

行政院所屬各機關因公出國人員出國報告書 (出國類別：國際會議)

蒙特婁議定書第二十二次締約國會議 與會情形報告

服務機關： 行政院環境保護署

姓名職稱： 劉銘龍 主任秘書

謝議輝 助理環境技術師

派赴國家： 泰國－曼谷

(Bangkok, Thailand)

出國期間： 99年11月8日至11月12日

報告日期： 99年12月30日

摘要

管制臭氧層破壞物質 (Ozone Depleting Substances 簡稱 ODS) 的國際公約蒙特婁議定書 (Montreal Protocol) 第二十二次締約方大會，於 99 年 11 月 8 日至 11 月 12 日在泰國－曼谷 (Bangkok, Thailand) 舉行，行政院環保署特派劉主任秘書銘龍代表與財團法人工業技術研究院以非政府組織 NGO (Non-governmental organization) 的方式率團出席會議，全程參與並觀察議定書的管制發展。

本次會議主要討論議題包括有：(1) 推動破壞臭氧層物質庫 (簡稱 ODS banks) 無害化管理與最終處置之銷毀的技術經驗分享、(2) 溴化甲烷於檢疫及裝運前處理 QPS (Quarantine and Pre-shipment) 之各用途資料、(3) 氫氟碳化物 (HFCs) 是否適合納入蒙特婁議定書管制及推動低 GWP (Global Warming Potential) 值替代品等重要關鍵議題，共同協商後續管制方案。

與會期間我國代表團主動與 TEAP (Technology and Economic Assessment Panel) 主席 Mr. Stephen O. Andersen、新任溴化甲烷用於 QPS 用途之共同主席 Ms. Marta Pizano、環境調查組織(EIA)的 Mr. Fionnuala Walravens、聯合國毒品與犯罪辦公室(UNODC)助理專家 Mr. Giovanni Broussard、歐盟顧問 Dr. Melanie Miller、世界海關組織(WCO)亞太區情報處(RILOA/P)副主任 Mr. Zhao Jie 等，正面傳達我國遵循蒙特婁議定書已開發國家管制規範，在保護臭氧層上的努力與成果。現場並在適當攤位上發放我國的宣傳文宣與隨身碟，供國際友人參考取閱。

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蒙特婁議定書第二十二次締約國會議與會情形報告

壹、 前言

- 一、 氟氯氮化物 (Chlorofluorocarbons) 於 1930 年開發後，因具有易揮發、不易殘留及較低的毒性等特殊性質，被各國廣泛應用在冷凍空調系統、工業製程洗淨溶劑、消防滅火藥劑、發泡劑及噴霧推進器等，直至 1974 年美國二位教授在 Nature 科學期刊提及，氟氯氮化物因生命週期穩定使用後逸散放至大氣中，當上升至平流層經陽光紫外線分解逐漸釋出氯原子，會與臭氧分子發生反應，使臭氧濃度降低。
- 二、 1985 年南極測站科學家觀察 1977 至 1984 年期間，春季時南極上空平流層臭氧減少約 40% 濃度，且急遽變化區域面積甚至已大於南極大陸（從 100 至 400 Dobson Unit，而厚度若在 220 Dobson Unit 以下），即稱為「臭氧洞」。
- 三、 然而臭氧層破壞導致陽光中過量的紫外線直接進入地球表面，將嚴重影響全球生態（如造成人類皮膚癌與白內障罹患率增高、植物生長受到抑制、水生生態系統平衡受到破壞及建築物等材料加速老化等）有鑒於此，聯合國環境規劃署 (United Nations Environment Program, UNEP) 於 1985 年邀集相關國家制訂保護臭氧層之「維也納公約 (Vienna Convention for the Protection of the Ozone Layer)」，並要求簽署公約之國家應採取相關因應措施減少臭氧層破洞逐年擴大，UNEP 並決議研擬更具有策略性之管制措施，以保護人類健康和環境受到影響，至今維也納公約已受到全球 196 個國家批准。
- 四、 由於維也納公約並不具有實質管制約束力，因此 UNEP 後於 1987 年於加拿大蒙特婁市再邀集相關各國及歐洲經濟體簽署更具有管制效力之「蒙特婁議定書 (Montreal Protocol on Substances that Deplete the Ozone Layer)」，優先管制 CFC-11、-12、-113、-114、115 及 Halon-1211、-1301、-2402 等 8 項化學品，列為附件 A 第一、二類管制物質。

五、 為加速落實破壞臭氧層物質減量行動，各締約國採加嚴之消滅時程與管制措施，增修蒙特婁議定書內容於「修正案（Amendment）：用來新增管制方案或物質，需經一定數目的締約國批准後才具效力」及「調整案（Adjustment）：用來調整現有管制措施內容，無管制項目之新增，以加嚴現有管制方案為主」。

六、 目前蒙特婁議定書批准修正案包括，1990 年倫敦修正案、1992 年哥本哈根修正案、1997 年的蒙特婁修正案及 1999 年的北京修正案等四案，各修正案批准情形如表一：

(一) 倫敦修正案：1990 年 MOP2 於英國倫敦決議，新增 CFC-13、-111、-211、-212、-213、-214、-215、-216、及-217 等 10 項化學品，另管制四氯化碳及 1,1,1-三氯乙烷，列於附件 B 第一、二及三類管制物質，並決議議定書中五種 CFCs 及三種海龍(Halons)於 2000 年之前停止生產。此外，設立多邊基金（Multilateral Fund）促進議定書的推廣執行，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，至今計有 195 個締約國批准。

(二) 哥本哈根修正案：1992 年 MOP4 於丹麥哥本哈根決議，新增 HCFC-21、-22 及-21 等 40 與 HBFC-22B1 等 34 項化學品及其異構物，列為附件 C 第一及二類與附件 E 管制物質，至今計有 192 個締約國批准。

(三) 蒙特婁修正案：1997 年 MOP9 於加拿大蒙特市通過各國應採用 ODS 進/出口許可制度，決議未批准哥本哈根修正案的締約國進行溴化甲烷貿易限制，至今計有 181 個締約國批准。

(四) 北京修正案：1992 年 MOP11 於中國北京決議，納入管制 Bromochloromethane 與新增加入 HCFCs 生產管制，列為附件 C 第三類管制物質，至今計有 165 個締約國批准。

表 1、蒙特婁議定書及其修正案之批准情形

公約/修正案	批准之締約國總數
維也納公約	196
蒙特婁議定書	196
倫敦修正案	195
哥本哈根修正案	192
蒙特婁修正案	181
北京修正案	165

表 2、蒙特婁議定書管制物質種類

代號	蒙特婁議定書代稱	管制物質種類
A	附件 A 管制物質	CFC-11、-12、-113、-114、115 及 Halon-1211、-1301、-2402
B	附件 B 管制物質	其它 CFCs 等 10 項化學品、四氯化碳及 1,1,1-三氯乙烷
C-I	附件 C 第一類管制物質	HCFCs
C-II	附件 C 第二類管制物質	HBFCs
C-III	附件 C 第三類管制物質	一氯一溴甲烷
E	附件 E 管制物質	溴化甲烷

資料來源：http://ozone.unep.org/Ratification_status/

七、聯合國環境規劃署臭氧秘書處於 2010 年 11 月 8-12 日在泰國－曼谷聯合國會議中心（UNCC, United Nations Conference Centre）舉行蒙特婁議定書第 22 次締約國會議，包括各締約國政府機關代表各國政府代表、聯合國相關機構、政府間組織、非政府組織及相關產業團體等，共計有超過 400 位專家共襄盛舉。



圖 1、MDP22 會議地點 United Nations Conference Centre



圖 2、MOP22 大會會場

貳、 我國代表團

本次會議以財團法人工業技術研究院名義，非政府組織（NGO）身分參加，由本署劉銘龍 主任秘書率團，謝議輝 助理環境技術師；工業技術研究院 蔡振球 組長、楊斐喬 研究員及連振安 副研究員，共計 5 人與會，表 3。

表 3、成員任務分工表簡要說明如下

單位	職稱	姓名	任務分工
行政院環境保護署	主任秘書	劉銘龍	團長/對外交流
	助理環境技術師	謝議輝	資訊蒐集/會議紀錄
工業技術研究院 能源與環境研究所	組長	蔡振球	對外交流/技術資訊
	研究員	楊斐喬	技術資訊/資訊蒐集
	副研究員	連振安	技術資訊/資訊蒐集

參、 出國行程

- 一、 會議時間：2010 年 11 月 8 日至 11 月 12 日。
- 二、 會議地點：泰國曼谷（UNCC, United Nations Conference Centre）
- 三、 主辦單位：聯合國環境規劃署臭氧秘書處
- 四、 行程：
 - 11.7 台北出發至泰國曼谷
 - 11.8~12 參加聯合國蒙特婁議定書第 22 次締約方會議
the Twenty-Second Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer
 - 11.13 泰國曼谷回台北

肆、 與會目的

- 一、 藉由參與本會議，瞭解國際公約管制發展趨勢，並建立我國與其他國家管制與替代技術資訊分享管道，並宣揚我國努力依循議定書管制規範和減少管制物質消費量的成果，表達我國保護臭氧層之決心。
- 二、 與各國保持聯繫及交流，並迅速掌握臭氧層保護國際管制最新資訊，使我國得以妥為因應，將衝擊減至最低，對於本署國際環保業務之推動，極有助益。

伍、 會議議程

本年度蒙特婁議定書締約國會議於泰國-曼谷召開，2010年11月8-10日為期5天的會議，分為2010年11月8-10日3天的預備會議及11月11-12日2天的高層會議。會議議程如下：

一、 預備會議（2010年11月8日-10日）

日期	行程
11/8 開會	<ol style="list-style-type: none">1. 預備會議開幕2. 組織事項(通過預備會議議程)3. 審議蒙特婁議定書 2011 年的成員4. 維也納公約、蒙特婁議定書信託基金的財務報告及蒙特婁議定書的預算
11/9 開會	<ol style="list-style-type: none">5. 蒙特婁議定書第 10 條下的財務機制有關的問題6. 將摻入多元醇中的氟氯烴作為蒙特婁議定書所列受控物質的現狀7. 破壞臭氧物質庫存的無害環境管理8. 提議對蒙特婁議定書的修正9. 逐步淘汰作為氟氯烴-22 生產附帶排放的氟氯烴-23
11/10 開會	<ol style="list-style-type: none">10. 蒙特婁議定書第 2 條中的豁免有關的問題11. 海地的特殊情況

二、 高階會議（2010 年 11 月 11-12 日）

日期	行程
11/11 開會	<ol style="list-style-type: none"> 1. 高級別會議開幕 2. 組織事項(安排工作) 3. 維也納公約、蒙特婁議定書及修正案的批准現況 4. 評估小組介紹其四年期評估工作 5. 多邊基金執行委員會主席介紹執行委員會、多邊基金秘書處及該基金各執行機構的工作
11/12	<ol style="list-style-type: none"> 6. 各代表團團長致辭 7. 預備會議共同主席的報告及審議建議締約方第二十二次會議通過的各項決定 8. 締約第二十三次會議的日期及地點 9. 其他事項 10. 通過締約大會第二十二次會議的各項決定 11. 通過締約第二十二會議的報告 12. 會議閉幕

陸、 會議過程

本次會議地點為泰國曼谷聯合國會議中心，會議包括 11 月 8~10 日的 MOP-22 預備會議與 11 月 11~12 日的 MOP-22 高階會議。11 月 8 日的預備會議由泰國籍主席 Mr. Prepat Vanapitaksa 召開並呼籲各締約方能夠有緊密的合作，以強化蒙特婁議定書的執行。而執行主席 Mr. Marco Gonzalez 對於發展中國家可以在 2010 年達到蒙特婁議定書所設定管制目標的努力表示肯定，並敦促各國持續進行 HCFCs、溴化甲烷以及甲基氯仿的削減。11 月 11 日的高階會議，由格瑞那達環境部部長也是第 21 次蒙特婁議定書締約國大會主席 Mr. Michael Church 宣布召開。執行秘書 Mr. Marco Gonzalez 代表 UNEP 向泰國政府協助舉辦本次會議表示感謝，並指出蒙特婁議定書不僅僅成功地保護了臭氧層，也將

