Mauritania			26.05.1994(Ac)	26.05.1994(Ac)	22.07.2005(At)	22.07.2005(At)	22.07.2005(At)	
Mauritius ⁸			18.08.1992(Ac)	18.08.1992(Ac)	20.10.1992(Ac)	30.11.1993(R)	24.03.2003(At)	24.03.2003(At)
Mexico	01.04.1985	16.09.1987	14.09.1987(R)	31.03.1988(At)	11.10.1991(At)	16.09.1994(At)	28.07.2006(At)	12.09.2007(At)
Micronesia (Federated States of)			03.08.1994(Ac)	06.09.1995(Ac)	27.11.2001(Ac)	27.11.2001(Ac)	27.11.2001(Ac)	27.11.2001(Ac)
Monaco			12.03.1993(Ac)	12.03.1993(Ac)	12.03.1993(Ac)	15.06.1999(At)	26.07.2001(At)	03.04.2003(At)
Mongolia			07.03.1996(Ac)	07.03.1996(Ac)	07.03.1996(Ac)	07.03.1996(Ac)	28.03.2002(R)	
Montenegro			23.10.2006(Sc)	23.10.2006(Sc)	23.10.2006(Sc)	23.10.2006(Sc)	23.10.2006(Sc)	23.10.2006(Sc)
Morocco	07.02.1986	07.01.1988	28.12.1995(R)	28.12.1995(R)	28.12.1995(Ac)	28.12.1995(Ac)		
Mozambique			09.09.1994(Ac)	09.09.1994(Ac)	09.09.1994(Ac)	09.09.1994(Ac)		
Myanmar			24.11.1993(Ac)	24.11.1993(Ac)	24.11.1993(Ac)			
Namibia			20.09.1993(Ac)	20.09.1993(Ac)	06.11.1997(R)	28.07.2003(At)	01.10.2007(At)	01.10.2007(At)
Nauru			12.11.2001(Ac)	12.11.2001(Ac)	10.09.2004(Ac)	10.09.2004(Ac)	10.09.2004(Ac)	10.09.2004(Ac)
Nepal			06.07.1994(Ac)	06.07.1994(Ac)	06.07.1994(Ac)			
Netherlands ⁹	22.03.1985	16.09.1987	28.09.1988(Ac)	16.12.1988(At)	20.12.1991(At)	25.04.1994(Ac)	21.02.2000(At)	13.11.2001(At)