對保護全球氣候變遷做出貢獻，並希望各締約方能夠做出更多的實質努力。泰國總理 Mr. Trairong Suwankiri 隨後召開了 MOP-22 高階會議，並強調泰國已經成功的削減了 10,000 公噸的 CFCs。隨後大會並選舉通過英國的 Mr. Steven Reeves 為主席，並針對各項議題進行討論，各評估小組及相關委員會討論情形如下：

一、各技術委員會或單位報告

(一) 技術與經濟評估小組 (TEAP)

技術與經濟評估小組 (TEAP)，由共同主席 Mr. Lambert Kuijpers 進行評估報告，TEAP 的各子委員會的報告則依序報告。TEAP 並報告對於 GWP 認定的標準如下：高 GWP 值者為大於 1000 者，中 GWP 值者為介於 300-1000 者，低 GWP 值者為低於 300 者。報告也指出目前各 HFCs 用途別皆有中或低 GWP 值的替代品 (low or moderate GWP alternatives) 正在轉換，同時部分用途也有「非全球暖化物質的另類替代品 (not-in-kind alternatives that are not global warming substances)」正在研發。部分締約方選擇替代品的時候，除了考慮其是否具有環境衝擊並考量 GWP 值外，也應考量其設備在能源上的消耗，以及其操作期間可能的排放是否會造成更多的二氧化碳當量增加。

(二) 醫療技術選擇委員會 (MTOC)

醫療技術選擇委員會 (Medical Technical Options Committee, MTOC) 提出關於目前使用 CFCs 之計量吸入器 (Metered Dose Inhaler, MDIs) 在許多國家的替代狀況，並預計在數年之後將可以完全進行替換。對於這些醫療級氣膠產品，部分開發中國家仍有一些小量的 CFCs 消費量，並儘量使用庫存量。

(三) 化學技術選擇委員會 (CTOC)

化學技術選擇委員會（Chemical Technical Options Committee, CTOC）在討論中探討 ODS 做為製程用劑的進度，在實驗與分析用途上，已開發國家僅剩很少的用途需要使用 ODS，部分開發中國家仍在使用 ODS 做為實驗與分析用途。在原料用途上，所回報的生產量與 ODS 原料排放量，較難驗證，締約方應確實向臭氧秘書處申報，以作為確認。在溶劑方面，開發中國家要求更便宜以及更容易取得的替代品，以提供大多中小企業主的使用需求。在 n-PB 的使用議題上，CTOC 認為 n-PB 在下層大氣中很容易分解，所以 ODP 值應較低，n-PB 主要的問題在於職業性的健康與安全顧慮。在銷毀技術上，2009 年 CTOC 共計認證 27 國的 176 座銷毀設施，很多不在以往的名單之中，至於許多新開發的技術，CTOC 目前正在檢核當中，並且建議銷毀設施之準則應列出適用對象，如 CFCs、HCFCs、海龍、溴化甲烷以及其他 ODSs 等等。

(四) 發泡技術選擇委員會（FTOC）

發泡技術選擇委員會（Foams Technical Options Committee, FTOC）提出了關於使用碳氫（Hydrocarbons）發泡劑做為家電產品之發泡用途的報告。能源使用的標準主導使用何種發泡劑，例如環戊烷（Cyclopentane）混合 HFCs，單獨或混和 HFOs。根據目前的資料指稱，HFOs 發泡的絕熱效果較液態的 HFCs 為佳。開發中國家削減 HCFCs 時，預料 HFOs 將無法供應並滿足需求，部分家電製造商認為開發中國家需要兩階段完成 HFOs 的替換。

在建築用發泡材料上，碳氫發泡劑仍將維持目前的主要使用地位，但因為開發中國家的 HCFCs 發泡材料供應工廠規模較小，替換幅度將不明顯。目前所建議的建築用發泡材替代物質如下所列：預拌碳氫發泡劑（Pre-blended hydrocarbons）、甲基醛（Methylal）、甲酸甲脂（Methyl Formate），短期則有可能採用液態飽和 HFCs（Liquid Saturated HFCs）。數項 HCFCs 的替代技術仍待驗證，例如超極端二氧化碳（Super-Critical CO₂）與氣態 HFOs。HFOs 將成為飽和氣態 HFCs 的替代品，特別是在

混和用途上。歐洲市場有著較嚴的法規，可能較早替代飽和 HFCs 發泡劑，北美洲預計進度較慢。日後計算發泡劑的 ODS 庫數量時，將以 2020 年為計算基準。

(五) 海龍技術選擇委員會 (HTOC)

海龍技術選擇委員會 (Halon Technical Option Committee, HTOC) 認為目前全球庫存的海龍 1211 與海龍 1301 應當符合未來全球消防設備的需求。HTOC 也認為目前海龍 2402 使用在非消防用途與其他新設產品上，導致其庫存數量持續減少的狀況下，現有的重要消防設施的海龍補給維護將受到困難。尤其在開發中國家，海龍庫的建立與管理計畫目前發現受到嚴重的推遲。目前海龍的建議替代藥劑主要仍是 HFCs 類的物質，況且目前數種重要消防設備的藥劑仍仰賴回收、回用的海龍或是 GWP 值非常高的 HFCs，當選用回收、回用的海龍或是使用 GWP 值非常高的 HFCs，各締約方應全面性的考慮其環境衝擊。雖然目前對於使用回收海龍的比例很高，但是目前沒有締約方表示國內供給無法滿足其需求。

近日因碳信用額度 (Carbon Credits) 概念引進 ODS 銷毀議題，是否銷毀海龍成為關注的焦點，但是為了日後民航機用途、石油與汽油生產、以及軍方用途的供給順暢，除非海龍遭受嚴重的污染無法再次精製，建議各締約方應該儲存適當數量的海龍因應。HTOC 持續國際民航組織 (ICAO) 就相關議題進行合作，ICAO 於 2010 年 9 月通過了 A37/9 決議。

(六) 溴化甲烷技術選擇委員會 (MBTOC)

溴化甲烷技術選擇委員會 (Methyl Bromide Technical Option Committee, MBTOC) 報告了今年全球溴化甲烷生產量約在基準量的 13%，全球目前的消費量約在基準量的 11%。自 2007 年起，開發中國

家的溴化甲烷消費量仍較已開發國家為多。值得注意的是，歐盟自今（2010）年3月起已完全停用溴化甲烷於 QPS 用途上。許多開發中國家已在 2015 年期限前停止溴化甲烷於 QPS 以外的用途。科學評估小組（SAP）報告指出大氣中溴化甲烷排放量減少了有效氯濃度 20% 當量，這些可歸功於蒙特婁議定書的管制成效。

目前在土壤用途上，建議的替代藥劑包括：碘化甲烷（MI）、1,3-二氯松與氯化苦混合（1,3-D/Pic）、氯化苦（Pic）以及 Metham Sodium 與 Metham Potassium，惟在相關應用上，仍有待資金與技術上的克服。在檢疫與裝運前用途上，報告指出 2009 年的 QPS 消費量超過了非 QPS 用途的消費量。亞洲地區目前回報了大量的 QPS 消費量增加（主要是以色列），其他地區則是減少或是維持相等數量。根據資料，超過 70% 的 QPS 用途對象是木材、切削木材、木質包裝材、穀物以及類似的食物材料、與預植用的土壤燻蒸。MBTOC 認為當中的 30~50% 的消費量可以馬上進行取代。除了歐盟宣告 2010 年停用溴化甲烷於 QPS 用途上外，巴西也回報預計將在 2015 年停止使用在 QPS 用途上。

(七) 冷凍空調暨熱泵技術委員會（RTOC）

冷凍空調暨熱泵技術選擇委員會（Refrigeration, Air Conditioning and Heat Pumps Technical Options Committee）指出目前家用設備冷媒逐漸轉向使用碳氫冷媒，並預估在 2020 年時，將占市場規模的 75%。商用設備冷媒若使用 HFC-134a 者，預估大多會轉用碳氫冷媒。其他商用冷凝機組（condensing units）現在使用其他 HFCs 者，預計將轉而使用碳氫冷媒或是二氧化碳冷媒，但仍在測試中而未達商業規模。

商用冷媒的建議如下：非直接系統（indirect system）可用 HFCs（包括 134a 與 32）、氨（Ammonia）、碳氫冷媒、二氧化碳（R-744，於第一循環，第二循環的二氧化碳做為熱交換液體）。串聯式系統（Cascading System）可使用 CO₂ 於低溫循環的部分，純二氧化碳可以

使用在次臨界系統（Subcritical system）的低環境溫度中。

一般空調系統使用碳氫冷媒與二氧化碳冷媒的狀況增加，HFC-32 預期可以取代部分的 R-410A 市場，較低 GWP 值的之混合冷媒正在研發。離心式冰水機（Centrifugal Chillers）則建議繼續使用 HFC-134a 與 HCFC-123。也發現部分廠商開始推薦氨氣冷媒冰水機，碳氫冷媒使用在冰水機的狀況較少，在部分廠商與政府的支持下，安全顧慮已經大多被解決了。

巴士與火車上使用的 HCFC-22 建議使用 HFC-134a 與二氧化碳進行替換。目前大多的新車空調裝填仍是採用 HFC-134a，在歐盟的法規規定未來汽車冷媒 GWP 值不得超過 150 的狀況下，原本屬意的替代物質為二氧化碳（R-744）或是 HFC-152a，而目前汽車製造商未來傾向使用 HFO-1234yf。

（八） 國際民航組織（ICAO）

國際民航組織（International Civil Aviation Organization, ICAO）決議持續研發海龍替代品用於貨艙（Cargo Compartments）以及引擎暨輔助動力系統（Engine/Auxiliary Power Units）之滅火系統，並尋求更佳的手持式滅火器替代品。並建議建立專案期程來替換海龍藥劑：（1）2011 年起新造飛行器之機用廁所停用海龍（2）2016 年起新造飛行器之手持式滅火器停用海龍（3）2014 年起民用航空器申請型式證明（type certification）的引擎與輔助動力單位滅火系統停用海龍。

相關的飛機製造商與維修業者應經由本身的專業判斷既存海龍的品質，或是由合格的供應商進行供貨。鼓勵民用航空器業者持續與臭氧秘書處合作或是與 TEAP 的 HTOC 進行替代技術的合作，並且使用海龍者應定期向 ICAO 申報該單位的海龍儲備量。目前飛機製造商對於所設定的海龍替代期程表示可以接受，並表示對於現有飛行器中的海龍庫

並不需要進行重新換裝，因不僅成本高昂、導致飛機停用耗時，重新裝填時也會導致不必要的海龍排放。

(九) 科技評估小組 (SAP)

科學評估小組 (Scientific Assessment Panel, SAP) 報告指稱目前的初步報告為執行總結，2011 年初將公佈完整的研究報告，SAP 的共同主席 Mr. A.R. Ravishankara 指出 SAP 將提出更有力的證據支持蒙特婁議定書的管制成效。

(十) 多邊基金 (MLF)

由多邊基金執委會主席 Mr. Javier Ernesto Camargo Cubillos 報告過去三次會議中多邊基金執委會的執行成果。MLF 將藉由資金加速 HCFCs 的削減、並增加研究 HCFCs 的低 GWP 值替代品所需資金，並提供 MLF 氣候衝擊指標 (Climate Impact Indicator) 所需資金來評估替代 HCFCs 的技術。同時感謝 UNDP、UNEP、UNIDO 與世界銀行對蒙特婁議定書執行上的努力，尤其是開發中的國家。這些合作的項目包括 HCFCs 削減、認證系統、ODS 銷毀計畫以及未來可能的碳市場交易項目等。

二、重點國家聲明與國際趨勢分析

(一) 美國

美國方面表示將持續與加拿大、墨西哥共同對 HFCs 削減以減緩溫室氣體排放的議題進行溝通與努力。同時，蒙特婁議定書所面對的挑戰，須採用新的思維，蒙特婁議定書的架構，是以具有悠久傳統的共識做為基礎的決策。但是，美國方面認為應避免基於官僚而導致「無作為」的藉口產生。國際社會將關心蒙特婁議定書的「不採取行動」來應對當今的氣候變遷。美國將視各國在墨西哥坎昆 (Cancun) 面對氣候變遷的

所做出的回應，敦促各國對蒙特婁議定書做出更多的努力。

(二) 日本

日本強調鼓勵所有締約方關注 ODS 庫的後繼發展，並希望 MLF 能夠清楚界定其範圍，以避免重複。日本表示雖然大多數的蒙特婁議定書締約方現在面臨的挑戰為淘汰氟氯烴 (HCFCs)，但同時使用氫氟碳 (HFCs) 作為替代品的用量則是不斷增加。雖然 HFCs 不會導致臭氧層破壞，且不由蒙特婁議定書所管制，但是 GWP 值較高的替代品對全球氣候具負面影響，必須加以仔細考慮。各締約方目前應該都已經注意到在蒙特婁議定書的框架下管制 HFCs 有其困難，不管是技術可行性，法規的不確定性以及經濟負擔等因素，都加大了管制的困難度。但是日本將持續與其他締約方尤其是開發中國家繼續就 HFCs 的管制技術與經驗進行交流與分享。日本認為蒙特婁議定書將有助於減緩氣候變化，其可消除的二氧化碳當量將遠高於京都議定書。隨著不斷的努力在逐步淘汰 HCFCs 的生產和消費，蒙特婁議定書將能夠作出更大的貢獻，以保護全球氣候。

(三) 歐盟

歐盟自 2010 年 1 月 1 日起頒布修正版的 ODS 管理規定，在很多方面強化了 ODS 的削減，甚至超越了蒙特婁議定書的要求，如非經許可，禁止含有 ODS 的新舊設備出口，以及自 2010 年 3 月 18 日起，禁止使用溴化甲烷於 QPS 或是關鍵用途上。亦敦促各締約方對削減溴化甲烷於 QPS 用途上提出更具體的減量時程與步驟。

另同意建立海龍關鍵用途的最後使用期限為 2040 年，並自 2011 年起開始實行。在友善管理與銷毀 ODS 庫上，歐盟認為目前仍遭遇很多挑戰，尤其是政府管理與基礎設施成本的投資上都是艱鉅的挑戰，並應及早行動，藉由創新的理念與各國政府間的合作方式達到在氣候變遷

領域與臭氧保護的附加價值。迄今為止所採取的行動不僅解決了對臭氧層的破壞，而且大大有助於減緩氣候變遷，因為許多受管控物質（ODS）也是潛在的溫室氣體（GHGs）。並關切作為 HCFCs 替代物質的 HFCs 消費量大量成長的趨勢，並敦促國際上儘速就管制上提出具體的行動。歐盟將率先於 2011 年起規定新型式汽車使用的冷媒不得使用 GWP 值大於 150 者，並控制固定設備的排放。

(四) 印度

印度強調 ODS 雖屬溫室氣體，但是並不在京都議定書的排放管制範圍內。並認為在蒙特婁議定書的管制下，在 2010 年時，印度所減少排放的溫室氣體當量已經是京都議定書第一階段目標值的 5-6 倍。印度並預計於 2013 年完全削減使用於 MDIs 的 CFCs。印度表示瞭解密克羅尼西亞以及北美三國所提的 HFCs 削減案的內容，但是歷次會議皆無共識，同時 HFCs 並非破壞臭氧層物質，對其管制將違反蒙特婁議定書之維也納公約的管制範圍。HFCs 縱然有著高 GWP 值，但是屬於京都議定書 GHG 之一，並在京都議定書與（United Nations Framework Convention on Climate Change, UNFCCC）的管制範圍內。同時，蒙特婁議定書三年前為了加速削減 HCFCs，而鼓勵各締約方使用較低 GWP 值的替代品 HFCs，蒙特婁議定書應該有好的機制來削減 HFCs 的消費與市場滲透。

(五) 中國

中國目前為最大的 HCFCs 生產、消費、與出口國，在替代技術未達完全成熟前，將其完全削減仍有困難度。希望就低 GWP 值的 HCFCs 替代技術進行更深入的研究，也希望多邊基金能對中國提供更多的幫助，同時應推動解決發展中國家必要用途的豁免問題。至於在 HFCs 的管制議題上，中國表示因事涉不同公約間的協調問題，建議加強締約方之間的對話與協調，促使有關問題的解決而不造成公約之間的衝突與管

轄權的混淆，藉此維護國際公約體系的穩定性與合理性。

(六) 其他國家

其他締約國與組織在大會中報告努力與意見聲明，經節錄重點後如

表 4：

表 4、相關各締約國代表團重點說明表

國家	重點說明
印尼	強調削減 HCFCs 的承諾與努力，也希望各締約方能夠減少對航空器用海龍的依賴性，並表達願意承辦 MOP-23 的意願
烏干達	打擊非法 ODS 走私需要在國內與區域層級上進一步進行努力
波士尼亞赫塞哥維亞	已經成功削減 250 公噸的 CFCs 使用，並藉由 HCFCs 削減管理計畫（HPMP）開始管制 HCFCs 的使用
辛巴威	缺乏可行的 ODS 廢棄選項，若有合適的移動式銷毀設施，將有助推展 ODS 的銷毀並推廣自然冷媒
寮國	目前也正在推行 HPMP，並強調未來是否有合適的 ODS 銷毀設施可供推行
肯亞	呼籲各締約方能對環境保護做出妥協與讓步
馬拉威	宣告目前在農業用途上禁用溴化甲烷的努力
巴林	強調其對於將 HFCs 納入議定書管制之修正案的支持
密克羅尼西亞	強調削減 HFCs 的最大理由就是「因為我們能」
安哥拉	提出了一項建議來防止邊境的非法 ODS 貿易
紐西蘭	表示為了取得生物安全與臭氧層保護的平衡，已經開始對溴化甲烷使用於 QPS 用途上進行更為強化的溴化甲烷捕捉計畫（回收）
古巴	希望蒙特婁議定書與 UNFCCC 之間能夠取得國際公約上的協調作用
北韓	希望能夠取得經濟與技術上的幫助，以協助開發中國家達成議定書的要求
不丹	在多邊基金（MLF）的協助下，成功的削減 CFCs 表示感謝
莫三比克	願就氣候變遷做出努力，並希望取得金融與技術上的支持來削減 HCFCs

伊朗	成功的停用 CFCs 於計量式吸入器 (MDIs)，並表示這是為了之後削減 HCFCs 做鋪路
庫克群島	對密克羅尼西亞所提將 HFCs 納入蒙特婁議定書管制的提案表示支持
馬來西亞	HCFCs 將於 2030 年完全削減，並敦促 MLF 提供額外的資金來銷毀 ODS 庫
尼泊爾	強調臭氧保護與氣候變遷的重要關聯性，並呼籲金融與技術上的幫助來完成蒙特婁議定書的執行
尚比亞	表示正在努力削減溴化甲烷的使用，但是對於削減 HCFCs 表示仍有困難與挑戰
孟加拉	已經 100% 削減 CFCs 使用於冷凍藏設備與空調系統
巴西	感謝 MLF 對其國家削減 CFCs 的協助之餘，也呼籲使用對環境友善的替代方案來削減 HCFCs
墨西哥	報告成功削減 CFCs 的策略外，也呼籲蒙特婁議定書應與 UNFCCC 取得協調 (Synergies)
南非	強調該國所做的努力外，也敦促各國針對臭氧層保護的挑戰做出更多的努力與合作
巴基斯坦	表示已經初步完成削減 CFCs，希望明年之後有足夠的資金來協助削減 HCFCs
馬爾地夫	已經提前並成功的削減 CFCs，並預計依循承諾，在 2020 年的時候削減 HCFCs，並呼籲 MLF 應該支助與氣候變遷具有共同利益的活動事項 (co-benefit activities)
斯里蘭卡	表示倘若沒有足夠的金融與技術協助，將很難達到完成削減 HCFC 與其他 ODS 的義務
坦尚尼亞	建議本次會議應就開發中國家收集、運輸、儲存與銷毀 ODS 所需的資金來做成共識決定
利比亞	宣告在削減 HCFCs 與溴化甲烷使用上的努力
賴比瑞亞	強調削減 HCFCs 將面臨的挑戰，並建議若削減 HFCs，應與其他國際公約取得協調
模里西斯	表示削減 HCFCs 應從整體面來考量
菲律賓	除了表示他們削減 ODS 的成果外，也表示他們將進一步的執行 HPMP

柒、 結論與建議

本次會議於 11 月 12 日晚上 8 點 11 分結束，共計產出 26 項實質和程序性決議，包括 TEAP 對多邊基金（MLF）增資的職權範圍（Terms of Reference, 又稱 ToR）研究、職權範圍的金融機制評估、2011 年必要用途豁免、2011-2012 年關鍵用途豁免、實驗與分析用途豁免、製程用劑的使用規範、含有 HCFCs 管制物質之多元醇（Polyols）管制規範、銷毀 ODS 技術評估、國際民用航空組織對轉換海龍的規範、進出口證照系統建置規範、庫存 ODS 處置、蒙特婁議定書相關資金現況報告、新任相關技術評估小組共同主席、相關委員會委員、資料申報與未遵約事項等。重要議題說明如下：

一、 推動 ODS bank 庫存管理

(一) 今年各締約方根據在 OEWG-30 所做的決議，包括：推動銷毀不再需要的 ODS 之銷毀技術、庫存 ODS 的處置及推動銷毀技術所需資金來源與技術進行討論。最後在本次會議決議要求相關技術評估委員會繼續諮詢相關技術專家，以考量於明（2011）年的第 31 次工作小組會議中，提出適當 ODS 銷毀技術及去除效率評估與建議，以更新 MOP15 報告中所列化學物質的銷毀技術與去除效率，並檢視是否可將上述資料納入蒙特婁議定書手冊（Montreal Protocol Handbook）中。此外，亦要求技術評估委員會檢視已經通過的銷毀技術名單及 2010 年 TEAP 進展報告中所提的緊急技術（emerging technologies）與此議題的相關進展，以提出效能、商業化及技術可行性評估。同時，也要求技術評估委員會發展出可用於確認銷毀技術的查證標準。

(二) 另基於部分締約方表示有過量生產與消費量的原因是為未來預備庫存 ODS，因此本次決議要求締約方未來申報每年消費量時，應依據：(1)未來於當地或出口進行銷毀、(2)未來於當地或出口作為原料使用、(3)未來出口作為開發中國家當地需求用，等三項理由說明其生產及消費量超過規範之理由。

(三) 此外，要求 TEAP 成立 ODS 處理與銷毀技術審議專家委員會，定期審查其他可行的銷毀技術，並提出針對設備壽命終期後之 ODS 回收和銷毀的技術關鍵。但這些管理方案面臨僵局也未列入決議，因為締約方往往不同意資金來源來自多邊基金（MLF）；相較外部資金來源的 GEF 或是自願碳市場交易（Voluntary Carbon Markets），銷毀較易處理的部分 ODS 將可以獲得大量的碳權（Carbon Credits）看來更吸引部分人的注意。因此認為「ODS 銷毀」在議定書當中仍不是必要要求的狀況下，MLF 將無法對這些超過補助範圍的事項進行補助，同時在議定書仍未規範必須銷毀多餘 ODS 的狀況下，ODS 庫排放至大氣中的狀況仍將持續發生。

(四) 我國目前僅針對查獲走私而沒入之 ODS 應進行銷毀，市場上回收之 ODS 尚未有妥善管理，後續應密切注意國際銷毀技術的推動與發展及經驗分享，以作為未來評估國內銷毀技術的參考。後續擬邀集相關單位針對 ODS 回收與管理，進行回收、銷毀、再純化精緻等可行性評估，以瞭解推動相關技術的可行性與必要性。

二、國際民用航空組織（ICAO）推動停用海龍的進展

(一) 針對海龍航空用途滅火器停用規範，要求：(1) 民用航空器的廁所

滅火系統於 2011 年起停用海龍 (2) 民用航空器上使用手提式滅火器於 2016 年起停用海龍 (3) 民用航空器申請作為型式證明的引擎與輔助動力單位滅火系統於 2014 年起停用海龍。

(二) 對生產新的民用航空器較需注意，我國則應提醒國內航空業者未來採購新機時，注意勿購置使用海龍的機型。

三、 必要用途與關鍵用途豁免：

(一) 今年締約方再次提出申請 2011 年與 2012 年的 ODS 必要用途和溴化甲烷關鍵用途豁免，讓無技術及經濟可行的 ODS 在消費量與生產量管制下可繼續申請。

(二) 另有締約方對 CFCs 於氣喘用途之劑量吸入器生產，及溴化甲烷於草莓匍莖、穀物及部分植物用途仍有使用需求。今年也開始關注開發中國家 (A5) 在實驗與分析用途及製程用劑等，要求 TEAP 開始評估與蒐集相關資訊，以作為未來管制的參考。此外，也強調希望各締約方仍先以向各地尋找庫存為主，以減少不必要的生產。