New Zealand ¹⁰	21.03.1986	16.09.1987	02.06.1987(R)	21.07.1988(R)	01.10.1990(At)	04.06.1993(R)	03.06.1999(R)	08.06.2001(R)
Nicaragua			05.03.1993(Ac)	05.03.1993(Ac)	13.12.1999(R)	13.12.1999(R)		
Niger			09.10.1992(Ac)	09.10.1992(Ac)	11.01.1996(Ac)	08.10.1999(R)	08.10.1999(R)	25.08.2005(R)
Nigeria			31.10.1988(Ac)	31.10.1988(Ac)	27.09.2001(R)	27.09.2001(R)	27.09.2001(R)	24.05.2004(R)
Niue			22.12.2003(Ac)	22.12.2003(Ac)	22.12.2003(Ac)	22.12.2003(Ac)	22.12.2003(Ac)	22.12.2003(Ac)
Norway	22.03.1985	16.09.1987	23.09.1986(R)	24.06.1988(R)	18.11.1991(R)	03.09.1993(R)	30.12.1998(R)	29.11.2001(R)
Oman			30.06.1999(Ac)	30.06.1999(Ac)	05.08.1999(Ac)	05.08.1999(Ac)	19.01.2005(R)	19.01.2005(R)
Pakistan			18.12.1992(Ac)	18.12.1992(Ac)	18.12.1992(Ac)	17.02.1995(R)	02.09.2005(R)	02.09.2005(R)
Palau			29.05.2001(Ac)	29.05.2001(Ac)	29.05.2001(Ac)	29.05.2001(Ac)	29.05.2001(Ac)	29.05.2001(Ac)
Panama		16.09.1987	13.02.1989(Ac)	03.03.1989(R)	10.02.1994(R)	04.10.1996(Ac)	05.03.1999(R)	05.12.2001(R)
Papua New Guinea			27.10.1992(Ac)	27.10.1992(Ac)	04.05.1993(Ac)	07.10.2003(Ac)		
Paraguay			03.12.1992(Ac)	03.12.1992(Ac)	03.12.1992(Ac)	27.04.2001(R)	27.04.2001(R)	18.07.2006(Ac)
Peru	22.03.1985		07.04.1989(R)	31.03.1993(Ac)	31.03.1993(Ac)	07.06.1999(Ac)	20.05.2008(Ac)	
Philippines		14.09.1988	17.07.1991(Ac)	17.07.1991(R)	09.08.1993(R)	15.06.2001(R)	23.05.2006(R)	23.05.2006(R)
Poland			13.07.1990(Ac)	13.07.1990(Ac)	02.10.1996(Ac)	02.10.1996(Ac)	06.12.1999(R)	13.04.2006(R)
Portugal ¹¹		16.09.1987	17.10.1988(Ac)	17.10.1988(R)	24.11.1992(R)	24.02.1998(R)	03.10.2003(R)	08.05.2006(R)
Qatar			22.01.1996(Ac)	22.01.1996(Ac)	22.01.1996(Ac)	22.01.1996(Ac)		
Republic of Korea			27.02.1992(Ac)	27.02.1992(Ac)	10.12.1992(Ac)	02.12.1994(At)	19.08.1998(At)	09.01.2004(At)
Republic of Moldova			24.10.1996(Ac)	24.10.1996(Ac)	25.06.2001(Ac)	25.06.2001(Ac)	24.05.2005(Ac)	05.12.2006(Ac)
Romania			27.01.1993(Ac)	27.01.1993(Ac)	27.01.1993(Ac)	28.11.2000(At)	21.05.2001(R)	17.11.2005(At)
Russian Federation ¹²	22.03.1985	29.12.1987	18.06.1986(At)	10.11.1988(At)	13.01.1992(At)	14.12.2005(At)	14.12.2005(At)	14.12.2005(At)
Rwanda			11.10.2001(Ac)	11.10.2001(Ac)	07.01.2004(Ac)	07.01.2004(Ac)	07.01.2004(Ac)	07.01.2004(Ac)