(三) 此項決議對我國影響較小，但我國仍應持續蒐集相關資訊，以作為未來廠商申請時之評估參考。

四、 溴化甲烷於 QPS 用途之管理

(一) 依據 TEAP 的報告，目前全球 QPS 用途中四個主要類別已有技術可達到減少使用溴化甲烷的數量達 18-27%，約相當於 1,937-2,942 公噸，因此會議中提出要求各締約方再次檢視其國家衛生

(sanitary)、植物疾病防疫 (phytosanitary)、環境方面 (environmental) 及儲存貨品 (stored product) 的相關法規中是否有管制溴化甲烷的使用，並允許可提供適當程度的植物疾病防疫保護之替代處理或流程，以符合 IPPC 的相關規範。

(二) 此外，於 OEWG-30 時要求各締約方應盡可能蒐集使用於各類別作為 QPS 用途的相關數據資料，惟各締約方表示執行有困難，並要求 TEAP 提供詳細要求的資料項目與準則，在各國意見分歧的狀況下，並未通過任何決議。

(三) 後續我國對於此項議題將持續掌握祕書處未來要求各締約方蒐集和申報的資料內容，並盡可能蒐集我國的資料，以因應其未來的減量管理趨勢。

五、 ODS 替代品之氟化烴 (HFCs) 的管制

(一) 會議中美國、加拿大及墨西哥，以及密克羅尼西亞分別再次提出管制 HFCs 的議案。會議最後墨西哥表示由美國提出的推動低 GWP 替代品的宣言已獲 91 個締約方支持，包括：歐盟、瑞士、日本、澳洲、加彭、亞美尼亞、印尼、喀麥隆、菲律賓、肯亞、吐瓦魯(代表諸多太平洋島國)等國家，且美墨已轉向強調訴求對環境友善的替代品而非對 HFCs 的管制，但巴西、印度與中國仍強烈反對有關 HFCs 的提案，最後會議也未通過任何相關決議。

(二) 而在廢除生產 HCFC-22 之高 GWP 值之副產品 HFC-23 之排放的議題上，因為管制 HFCs 類物質，該提案在會議受到擱置。TEAP 為「加強管制 HFCs」與「蒙特婁議定書」之間相連結，也定義高、

中、低 GWP 值，作為 ODS 替代品之 HFCs 和 PFCs 對氣候系統有實質潛在衝擊進行討論。部分締約方反對 GWP 值做為明確的 HFCs 分類，建議採較模糊的字眼，例如「對氣候友善或有益」。京都議定書、UNFCCC 與（Clean Development Mechanism, CDM）其他國際環保公約是否重疊或是合作管制 HFCs 氣體，預計在數年內仍有爭議。但重要的是，各國將對 HFCs 替代技術之相關資金及技術協助工具與管道已儘速評估。

(三) 而我國目前使用 HFCs 主要是 HFC-134a 冷媒與一些發泡劑，且產品發展主要依循國際技術發展，預估短期受到的衝擊較小，但仍應密切注意各國的態度與發展，觀察是否會擴展到其他 GHG 的管制，以及 TEAP 可能會發展各種評估管制 ODS 替代品對臭氧層保護和氣候變遷的相關影響技術與情境工具與報告，以及早提供給國內相關產業參考。

捌、 雙邊會談

我國代表團主動與 TEAP 主席 Mr. Stephen O. Andersen、新任溴化甲烷用於 QPS 用途之共同主席 Ms. Marta Pizano、環境調查組織（Environmental Impact Assessment, EIA）的 Mr. Fionnuala Walravens、聯合國毒品與犯罪辦公室（United Nations Office on Drugs and Crime, UNODC）助理專家 Mr. Giovanni Broussard、歐盟顧問 Dr. Melanie Miller、世界海關組織（WCO）亞太區情報處（RILOA/P）副主任 Mr. Zhao Jie 等，正面傳達我國遵循蒙特婁議定書已開發國家管制規範，在保護臭氧層上的努力與成果，如表 5。現場並在適當攤位上發放我國的宣傳文宣與隨身碟，供國際友人參考取閱。

表 5、MOP-22 與國外專家或代表會談

對象	重點說明
TEAP 主席 Mr. Stephen O. Andersen	肯定我國努力的成果，並謝謝我們今年度邀請他來台灣參加國際 NAMA 研討會，且對我們溫室氣體減量及臭氧層保護工作非常佩服，另外，Andersen 亦建議 LCCP (London Climate Change Partnership) 有關空調的不應該只看破壞臭氧層的數值或只看冷媒的 GWP 值，建議從能源效率著手。希望未來 TEAP 能與我國冷凍藏空調業者合作替代技術研發
新任溴化甲烷用於 QPS 用途之共同主席 Ms. Marta Pizano	說明我國在管制溴化甲烷於 QPS 用途上的成就，並邀請明年度就此議題來臺灣進行訪問交流
環境調查組織 EIA 的 Mr. Fionnuala Walravens	EIA 的英國籍專家共同對國際上的 ODS 走私調查狀況進行意見交流，EIA 表示對於台灣的跨海域 ODS 狀況非常有興趣，希望台灣能夠提供詳細的走私模式、私梟裝備改裝實例、以及我國後繼處理流程等資料
聯合國毒品與犯罪辦公室 UNODC 助理專家 Mr. Giovanni Broussard	與 UNODC 的助理專家 Mr. Giovanni Broussard 進行廣泛的意見交流。我方除了向聯合國表示近來自中國走私違法 ODS 狀況嚴重外，雙方並同意日後進行廣泛的資訊交流，Mr. Broussard 對於走私的實際狀況表示濃厚的興趣，並希望我方能在後繼的資訊交流上面保持聯繫，協助在全球共同打擊 ODS 走私
歐盟顧問 Dr. Melanie Miller	雙方就是否進行「綠色貨櫃」以實質行動減少溴化甲烷於 QPS 上的使用進行充分的意見交流與評估未來合作的可能性

玖、心得

- 一、大會經過 5 天的密集協商，決議各締約方依循目前議定書之管制時程削減 ODS 仍未改變，另要求聯合國技術與經濟評估委員會 (TEAP) 強化蒐集 ODS 最終處置技術發展與運轉資料、推動各締約國進一步調

查溴化甲烷於 QPS 之各用途分類使用數據與相關管制方案、要求 TEAP 協助多邊基金訂定審核第五條國家申請替代技術計畫標準時應納入低 GWP 值規範等決議案，顯見 ODS 回收處置管理、強化管制溴化甲烷及推動低 GWP 值替代品等議題已成為蒙特婁議定書後續推動的重點工作。

二、我國雖非蒙特婁議定書締約國，但自始即自願遵守蒙特婁議定書對非第五條國家（即已開發國家）之較早管制規範，且自 1990 年起即積極參與歷屆蒙特婁議定書締約方大會與相關工作小組會議，以配合研議因應國際管制趨勢之行動方案，同時提供國內廠商最新國際管制動態、未來削減趨勢、替代技術發展情況，提醒國內相關產業及早準備和因應。

三、今（2010）年蒙特婁議定書保護臭氧層的工作因全球氟氯碳化物（CFCs）消費量的廢除而又往前邁進一大步，且因這些物質具高全球暖化潛勢值 GWP，故管制這些 ODS 物質將對全球氣候變遷問題作出極大貢獻。而根據技術與經濟評估委員會 TEAP 的研究報告，全球既有設備廢棄後的妥善管理，每年對減緩全球暖化的貢獻可超過 400 百萬公噸二氧化碳當量。

四、我國積極保護臭氧層工作已歷經 20 多年的努力，從配合國際管制時程，採取策略性目標、建置核配制度、逐步對蒙特婁議定書列管化學物質進行管控，已具有相當成效。未來工作重點將強化既有設備之 ODS 物質回收管理（如廢冰箱、冷氣及汽車之冷媒回收），以及建置本土 ODS 熱處理銷毀系統，避免不必要的排放，持續協助推動國內廠商選擇非溴化甲烷於檢疫和裝運前處理用途，及低 GWP 值之環境友

善冷凍冷藏空調替代技術，以期對蒙特婁議定書國際管制破壞臭氧物質工作做出實質貢獻。

五、 將持續與 UNEP 臭氧秘書處及各國專家建立聯繫合作，掌握國際動態，與各國共同重視臭氧層保護及相關氣候變遷等環境議題，展現我國在地球環境保護工作上的成果。

壹拾、附件

一、蒙特婁議定書第22次締約國大會會議議程

Provisional agenda of the Twenty- Second Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer

二、蒙特婁議定書第22次締約國大會報告書全文

Report of the Twenty-Second Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer

三、會議決議案

The Twenty-Second Meeting of the Parties decides

四、ENB會議記錄

Earth Negotiations Bulletin : A Reporting Service for Environment and Development Negotiations, Published by the International Institute for Sustainable Development (IISD)



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**Twenty-Second Meeting of the Parties to the
Montreal Protocol on Substances that
Deplete the Ozone Layer**
Bangkok, 8–12 November 2010

Provisional agenda

I. Preparatory segment (8–10 November 2010)

1. Opening of the preparatory segment:
 - (a) Statements by representative(s) of the Government of Thailand;
 - (b) Statements 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 membership of Montreal Protocol bodies for 2011:
 - (a) Members of the Implementation Committee;
 - (b) Members of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol;
 - (c) Co-chairs of the Open-ended Working Group;
 - (d) Co-chairs of the assessment panels.
4. Financial reports of the trust funds for the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer and budgets of the Montreal Protocol.
5. Issues related to the financial mechanism under Article 10 of the Montreal Protocol:
 - (a) Terms of reference for an evaluation of the financial mechanism (decision XXI/28);
 - (b) Terms of reference for a study on the 2012–2014 replenishment of the Multilateral Fund;

* Reissued for technical reasons on 6 October 2010.

- (c) Assessment of the hydrochlorofluorocarbon guidelines approved by the Executive Committee of the Multilateral Fund.
6. Status of hydrochlorofluorocarbons blended in polyols as controlled substances under the Montreal Protocol.
7. Environmentally sound management of banks of ozone-depleting substances:
 - (a) Technologies and related facilities for the destruction of ozone-depleting substances;
 - (b) Environmentally sound management of banks of ozone-depleting substances.
8. Proposed amendments to the Montreal Protocol.
9. Phase-out of HFC-23 as a by-product emission of the production of HCFC-22.
10. Issues related to exemptions from Article 2 of the Montreal Protocol:
 - (a) Nominations for critical-use exemptions for 2011 and 2012;
 - (b) Quarantine and pre-shipment uses of methyl bromide;
 - (c) Nominations for essential-use exemptions for 2011;
 - (d) Laboratory and analytical uses of ozone-depleting substances (decision XXI/6);
 - (e) Issues relating to the uses of ozone-depleting substances as process agents (decision XXI/3).
11. Special situation of Haiti.
12. Compliance and data reporting issues:
 - (a) Treatment of stockpiled ozone-depleting substances relative to compliance;
 - (b) Presentation on and consideration of the work and recommended decisions of the Implementation Committee.
13. Other matters.

II. High-level segment (11 and 12 November 2010)

1. Opening of the high-level segment:
 - (a) Statements by representative(s) of the Government of Thailand;
 - (b) Statements by representative(s) of the United Nations;
 - (c) Statement by the President of the Twenty-First Meeting of the Parties.
2. Organizational matters:
 - (a) Election of officers for the Twenty-Second Meeting of the Parties;
 - (b) Adoption of the agenda of the Twenty-Second Meeting of the Parties;
 - (c) Organization of work;
 - (d) Credentials of representatives.
3. Status of ratification of the Vienna Convention, the Montreal Protocol and the amendments to the Montreal Protocol.
4. Presentation by the assessment panels on their quadrennial assessment.
5. Presentation by the Chair of the Executive Committee of the Multilateral Fund on the work of the Executive Committee, the Multilateral Fund Secretariat and the Fund's implementing agencies.
6. Statements by heads of delegations.
7. Report by the co-chairs of the preparatory segment and consideration of the decisions recommended for adoption by the Twenty-Second Meeting of the Parties.

8. Dates and venue for the Twenty-Third Meeting of the Parties.
 9. Other matters.
 10. Adoption of decisions by the Twenty-Second Meeting of the Parties.
 11. Adoption of the report of the Twenty-Second Meeting of the Parties.
 12. Closure of the meeting.
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**Twenty-Second Meeting of the Parties to the
Montreal Protocol on Substances that
Deplete the Ozone Layer**
Bangkok, 8–12 November 2010

**Report of the Twenty-Second Meeting of the Parties to the
Montreal Protocol on Substances that Deplete the Ozone Layer****Introduction**

1. The Twenty-Second Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer was held at the United Nations Conference Centre in Bangkok from 8 to 12 November 2010. It consisted of a preparatory segment, held from 8 to 10 November, and a high-level segment, held on 11 and 12 November.

Part One: Preparatory segment**I. Opening of the preparatory segment**

2. The preparatory segment was opened by its co-chairs, Mr. Fresnel Díaz (Bolivarian Republic of Venezuela) and Mr. Martin Sirois (Canada), on Monday, 8 November 2010, at 10.25 a.m.

3. Opening statements were delivered by Mr. Prapat Vanapitaksa, Director-General of the Department of Industrial Works, on behalf of the Minister of Industry of Thailand, and Mr. Marco González, Executive Secretary of the Ozone Secretariat.

4. In his statement, observing that the depletion of the ozone layer threatened the well-being of humankind, Mr. Vanapitaksa commended the world community on its determination to find sustainable solutions, as evidenced by the fact that the Montreal Protocol, with 196 parties, was the first environmental agreement to achieve universal ratification.

5. He praised the parties to the Protocol for achieving the phase-out of chlorofluorocarbons (CFCs) on 1 January 2010, thanks to the commitment of Governments, industry bodies and civil society in both developed and developing countries, and for reaching in 2007, on the twentieth anniversary of the Protocol, a historic agreement to accelerate the schedule for phasing out hydrochlorofluorocarbons (HCFCs). Those successes augured well for the outcome of the current meeting. He wished the representatives fruitful deliberations and declared the meeting officially open.

6. The Executive Secretary, in his statement, thanked the Government of Thailand for hosting the meeting and the staff members of the United Nations Environment Programme (UNEP) Compliance Assistance Programme; of the Conference Centre of the Economic and Social Commission for Asia and the Pacific; and of the secretariat of the Multilateral Fund for the Implementation of the Montreal Protocol for their cooperation in organizing the meeting. He said that the meeting was taking place at a crucial juncture in the history of the Montreal Protocol: the parties were expected to have already met the 2010 phase-out targets for CFCs, halons and carbon tetrachloride and were looking ahead to

completing the phase-out of methyl bromide and methyl chloroform in 2015, which could be expected to take place on schedule thanks to the implementation of projects already approved by the Multilateral Fund. With those successes as background, parties needed to turn their attention to phasing out HCFCs.

7. Turning to the agenda for the meeting, he noted that the parties were to continue to discuss a number of proposals relating to the Multilateral Fund. They included proposals on terms of reference for an evaluation of the Fund, including its scope and funding; on the terms of reference for the replenishment of the Fund for the period 2012–2014; on a review of guidelines for funding the phase-out of HCFCs recently approved by the Multilateral Fund Executive Committee; and on clarifying the eligibility for funding of projects to phase out HCFCs pre-blended in polyols. Parties were also to continue to discuss four proposals on the environmentally sound management of banks of ozone-depleting substances and two proposals to amend the Protocol to provide for the phase-down of the production and consumption of hydrofluorocarbons (HFCs) and two low-global-warming-potential hydrofluoroolefins. Other items for consideration were critical-use exemptions for 2011 and 2012, and quarantine and pre-shipment applications of, methyl bromide; essential-use exemptions in respect of other ozone-depleting substances; and the exemptions applicable to laboratory and analytical uses of ozone-depleting substances.

8. In closing he said that the parties to the Protocol could take pride in having successfully phased out most ozone-depleting substances, urging representatives to continue working towards a total phase-out with a view to ensuring complete protection of the ozone layer for the good of all.

II. Organizational matters

A. Attendance

9. The Twenty-Second Meeting of the Parties to the Montreal Protocol was attended by representatives of the following parties to the Protocol: Afghanistan, Algeria, Angola, Antigua and Barbuda, Argentina, Armenia, Australia, Austria, Bahamas, Bahrain, Bangladesh, Belgium, Belize, Benin, Bhutan, Bosnia and Herzegovina, Brazil, Brunei Darussalam, Burkina Faso, Cambodia, Cameroon, Canada, China, Colombia, Comoros, Congo, Cook Islands, Costa Rica, Côte d'Ivoire, Cuba, Cyprus, Czech Republic, Democratic People's Republic of Korea, Democratic Republic of the Congo, Denmark, Dominica, Dominican Republic, Egypt, Equatorial Guinea, European Union, Finland, France, Gabon, Gambia, Georgia, Germany, Ghana, Grenada, Guinea, Haiti, Holy See, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Italy, Japan, Jordan, Kazakhstan, Kenya, Kuwait, Kyrgyzstan, Lao People's Democratic Republic, Lebanon, Lesotho, Liberia, Libyan Arab Jamahiriya, Lithuania, Madagascar, Malawi, Malaysia, Maldives, Mali, Marshall Islands, Mauritius, Mexico, Micronesia (Federated States of), Mongolia, Montenegro, Mozambique, Myanmar, Nepal, Netherlands, New Zealand, Nicaragua, Niger, Nigeria, Norway, Oman, Pakistan, Palau, Panama, Paraguay, Philippines, Poland, Portugal, Qatar, Republic of Korea, Republic of Moldova, Romania, Russian Federation, Rwanda, Saint Lucia, Samoa, Sao Tome and Principe, Senegal, Serbia, Singapore, Solomon Islands, Somalia, South Africa, Spain, Sri Lanka, Sudan, Swaziland, Sweden, Switzerland, Syrian Arab Republic, Tajikistan, Thailand, the former Yugoslav Republic of Macedonia, Timor-Leste, Togo, Tonga, Tunisia, Turkmenistan, Tuvalu, Uganda, United Kingdom of Great Britain and Northern Ireland, United Republic of Tanzania, United States of America, Uruguay, Vanuatu, Venezuela (Bolivarian Republic of), Viet Nam, Yemen, Zambia, Zimbabwe.

10. Representatives of the following United Nations bodies and specialized agencies also attended: Global Environment Facility, Secretariat of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, Secretariat of the Multilateral Fund for the Implementation of the Montreal Protocol, Secretariat of the United Nations Framework Convention on Climate Change, United Nations Development Programme, United Nations Environment Programme, United Nations Industrial Development Organization, World Bank.

11. The following intergovernmental, non-governmental and industry bodies were also represented: African Oxygen Limited, Alliance for Responsible Atmospheric Policy, APL Asia Co. Ltd, Arkema Inc., Arysta Life Science North America Corporation, Asia-Pacific Institute of Broadcasting Development, Australian Urethane Systems, Business Council for Sustainable Energy, California Strawberry Commission, Catalinos Berry Farms, Center for Energy Environment Research & Development Co. Ltd, Chemcofer, Chemtura Corporation, CYDSA, Daikin Industries Ltd, Dev TV, Dow AgroSciences LLC, ECI International Co. Ltd, Ecologists for Sustainable Development, Environmental Investigation Agency, Federation of Thai Industries, Foam Supplies Inc., Global Environmental Refrigerant Gases P/L, Green Alternatives and Peace Movement Uganda, Green

Cooling Association, Greenpeace International, GTZ (Deutsche Gesellschaft für Technische Zusammenarbeit GmbH), Gujarat Fluorochemicals Limited, ICF Macro, ICL Industrial Products, Industrial Foams PVT. Ltd, Industrial Technology Research Institute, Institute for Governance and Sustainable Development, International Institute of Refrigeration, Iran Refrigeration Association, King Mongkut's University of Technology, League of Arab States, M. De Hondt bvba, Mebrom NV, Natural Resources Defense Council, Navin Fluorine International Limited, Pertamina, Princeton University, PT Airkon Pratama, PT Nugas Trans Energy, PT Dayu Nusantara, PT Grasse Arum Lestari, Quimobasicos, Refrigerants Australia, Refrigeration and Air-Conditioning Manufacturers' Association, Research, Innovation and Incubation Center, RTI Technologies, Shecco, SRF Limited, Technology Education Research and Rehabilitation for the Environment, TouchDown Consulting, Trans-Mond Environment Ltd, WCO Regional Intelligence Liaison.

B. Officers

12. The preparatory segment of the meeting was co-chaired by Mr. Díaz and Mr. Sirois.

C. Adoption of the agenda for the preparatory segment

13. The following agenda for the preparatory segment was adopted on the basis of the provisional agenda contained in document UNEP/OzL.Pro.22/1:

1. Opening of the preparatory segment:
 - (a) Statements by representative(s) of the Government of Thailand;
 - (b) Statements 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 membership of Montreal Protocol bodies for 2011:
 - (a) Members of the Implementation Committee;
 - (b) Members of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol;
 - (c) Co-chairs of the Open-ended Working Group;
 - (d) Co-chairs of the assessment panels.
4. Financial reports of the trust funds for the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer and budgets of the Montreal Protocol.
5. Issues related to the financial mechanism under Article 10 of the Montreal Protocol:
 - (a) Terms of reference for an evaluation of the financial mechanism (decision XXI/28);
 - (b) Terms of reference for a study on the 2012–2014 replenishment of the Multilateral Fund;
 - (c) Assessment of the hydrochlorofluorocarbon guidelines approved by the Executive Committee of the Multilateral Fund.
6. Status of hydrochlorofluorocarbons blended in polyols as controlled substances under the Montreal Protocol.
7. Environmentally sound management of banks of ozone-depleting substances:
 - (a) Technologies and related facilities for the destruction of ozone-depleting substances;
 - (b) Environmentally sound management of banks of ozone-depleting substances.
8. Proposed amendments to the Montreal Protocol.
9. Phase-out of HFC-23 as a by-product emission of the production of HCFC-22.

10. Issues related to exemptions from Article 2 of the Montreal Protocol:
 - (a) Nominations for critical-use exemptions for 2011 and 2012;
 - (b) Quarantine and pre-shipment uses of methyl bromide;
 - (c) Nominations for essential-use exemptions for 2011;
 - (d) Laboratory and analytical uses of ozone-depleting substances (decision XXI/6);
 - (e) Issues relating to the use of ozone-depleting substances as process agents (decision XXI/3).
11. Special situation of Haiti.
12. Compliance and data reporting issues:
 - (a) Treatment of stockpiled ozone-depleting substances relative to compliance;
 - (b) Presentation on and consideration of the work and recommended decisions of the Implementation Committee.
13. Other matters.
14. During the adoption of the agenda for the preparatory segment, the parties agreed to take up under agenda item 13, "Other matters", a draft decision on halons in airframes; information documents submitted by the United States of America on low-global-warming-potential alternatives to ozone-depleting substances; and a draft decision on the import of HCFCs by Kazakhstan pending its ratification of the amendments to the Montreal Protocol.

D. Organization of work

15. The parties agreed to follow their customary procedure and to establish contact groups as necessary.

III. Consideration of membership of Montreal Protocol bodies for 2011

16. Introducing the item, the Co-Chair recalled that it would be necessary at the current meeting to nominate and endorse candidates for several positions in Montreal Protocol bodies for 2010. He requested the regional groups to submit nominations to the Secretariat.
17. The Executive Secretary and several representatives praised Mr. Jan van der Leun and Mr. José Pons Pons, who were stepping down as Co-Chair of the Environmental Effects Assessment Panel and Co-Chair of the Technology and Economic Assessment Panel, respectively, for their long and outstanding service to the Montreal Protocol.
18. The parties subsequently agreed on the membership of the Implementation Committee and the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol, and on co-chairs of the Open-ended Working Group and the assessment panels, approving draft decisions reflecting that agreement for further consideration during the high-level segment.

IV. Financial reports of the trust funds for the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer and budgets of the Montreal Protocol

19. Introducing the item, the Co-Chair noted that it had been the practice at past meetings to establish a budget committee to review budget-related documents and prepare one or more draft decisions on budgetary matters for consideration by the Meeting of the Parties. In accordance with that practice the parties agreed to establish such a committee, chaired by Mr. Ives Enrique Gomez Salas (Mexico).
20. Following the work of the budget group the chair of the group introduced a conference room paper containing a draft decision on administrative and financial matters and budgets. The chair reported that there had been a robust discussion on the position of the Executive Secretary. After considering a number of possible options, the budget committee had agreed that there was strong support for both raising the level of the position from D-2 to Assistant Secretary-General and for considering any other possible means to retain the current Executive Secretary through 2015. The

parties approved the draft decision for further consideration during the high-level segment, on the understanding that missing numbers in certain budget lines would be provided from the floor during the high-level segment.