Saint Kitts and Nevis			10.08.1992(Ac)	10.08.1992(Ac)	08.07.1998(Ac)	08.07.1998(R)	25.02.1999(R)	
Saint Lucia			28.07.1993(Ac)	28.07.1993(Ac)	24.08.1999(Ac)	24.08.1999(Ac)	24.08.1999(Ac)	12.12.2001(R)
Saint Vincent and the Grenadines			02.12.1996(Ac)	02.12.1996(Ac)	02.12.1996(Ac)	02.12.1996(Ac)		
Samoa			21.12.1992(Ac)	21.12.1992(Ac)	04.10.2001(At)	04.10.2001(At)	04.10.2001(At)	04.10.2001(At)
Sao Tome and Principe			19.11.2001(Ac)	19.11.2001(Ac)	19.11.2001(Ac)	19.11.2001(Ac)	19.11.2001(Ac)	19.11.2001(Ac)
Saudi Arabia			01.03.1993(Ac)	01.03.1993(Ac)	01.03.1993(Ac)	01.03.1993(Ac)		
Senegal		16.09.1987	19.03.1993(Ac)	06.05.1993(R)	06.05.1993(R)	12.08.1999(Ac)	12.08.1999(Ac)	08.10.2003(R)
Serbia ¹⁴			12.03.2001(Sc)	12.03.2001(Sc)	22.03.2005(Ac)	22.03.2005(Ac)	22.03.2005(Ac)	22.03.2005(Ac)
Seychelles			06.01.1993(Ac)	06.01.1993(Ac)	06.01.1993(Ac)	27.05.1993(R)	26.08.2002(Ac)	26.08.2002(Ac)
Sierra Leone			29.08.2001(Ac)	29.08.2001(Ac)	29.08.2001(Ac)	29.08.2001(Ac)	29.08.2001(Ac)	29.08.2001(Ac)
Singapore			05.01.1989(Ac)	05.01.1989(Ac)	02.03.1993(Ac)	22.09.2000(Ac)	22.09.2000(Ac)	10.01.2007(Ac)
Slovakia			28.05.1993(Sc)	28.05.1993(Sc)	15.04.1994(Ap)	08.01.1998(Ac)	03.11.1999(Ap)	22.05.2002(R)
Slovenia			06.07.1992(Sc)	06.07.1992(Sc)	08.12.1992(At)	13.11.1998(At)	15.11.1999(R)	23.01.2003(R)
Solomon Islands			17.06.1993(Ac)	17.06.1993(Ac)	17.08.1999(Ac)	17.08.1999(Ac)	17.08.1999(Ac)	
Somalia			01.08.2001(Ac)	01.08.2001(Ac)	01.08.2001(Ac)	01.08.2001(Ac)	01.08.2001(Ac)	01.08.2001(Ac)
South Africa			15.01.1990(Ac)	15.01.1990(Ac)	12.05.1992(Ac)	13.03.2001(Ac)	11.11.2004(Ac)	11.11.2004(Ac)
Spain		21.07.1988	25.07.1988(Ac)	16.12.1988(R)	19.05.1992(At)	05.06.1995(At)	11.05.1999(At)	19.02.2002(At)
Sri Lanka			15.12.1989(Ac)	15.12.1989(Ac)	16.06.1993(Ac)	07.07.1997(Ac)	20.08.1999(Ac)	27.11.2002(Ac)
Sudan			29.01.1993(Ac)	29.01.1993(Ac)	02.01.2002(Ac)	02.01.2002(Ac)	18.05.2004(Ac)	18.05.2004(Ac)
Suriname			14.10.1997(Ac)	14.10.1997(Ac)	29.03.2006(Ac)	29.03.2006(Ac)	29.03.2006(Ac)	29.03.2006(Ac)
Swaziland			10.11.1992(Ac)	10.11.1992(Ac)	16.12.2005(Ac)	16.12.2005(Ac)	16.12.2005(Ac)	16.12.2005(Ac)
Sweden	22.03.1985	16.09.1987	26.11.1986(R)	29.06.1988(R)	02.08.1991(R)	09.08.1993(R)	12.07.1999(R)	28.03.2002(R)