V. Issues related to the financial mechanism under Article 10 of the Montreal Protocol

A. Terms of reference for an evaluation of the financial mechanism (decision XXI/28)

21. The Co-Chair introduced draft decision XXII/[C], on an evaluation of the financial mechanism of the Montreal Protocol (UNEP/OzL.Pro.22/3). He recalled that the draft decision had been discussed at the thirtieth meeting of the Open-ended Working Group but said that it would require further discussion.

22. Mr. Paul Krajnik (Austria), co-chair of the contact group that had discussed the matter at the thirtieth meeting of the Open-ended Working Group, reported on that group's deliberations.

23. The parties agreed to establish a contact group, co-chaired by Mr. Krajnik and Mr. David Omotosho (Nigeria), to consider the draft decision further.

24. Following the contact group's deliberations the parties approved the draft decision for further consideration during the high-level segment.

B. Terms of reference for a study on the 2012–2014 replenishment of the Multilateral Fund

25. The Co-Chair introduced draft decision XXII/[D], on terms of reference for a study on the 2012–2014 replenishment of the Multilateral Fund (UNEP/OzL.Pro.22/3). He recalled that the draft decision had been discussed at the thirtieth meeting of the Open-ended Working Group but said that it would require further discussion.

26. Mr. Krajnik, co-chair of the contact group that had discussed the matter at the thirtieth meeting of the Open-ended Working Group, reported on that group's deliberations.

27. Following Mr. Krajnik's report one representative said that the study on the replenishment was of great importance given the forthcoming phase-out targets under the Montreal Protocol, and urged that it should fully reflect the needs and capacities of developing countries.

28. The parties agreed that the contact group established under agenda item 5 (a) would also consider the draft decision on the terms of reference for the study.

29. Following the contact group's deliberations the parties approved the draft decision for further consideration during the high-level segment.

C. Assessment of the hydrochlorofluorocarbon guidelines approved by the Executive Committee of the Multilateral Fund

30. The Co-Chair introduced draft decision XXII/[E], on assessment of the HCFC guidelines approved by the Executive Committee of the Multilateral Fund (UNEP/OzL.Pro.22/3). He recalled that the draft decision had been discussed at the thirtieth meeting of the Open-ended Working Group but said that it would require further discussion.

31. Mr. Krajnik, co-chair of the contact group that had discussed the matter at the thirtieth meeting of the Open-ended Working Group, reported on that group's deliberations.

32. An informal group, co-chaired by Mr. Blaize Horisberger (Switzerland) and Mr. Leslie Smith (Grenada), was established by the co-chairs of the preparatory segment to discuss agenda items 5 (c), 8 and 9.

33. The resolution of the sub-item is described below in chapters VIII and IX.

VI. Status of hydrochlorofluorocarbons blended in polyols as controlled substances under the Montreal Protocol

34. The Co-Chair introduced draft decision XXII/[F], on the status of HCFCs blended in polyols as controlled substances under the Montreal Protocol (UNEP/OzL.Pro.22/3). He recalled that the

Open-ended Working Group had discussed the draft decision at its thirtieth meeting but had not achieved consensus.

35. The representative of India, the proponent of the draft decision, explained that the objective of the proposal was to seek affirmation of the status of HCFCs preblended in polyols as controlled substances under the Montreal Protocol.

36. Mr. Mikkel Sorensen (Denmark), co-chair of the contact group that had discussed the matter at the thirtieth meeting of the Open-ended Working Group, reported on that group's deliberations. He noted that the Executive Committee of the Multilateral Fund had considered the matter at its sixty-first meeting and had agreed to fund the conversion of HCFCs preblended in polyols.

37. The parties agreed that interested parties should meet informally to discuss the matter.

38. The representative of the United States subsequently introduced a conference room paper containing a draft decision on HCFCs preblended in polyols, which the parties approved for further consideration during the high-level segment.

VII. Environmentally sound management of banks of ozone-depleting substances

A. Technologies and related facilities for the destruction of ozone-depleting substances

39. The Co-Chair introduced draft decisions XXII/[G]–XXII/[I], on technologies and related facilities for the destruction of ozone-depleting substances (UNEP/OzL.Pro.22/3). He recalled that the draft decisions had been discussed at the thirtieth meeting of the Open-ended Working Group, but said that they would require further discussion.

40. Ms. Annie Gabriel (Australia), co-chair of the contact group that had discussed the matter at the thirtieth meeting of the Open-ended Working Group, reported on that group's deliberations.

41. The parties agreed to establish a contact group, to be co-chaired by Ms. Gabriel and Mr. Javier Ernesto Camargo Cubillos (Colombia), to discuss the matter and to consider the draft decision further.

42. Following the work of the contact group its co-chair introduced a conference room paper containing a draft decision on destruction technologies with regard to ozone-depleting substances, which the parties approved for further consideration during the high-level segment.

B. Environmentally sound management of banks of ozone-depleting substances

43. The Co-Chair introduced draft decisions XXII/[J]–XXII/[L], on the environmentally sound management of banks of ozone-depleting substances (UNEP/OzL.Pro.22/3). He recalled that they had been discussed at the thirtieth meeting of the Open-ended Working Group, but said that they would require further discussion.

44. Ms. Gabriel, co-chair of the contact group that had discussed the matter at the thirtieth meeting of the Open-ended Working Group, reported on that group's deliberations.

45. The parties agreed that the contact group established under agenda item 7 (a) would also consider the draft decisions.

46. Following the contact group's deliberations its co-chair reported that the group had not had sufficient time to complete its work. It would therefore not proceed with its consideration of the item at the current meeting and would seek to chart a way forward on outstanding issues for discussion in 2011.

VIII. Proposed amendments to the Montreal Protocol

IX. Phase-out of HFC-23 as a by-product emission of the production of HCFC-22

47. The parties agreed to consider agenda items 8 and 9 together. The Co-Chair recalled that proposed amendments to the Montreal Protocol relating to HFCs had been submitted and initially considered at the thirtieth meeting of the Open-ended Working Group and had been forwarded for consideration by the Meeting of the Parties.

48. Under item 8 the representatives of Canada, Mexico and the United States jointly presented their proposal (UNEP/OzL.Pro.22/5). The representative of the United States said that it was necessary to coordinate and harmonize approaches to dealing with HFCs, preserving and building upon the climate benefits that had arisen from the phase-out of CFCs and HCFCs. It was acknowledged that the phase-out of HCFCs was still in its early stages and that a number of countries had just submitted their HCFC phase-out management plans; timely action on HFCs, however, would avert the additional costs that would accrue if action was delayed, and alternatives with low global-warming potential did exist in many sectors and could feasibly be adopted. The aim of the proposal was not to diminish the responsibility of the United Nations Framework Convention on Climate Change for HFCs but rather to work in conjunction with that convention to phase down emissions of the substance, for which the Montreal Protocol had been partly responsible. The representative of Mexico added that the proposed amendment would assist parties operating under paragraph 1 of Article 5 to adopt integrated solutions in an area in which the Montreal Protocol had considerable experience, and to receive appropriate financial and technical support in implementing those solutions.

49. The representative of the Federated States of Micronesia presented his country's proposal (UNEP/OzL.Pro.22/6). He said that the Montreal Protocol had a moral and legal obligation to address the issue of HFC emissions, noting that Article 2, paragraph 2, of the Vienna Convention for the Protection of the Ozone Layer mandated parties to adopt appropriate measures with regard to human activities that had adverse effects resulting from modification of the ozone layer, and that such effects included climate change.

50. Under item 9 the Co-Chair introduced draft decision XXII/[M], on the phase-out of HFC-23 as a by-product emission of the production of HCFC-22, proposed by Canada, Mexico and the United States (UNEP/OzL.Pro.22/3). He recalled that a related draft decision had been considered by the same informal open-ended group that had discussed the proposed amendments at the thirtieth meeting of the Open-ended Working Group. The representative of the United States said that the proposal recognized the need for immediate action to phase out HFC-23 emissions, summarizing the main components of the draft decision.

51. In the ensuing discussion, some representatives expressed opposition to further discussion of HFCs, but many favoured continuing dialogue on what they said was an important matter. One suggested that there should be wide-ranging debate at the current meeting, including consideration of high-global-warming-potential and low-global-warming-potential alternatives to HFCs and the development and application of guidelines on how such alternatives were selected.

52. The parties engaged in extended discussion of whether HFCs fell within the mandate of the Montreal Protocol given that they were covered by the Framework Convention on Climate Change and its Kyoto Protocol. Several representatives said that HFCs did not fall within the scope of the Montreal Protocol because action taken to reduce their emissions would not benefit the ozone layer; they urged that the Protocol should be limited to matters that lay clearly within its mandate. Others, however, argued that Article 2 of the Vienna Convention allowed the parties to coordinate their policies in managing the phase-out of HCFCs and the introduction of alternatives, including HFCs, and that action to reduce HFCs was clearly appropriate under the Protocol.

53. One representative, supported by others, said that under the climate change negotiations the parties to the Framework Convention on Climate Change were already considering HCFCs within the new commitment period of the Kyoto Protocol and that any decision on HFCs under the Montreal Protocol should await the outcomes of that process. Other representatives said that input from the Montreal Protocol had the potential to support rather than hinder those discussions and that linkages between the Kyoto Protocol and the Montreal Protocol on HFCs and other matters should be further explored. One representative quoted previous initiatives dating back to 1998 to demonstrate that the parties to the Protocol had been discussing HFCs for some time, including in collaboration with the Framework Convention on Climate Change, and that the Protocol was the instrument best placed to address the substance from a technical viewpoint. Another suggested that the proposed amendments could not proceed without a joint meeting of the parties to the relevant conventions, involving extended consultation with all parties.

54. Several representatives from States vulnerable to the effects of climate change stressed the need for urgent action on substances with high global-warming potential. A number of representatives said that the Montreal Protocol had a responsibility to avoid the adoption of such substances as alternatives to ozone-depleting substances. One representative expressed concern at the implications for the long-term stability of industry of introducing alternatives without proper evaluation of their feasibility and impacts.

55. Others, however, said that the priorities of the Montreal Protocol lay elsewhere. The task of phasing out HCFCs was already stretching the resources of many parties operating under paragraph 1 of Article 5, and banks of ozone-depleting substances also required urgent attention. Greater clarity was needed on such issues, including in respect of funding.

56. The issue of common but differentiated responsibilities, and the implications of that principle for resource allocation, figured prominently in the discussion. One representative said that both proposed amendments respected the principle, as they foresaw different timescales for phasing down HFCs for parties operating under paragraph 1 of Article 5 and those not so operating. Another representative said that the Montreal Protocol had been one of the first multilateral environmental agreements to implement the principle, in particular in creating the Multilateral Fund and adopting the worldwide implementation of ozone-depleting substance phase-out schedules. Another representative, however, said that the inclusion of HFCs in the Montreal Protocol would imply the imposition of binding obligations on all parties to the ozone regime despite the fact that under the climate change regime such obligations applied only to Annex I parties to the Framework Convention on Climate Change; consideration of HFCs under the Montreal Protocol would thus entail clear disrespect of the principle of common but differentiated responsibilities. A number of representatives stressed the importance of providing adequate funding and technology transfer in developing and implementing alternatives.

57. A number of representatives suggested that further study on the issues under discussion was needed, and suggested areas where the Technology and Economic Assessment Panel could further evaluate the implications of the proposed amendments.

58. Two representatives of non-governmental organizations spoke strongly in favour of the proposed amendments and supported immediate action to phase out HFCs under the aegis of the Montreal Protocol.

59. As informal group, co-chaired by Mr. Horisberger and Mr. Smith, was established by the co-chairs of the preparatory segment to discuss agenda items 5 (c), 8 and 9 of the agenda of the preparatory segment of the Twenty-Second Meeting of the Parties. The group organized its discussions by starting to consider the draft decision under item 5 (c) on an assessment of the HCFC guidelines approved by the Executive Committee. As the discussions could not be completed during the time available, the informal group agreed that the discussions on those issues should continue during the thirty-first meeting of the Open-ended Working Group.

60. The parties took note of the informal group's discussions.

X. Issues related to exemptions from Article 2 of the Montreal Protocol

61. The parties began their consideration of the item with a presentation by representatives of the Technology and Economic Assessment Panel and its technical options committees.

62. The co-chairs of the Methyl Bromide Technical Options Committee, Mr. Mohamed Besri, Mr. Ian Porter, Ms. Michelle Marcotte and Ms. Marta Pizano, gave a presentation on the final assessment of critical-use nominations and issues related to quarantine and pre-shipment use of methyl bromide.

63. Mr. Besri presented an overview of the critical-use nominations for 2011 and 2012. He noted that since 2005 only five parties had continued to submit nominations; all five had continued to submit nominations for both pre-plant soil and post-harvest uses, but at different rates. In 2011 Israel was expected to phase out all uses and Japan all uses for soil.

64. In the 2010 round of nominations, the Methyl Bromide Technical Options Committee had considered nominations for 1,481 metric tonnes of methyl bromide, compared to 2,261 metric tonnes nominated in 2009. With the exception of one party, the methyl bromide stocks held by all parties were small from 2005 to 2009. Stocks at the end of 2009 reported by the United States were more than three times the amount of methyl bromide for which the party submitted its nomination for 2012.

65. A workplan was presented showing tasks and timelines for critical-use nomination assessment for 2011.

66. Mr. Porter then presented an overview of the 27 nominations for pre-plant soil use of methyl bromide for 2011 and 2012 from five parties (Australia, Canada, Israel, Japan and the United States). At its first meeting, the Methyl Bromide Technical Options Committee had made interim recommendations on the 27 critical-use nominations for pre-plant soil use, nine for 2011 and 18 for

2012. Of the 27 nominations, only one had required reassessment. Following the final assessment the Committee recommended all nominations. The Committee had also recommended a supplementary nomination for 2011 from Australia for 5.95 metric tonnes for strawberry runners.

67. In its final assessment, the Committee had recommended a total of 230.447 additional tonnes for soil use in 2011 and had not recommended 7.750 tonnes; for 2012 the Committee had recommended 1,193.108 tonnes and had not recommended 78.541 tonnes.

68. He reported that Israel, Japan and the United States had made significant progress in the phase-out of methyl bromide for most uses in the current round.

69. Regulatory issues were hindering efforts to employ alternatives in the strawberry fruit industry in the United States. Applicable regulations were preventing the use of barrier films to reduce the dose rate of methyl bromide and were resulting in higher emission factors for 1,3-D/Pic for shank application treatment, which, with a factor of x1.8, was more effective than drip application (emission factor x1.1). The effect was to reduce the use of this alternative under township caps, which restricted the amount of 1,3D that could be used.

70. He also reported that a substantial amount of methyl bromide (approximately 2,800 metric tonnes) was employed for nursery uses in the United States; the party characterized that use as a quarantine and pre-shipment use, whereas similar uses in other countries had been considered under the critical-use process and some alternatives to methyl bromide had been adopted. At its September meeting, the Committee had further discussed that issue but no agreement was reached on the definitional issues regarding the exemption.

71. Ms. Marcotte discussed the critical-use nominations for structures and commodities. In 2010, the Methyl Bromide Technical Options Committee had received four such nominations pertaining to food-processing structures and four that included commodities (although one of the latter was incorporated in a nomination for a structure). The nominations received in 2010 included one for 2011, in which Canada had nominated 3.529 tonnes for pasta facilities, in response to which the Committee had recommended 2.085 tonnes. Australia, Japan and the United States had nominated 182.175 tonnes for 2012 and the Committee had recommended 101.105 tonnes.

72. In the 2010 round of nominations one party had nominated for 2011 for a total of 3.529 metric tonnes of methyl bromide. Seven nominations in that round for 2012 totalled 182.175 metric tonnes of methyl bromide. Parties had therefore nominated 185.704 metric tonnes of methyl bromide in that round. The Committee had recommended 2.084 tonnes for 2011 and 101.105 tonnes for 2012. The Committee had not recommended 84.599 tonnes in the 2010 round.

73. She explained some key changes that had taken place since the thirtieth meeting of the Open-ended Working Group. Australia had provided a new phase-out plan for the use of methyl bromide to disinfect Australian rice. The phase-out plan provided for a 25 per cent decrease in the nomination for 2012 over the party's earlier nomination for that year, plus significant reductions in 2013 and 2014. The party had said that it would ensure that those decreases occurred even in times of low harvest. The party had indicated further that it would not nominate for rice in 2015.

74. The United States had requested the Committee to re-review its commodities nomination, which included dried fruit, walnuts and dates, and had provided additional technical information. Upon consideration of the efficacy of an alternative for pest control in in-shell walnuts, the Committee had been able to increase its final recommendation for the United States to 2.419 tonnes. The United States had also requested that the Committee should re-review the part of the National Pest Management Association nomination that pertained to cheese infested while in storage in manufacturing facilities. The Committee had been able to recommend 0.200 tonnes in 2012 for that use.

75. She pointed to a most noteworthy development concerning a regulatory clarification that would considerably reduce the amount of methyl bromide used to fumigate food-processing structures. The Committee, she said, could congratulate the United States and its applicant, the National Pest Management Association, on their recent negotiations, which had resulted in a new regulatory interpretation by the United States Environmental Protection Agency. The Agency had clarified its regulatory interpretation regarding incidental fumigation of foods located in structures being fumigated with sulfuryl fluoride. That change showed the impact that regulatory improvements – even in the form of interpretations – could have on the adoption of alternatives. As a result of the regulatory interpretation, the National Pest Management Association had announced that it would not request the United States to submit a critical-use nomination for it in the following year. The previous year, the parties had granted the United States an exemption for over 17 metric tonnes of methyl bromide for the Association.

76. Ms. Pizano began by referring to questions raised by Australia during the thirtieth meeting of the Open-ended Working Group in respect of the reports prepared by the Technology and Economic Assessment Panel in 2009 and 2010 in response to decisions XX/6 and XXI/10. Australia had sought clarification of the scope of the work of the Methyl Bromide Technical Options Committee's quarantine and pre-shipment subcommittee, its working procedures and the information presented on consumption of methyl bromide used for quarantine and pre-shipment purposes. Australia's questions and the Panel's responses had been posted on the website of the Ozone Secretariat as an addendum to the Panel's progress report of May 2010.

77. With regard to the scope of the work conducted, Ms. Pizano said that the Committee had not evaluated methyl bromide emissions because such work had not been requested in decisions XX/6 and XXI/10. She explained that, while the Panel had focused on three key methodologies, it was aware that other methodologies existed, including that suggested by Australia. The Committee had not addressed the risks of emissions to the ozone layer from quarantine and pre-shipment uses of methyl bromide in its report as again that had not been requested by the decisions. The issue had, however, been addressed during the workshop on quarantine and pre-shipment uses held in Port Ghalib, Egypt, in November 2009 in the margins of the Twenty-First Meeting of the Parties. In response to a question regarding trade issues associated with quarantine and pre-shipment uses, she explained that such issues had been considered to the extent possible in the report, and that further work could be undertaken in that area.

78. Regarding the Committee's working procedures, she said that the Committee used data reported and submitted by the parties and data from previous reports, where those were relevant. It considered existing definitions where they were available, and developed working definitions as appropriate for its work. In response to a question on how quantities were determined, she explained that when multiple sources of consumption data were provided, the Committee took steps to avoid double counting. A methodology for assessing any impact of a restriction on quarantine and pre-shipment uses had been proposed and was considered a work in progress; further guidance from parties in that respect would be appreciated.

79. Regarding how the analysis on methyl bromide consumption for quarantine and pre-shipment uses had been conducted, Ms. Pizano said that the Committee had not extrapolated future consumption and use of methyl bromide for those uses and had not been able to provide a range estimate for emissions from fumigated logs since the data available to it at the time had been insufficient. She recalled that the Committee and the Quarantine and Pre-Shipment Task Force had highlighted a discrepancy of some 2,000 metric tonnes between the amounts of methyl bromide reported by parties for "use" and "consumption" in their reports, adding that no distinction had been made between the amounts of methyl bromide used in "good" and "bad" fumigations. The Committee had analysed official data reported or submitted by parties for the purposes of the required analyses.

80. In her concluding remarks, Ms. Pizano said that since 1992 the Committee and the Task Force had reported on more available alternatives to quarantine and pre-shipment uses of methyl bromide. For the four main categories of use, the Panel in its 2010 progress report had stated that 31–47 per cent of global consumption of methyl bromide for quarantine and pre-shipment uses could be immediately replaced with alternatives. It would be complex to determine the impact of bans by exporting countries on the use of methyl bromide for quarantine and pre-shipment uses in importing countries. She ended her presentation by recalling that the Panel had described future work that could help further to quantify how much of the methyl bromide being used for the currently reported quarantine and pre-shipment uses could be replaced.

81. Following the presentation by the representatives of the Technology and Economic Assessment Panel, a number of questions were posed. Responding to those questions, Ms. Pizano clarified that the Panel's most recent report considered various alternatives to quarantine and pre-shipment uses of methyl bromide. It was not, however, possible to fund trial projects using such alternatives for parties operating under paragraph 1 of Article 5 as they were not eligible for funding under the Multilateral Fund, the uses being exempt from the Protocol.

82. In response to another question, Ms. Marcotte noted the effectiveness of methyl bromide in fumigating high-moisture dates. Little information was available, however, as to the effectiveness of methyl iodide in that regard. She noted that research in Japan had shown promising results in respect of a specific pest affecting fresh chestnuts, but there was scant information on the effects of methyl iodide on other post-harvest commodities. She said that a company marketing methyl iodide was present at the current meeting and suggested that the matter could be discussed bilaterally. She also called upon other parties to circulate any relevant information that they might have.

83. Following the Panel's presentation and the questions and answers, the Executive Secretary drew attention to an emergency use of methyl bromide by the Government of Canada, which had authorized the use of 3.5 metric tonnes to treat strawberry runners on Prince Edward Island, although only 1.564 metric tonnes of that amount had actually been used. The Secretariat had requested the Technology and Economic Assessment Panel to evaluate the use according to the relevant criteria and the Government of Canada to report on the use through the accounting framework that it would submit in 2011.

84. Mr. Porter said that the Panel and the Methyl Bromide Technical Options Committee had assessed the emergency use, finding it responsible and legitimate vis-à-vis the criteria for critical-use exemptions as the same use had been approved for critical-use exemptions in past years. He noted that pursuant to decision IX/7 the parties might wish to review the emergency use and provide further guidance to the Panel on action to be taken in respect of future emergencies.

A. Nominations for critical-use exemptions for 2011 and 2012

85. The Co-Chair recalled that the Technology and Economic Assessment Panel had reported on its initial evaluations of nominations for 2011 and 2012 critical-use exemptions at the thirtieth meeting of the Open-ended Working Group. Since then the Panel had further evaluated some nominations in the light of additional information provided by nominating parties and had prepared its final recommendations in respect of the nominations.

86. The representative of Canada introduced a conference room paper containing a draft decision on critical-use exemptions based on the Panel's final recommendations.

87. One representative said that parties had made significant efforts to reduce quantities of methyl bromide used and outlined the progress made in his country. The complete elimination of methyl bromide in certain areas would, however, be a difficult task, given the existence of factors that impeded the use of alternatives, and his Government would stand firmly by its nomination for 2012. He also said that calculations used by the Technology and Economic Assessment Panel in arriving at its recommendations should be more transparent and that the Panel's recommendations should be based on a robust consensus among all its members. He expressed particular concern at the new economic feasibility threshold employed by the Panel to determine when the adoption of alternatives should be considered, saying that it was arbitrary and insufficiently responsive to the legitimate concerns of parties.

88. Another representative expressed concern at the number of nominations for critical-use exemptions being submitted, especially by parties that had considerable stockpiles of methyl bromide, and he requested clarification on how the level of stockpiles was taken into account in assessing exemptions. Another representative said that the work of the Methyl Bromide Technical Options Committee had been proactive and transparent and that its recommendations were reasonable, although he agreed that the issue of stockpiles required further attention. The representative of the Technology and Economic Assessment Panel said that in previous years the matter of stockpiles had been considered by the parties rather than by the Panel.