Switzerland	22.03.1985	16.09.1987	17.12.1987(R)	28.12.1988(R)	16.09.1992(R)	16.09.1996(R)	28.08.2002(R)	28.08.2002(R)
Syrian Arab Republic			12.12.1989(Ac)	12.12.1989(Ac)	30.11.1999(Ac)	30.11.1999(Ac)	30.11.1999(Ac)	
Tajikistan			06.05.1996(Ac)	07.01.1998(Ac)	07.01.1998(Ac)			
Thailand		15.09.1988	07.07.1989(Ac)	07.07.1989(R)	25.06.1992(R)	01.12.1995(R)	23.06.2003(R)	14.11.2006(R)
The Former Yugoslav Republic of Macedonia			10.03.1994(Sc)	10.03.1994(Sc)	09.11.1998(R)	09.11.1998(R)	31.08.1999(Ac)	23.05.2002(Ac)
Togo		16.09.1987	25.02.1991(Ac)	25.02.1991(R)	06.07.1998(At)	06.07.1998(At)	26.11.2001(At)	26.11.2001(At)
Tonga			29.07.1998(Ac)	29.07.1998(Ac)	26.11.2003(R)	26.11.2003(R)	26.11.2003(R)	26.11.2003(R)
Trinidad and Tobago			28.08.1989(Ac)	28.08.1989(Ac)	10.06.1999(R)	10.06.1999(R)	10.06.1999(R)	29.10.2003(R)
Tunisia			25.09.1989(Ac)	25.09.1989(Ac)	15.07.1993(Ac)	02.02.1995(Ac)	19.10.1999(R)	16.05.2005(Ac)
Turkey			20.09.1991(Ac)	20.09.1991(Ac)	13.04.1995(R)	10.11.1995(R)	24.10.2003(R)	24.10.2003(R)
Turkmenistan			18.11.1993(Ac)	18.11.1993(Ac)	15.03.1994(Ac)	28.03.2008(Ac)	28.03.2008(Ac)	28.03.2008(Ac)
Tuvalu			15.07.1993(Ac)	15.07.1993(Ac)	31.08.2000(At)	31.08.2000(At)	31.08.2000(At)	04.10.2004(At)
Uganda		15.09.1988	24.06.1988(Ac)	15.09.1988(R)	20.01.1994(R)	22.11.1999(Ac)	23.11.1999(Ac)	27.07.2007(Ac)
Ukraine	22.03.1985	18.02.1988	18.06.1986(At)	20.09.1988(At)	06.02.1997(R)	04.04.2002(R)	04.05.2007(R)	04.05.2007(R)
United Arab Emirates			22.12.1989(Ac)	22.12.1989(Ac)	16.02.2005(Ac)	16.02.2005(Ac)	16.02.2005(Ac)	16.02.2005(Ac)
United Kingdom of Great Britain and Northern Ireland ¹³	20.05.1985	16.09.1987	15.05.1987(R)	16.12.1988(R)	20.12.1991(R)	04.01.1995(R)	12.10.2001(R)	12.10.2001(R)
United Republic of Tanzania			07.04.1993(Ac)	16.04.1993(Ac)	16.04.1993(Ac)	06.12.2002(R)	06.12.2002(R)	06.12.2002(R)
United States of America	22.03.1985	16.09.1987	27.08.1986(R)	21.04.1988(R)	18.12.1991(R)	02.03.1994(R)	01.10.2003(R)	01.10.2003(R)
Uruguay			27.02.1989(Ac)	08.01.1991(Ac)	16.11.1993(R)	03.07.1997(Ac)	16.02.2000(Ac)	09.09.2003(Ac)
Uzbekistan			18.05.1993(Ac)	18.05.1993(Ac)	10.06.1998(Ac)	10.06.1998(Ac)	31.10.2006(R)	31.10.2006(R)
Vanuatu			21.11.1994(Ac)	21.11.1994(Ac)	21.11.1994(At)	21.11.1994(At)		
Venezuela (Bolivarian Republic of)		16.09.1987	01.09.1988(Ac)	06.02.1989(R)	29.07.1993(R)	10.12.1997(R)	13.05.2002(R)	22.12.2006(R)
Viet Nam			26.01.1994(Ac)	26.01.1994(Ac)	26.01.1994(Ac)	26.01.1994(Ac)	03.12.2004(R)	03.12.2004(R)
Yemen			21.02.1996(Ac)	21.02.1996(Ac)	23.04.2001(Ac)	23.04.2001(Ac)	23.04.2001(Ac)	
Zambia			24.01.1990(Ac)	24.01.1990(Ac)	15.04.1994(R)	11.10.2007(Ac)	11.10.2007(Ac)	11.10.2007(Ac)
Zimbabwe			03.11.1992(Ac)	03.11.1992(Ac)	03.06.1994(R)	03.06.1994(R)		
	Vienna Convention	Montreal Protocol	Vienna Convention	Montreal Protocol	London Amendment	Copenhagen Amendment	Montreal Amendment	Beijing Amendment
Total	28	46	193	193	189	184	167	143

Notes

R: Ratification

Ac: Accession

At: Acceptance

Ap: Approval

Sc: Succession

Entry into force is after ninety days following the date of ratification/accession/acceptance/approval for new Parties after the treaty enters into force.

維也納公約Vienna Convention (22.9.1988);

蒙特婁議定書Montreal Protocol (1.1.1989);

倫敦修正案 London
Amendment (10.8.1992)

哥本哈根修正案
Copenhagen Amendment
(14.6.1994)

蒙特婁修正案
Montreal Amendment
(10.11.1999)

北京修正案
Beijing Amendment
(25.2.2002)