89. The Co-Chair suggested that interested parties should engage in informal discussions on the nominations for critical-use exemptions.

90. Following those consultations the representative of Canada introduced a conference room paper containing a revised version of the draft decision, saying that it took into account concerns expressed by a number of parties regarding stockpiles of methyl bromide.

91. One representative said that his country supported the draft decision but believed that such stockpiles should be reviewed and taken into account by the Methyl Bromide Technical Options Committee, particularly in connection with its evaluation of critical-use exemption requests. As methyl bromide stockpiles could jeopardize effective compliance with the Montreal Protocol, his country would continue to follow the issue closely. Another representative expressed support for those comments, stressing in particular the suggestion that the Methyl Bromide Technical Options Committee should take methyl bromide stocks into account in its assessment of critical-use nominations. Both representatives asked that their comments be reflected in the present report.

92. Following those comments the parties approved the revised draft decision for further consideration during the high-level segment.

B. Quarantine and pre-shipment uses of methyl bromide

93. The Co-Chair introduced draft decision XXII/[N], on quarantine and pre-shipment uses of methyl bromide (UNEP/OzL.Pro.22/3). He recalled that a draft proposal submitted by the European

Union had been discussed by a contact group at the thirtieth meeting of the Open-ended Working Group and that the proposal had been forwarded for discussion at the current meeting.

94. Ms. Robyn Washbourne (New Zealand), co-chair of the contact group that had discussed the matter at the thirtieth meeting of the Open-ended Working Group, reported on that group's deliberations.

95. The representative of the European Union introduced a conference room paper supplementing and amending the draft decision on methyl bromide for quarantine and pre-shipment uses. The draft decision did not seek a full phase-out of methyl bromide for those purposes but requested the Technology and Economic Assessment Panel to undertake a study of the technical and economic feasibility of alternatives and the effect of a number of methyl bromide reduction and phase-out scenarios.

96. The parties agreed to establish a contact group, to be co-chaired by Ms. Washbourne and Ms. Tri Widayati (Indonesia), to discuss the matter and to consider the draft decision further.

97. Subsequently, the co-chair of the contact group reported that the group had not had sufficient time to consider proposed revisions to the draft decision properly and was accordingly unable to reach consensus on a way forward in respect of the issue.

98. The parties took note of the contact group co-chair's report.

C. Nominations for essential-use exemptions for 2011

99. The Co-Chair recalled that the Technology and Economic Assessment Panel had reported on its recommendations in respect of nominations for 2011 and 2012 essential-use exemptions at the thirtieth meeting of the Open-ended Working Group; he explained that the Panel had since then reassessed the nomination of Bangladesh based on additional information provided by that party.

100. The representatives of India and the Islamic Republic of Iran reported that their countries had completed the phase-out of CFC-based metered-dose inhalers and were therefore withdrawing their essential-use nominations for 2011. The Co-Chair congratulated both countries on their outstanding achievements.

101. Ms. Helen Tope, Co-Chair of the Medical Technical Options Committee, presented information on the Committee's review of Bangladesh's revised essential-use nomination for 2011. Before doing so, she commended the significant achievements of India and the Islamic Republic of Iran in successfully phasing out CFC metered-dose inhalers.

102. She went on to recall the background to the review of Bangladesh's essential-use nomination for 2011, which Bangladesh had requested the Committee to undertake during bilateral discussions with the Co-Chairs of the Committee at the thirtieth meeting of the Open-ended Working Group. Following internal consultations with stakeholders, Bangladesh had submitted additional information and a revised nomination in September and October 2010, reducing its nomination from 113.73 metric tonnes of CFCs, for use in metered-dose inhalers, to 85 metric tonnes. From the information available, the Committee had concluded that by the end of 2010 production capacity for salbutamol and beclomethasone HFC metered-dose inhalers would be more than adequate for patients in Bangladesh. The party had submitted that physicians and patients would need more time to become accustomed to HFC inhalers, but the Committee considered that there would be little benefit in such a delay. Taking into account the revised quantities nominated, the Medical Technical Options Committee recommended an essential-use exemption for 37 tonnes of CFCs for metered-dose inhalers using ciclesonide, fluticasone/salmeterol, ipratropium, ipratropium/salbutamol, salmeterol and tiotropium only. The Committee was unable to recommend an exemption for metered-dose inhalers using beclomethasone, levosalbutamol and salbutamol, given the availability of alternatives.

103. The representative of Bangladesh requested reconsideration of the matter, stating that the essential-use nomination of 85 metric tonnes was required for adequate treatment of those patients with asthma and chronic obstructive pulmonary disease.

104. The Co-Chair requested interested parties to prepare a draft decision on the matter, based on the information presented.

105. The representative of the Secretariat then reported on a request from the Dominican Republic for an emergency essential-use exemption for 0.332 metric tonnes of CFC-113 for use in the manufacture of medical devices. In accordance with decision VIII/9 the Secretariat had evaluated the request in consultation with the Technology and Economic Assessment Panel and had authorized an exemption for that amount. Subsequently the party had requested an exemption for an additional 2.78

metric tonnes to cover the period 2010–2011, explaining that there had been an error in its original request. In consultation with the Technology and Economic Assessment Panel the Secretariat had authorized the use of an additional 1.5 metric tonnes, bringing the total emergency-use exemption to 1.832 metric tonnes. The Secretariat had also urged the party to make every effort to adopt an alternative during the period of emergency-use exemption and had requested it to submit a framework report in accordance with the normal procedures for essential-use exemptions.

106. The representative of the Russian Federation introduced a conference room paper containing a draft decision on an essential-use exemption for chlorofluorocarbon-113 for aerospace applications in the Russian Federation. He said that the requested exemption was identical to that discussed at the thirtieth meeting of the Open-ended Working Group.

107. The parties approved the draft decision for further consideration during the high-level segment.

108. The representative of China introduced a conference room paper containing a draft decision on essential-use nominations for controlled substances for 2011, which the parties approved for further consideration during the high-level segment.

D. Laboratory and analytical uses of ozone-depleting substances (decision XXI/6)

109. The Co-Chair recalled that at the thirtieth meeting of the Open-ended Working Group the Technology and Economic Assessment Panel had reported on its evaluation of laboratory and analytical uses of ozone-depleting substances and had recommended that 15 procedures should be eliminated from the global exemption for such uses and three procedures retained. In the Working Group's discussion of the issue it had been noted that some parties had had difficulty in phasing out many uses, that it would be necessary to bear in mind the needs of parties operating under paragraph 1 of Article 5 and that as yet unidentified uses might exist. He noted that the Panel had not prepared any new report on the matter since then but had called upon parties operating under paragraph 1 of Article 5 to provide information on any of their laboratory and analytical uses that had already been eliminated from the list of uses eligible for the exemption.

110. One representative suggested that developing countries would need time to phase in alternative technologies and substances for laboratory and analytical use, including for the purpose of training personnel. The Co-Chair assured the representative that the Technology and Economic Assessment Panel would take such issues into account, especially as they pertained to parties operating under paragraph 1 of Article 5, in the preparation of its report on the matter in 2011. He suggested that any further discussion on the present item could continue informally.

111. The representative of China introduced a conference room paper containing a draft decision on a global laboratory and analytical use exemption.

112. Following informal consultations the representative of China introduced a conference room paper containing a revised version of the draft decision, which the parties approved for further consideration during the high-level segment.

E. Issues relating to the use of ozone-depleting substances as process agents (decision XXI/3)

113. The Co-Chair recalled that at the thirtieth meeting of the Open-ended Working Group the Technology and Economic Assessment Panel had reported on the status of process-agent uses and had recommended eliminating from tables A and B of decision X/14 a number of such uses that had ceased in the European Union and from table B a number of countries that no longer employed process-agent uses.

114. The representative of Canada then introduced a conference room paper containing a draft decision that had been prepared by Australia, Canada and the United States following the Open-ended Working Group's meeting, which aimed to implement the Panel's recommendations. As recommended by the Panel the draft decision would effect a number of changes to tables A and B of decision X/14, would request that parties report specific applications for which they used ozone-depleting substances as process agents and would clarify a number of issues for the Technology and Economic Assessment Panel and the Executive Committee of the Multilateral Fund.

115. The parties approved the draft decision for further consideration during the high-level segment.

XI. Special situation of Haiti

116. The Co-Chair introduced draft decision XXII/[O], on the special situation of Haiti (UNEP/OzL.Pro.22/3). He recalled that it had been discussed at the thirtieth meeting of the Open-ended Working Group and forwarded for further discussion at the current meeting. The decision called upon parties to assist Haiti in implementing the Montreal Protocol following the earthquake that had afflicted the country in January 2010 and continued to have significant adverse effects on its social and economic situation.

117. One representative said that he would like to discuss certain minor issues with the proponents of the decision. It was accordingly agreed that interested parties would hold informal consultations.

118. Following those consultations the representative of Saint Lucia introduced a conference room paper containing a revised version of the draft decision, which the parties approved for further consideration during the high-level segment.

XII. Compliance and data reporting issues

A. Treatment of stockpiled ozone-depleting substances relative to compliance

119. The Co-Chair introduced draft decision XXII/[P], on the treatment of stockpiled ozone-depleting substances relative to compliance (UNEP/OzL.Pro.22/3). He recalled that the draft decision had been discussed at the thirtieth meeting of the Open-ended Working Group and forwarded for further discussion at the current meeting. It was agreed that interested parties would hold informal consultations on the draft decision.

120. Following those consultations the representative of the European Union introduced a conference-room paper containing a revised version of the draft decision, which the parties approved for further consideration during the high-level segment.

B. Presentation on and consideration of the work and recommended decisions of the Implementation Committee

121. In the absence of Mr. Ezzat Lewis (Egypt), President of the Implementation Committee under the Non-Compliance Procedure for the Montreal Protocol, Ms. Elisabeth Munzert (Germany), Vice-President and Rapporteur of the Committee, reported on the work of the Committee's forty-fifth meeting, which took place on 4 and 5 November 2010. The full report of the meeting was available in English only on the Ozone Secretariat's portal for paperless meetings.

122. The Committee, she said, was very pleased with the excellent progress by parties in meeting their data reporting and phase-out obligations under the Protocol. The draft decisions that the Committee had approved for consideration by the Meeting of the Parties were contained in a conference-room paper and reflected the Committee's work at its forty-fifth meeting. That work had been immensely assisted by the representatives of the Multilateral Fund and its implementing agencies, including the Chair of the Fund's Executive Committee, and the Ozone Secretariat.

123. She then outlined the seven draft decisions approved by the Committee for consideration by the Meeting of the Parties. The first, on data reporting, listed five parties that had yet to report ozone-depleting substance consumption and production data for 2009 in accordance with Article 7 of the Protocol. Those five parties were Bolivia (Plurinational State of), Libyan Arab Jamahiriya, Luxembourg, Nauru and Qatar. She noted that as only five parties had not yet reported their data the rate of reporting was very high, with 191 of 196 parties having submitted their 2009 data. She also noted that 68 parties had reported data for 2009 by 30 June 2010 in accordance with decision XV/15, observing that such early submission of data was exceptionally helpful to the Committee's work. It was extremely encouraging that over the period 1991–2008 all parties had complied with their data-reporting obligations under the Protocol.

124. Turning to the reported data she observed that many parties operating under paragraph 1 of Article 5 had already succeeded in phasing out the consumption of many ozone-depleting substances in advance of the 1 January 2010 deadline, meaning that there was a high degree of confidence that the 2010 phase-out targets would be successfully attained.

125. Most of the draft decisions, she noted, pertained to the compliance status of particular parties. The draft decisions on Saudi Arabia and Vanuatu recorded those parties' non-compliance with their phase-out obligations for CFCs. In both cases the Committee had considered the circumstances that had led to the state of non-compliance and examined the action plans that the parties had submitted to the Committee to demonstrate how they intended to return to compliance. The Committee looked

forward to both parties' prompt return to compliance, and would monitor their progress carefully during future meetings.

126. The draft decisions on the Republic of Korea and Singapore recorded that each had fallen into a state of non-compliance because they had engaged in trade of HCFCs and methyl bromide, respectively, with non-parties to amendments to the Protocol. The Committee had carefully reviewed both parties' circumstances, and in particular any measures taken by them to control exports of ozone-depleting substances, and would continue to monitor their progress. In the case of the recommended decision on the Republic of Korea, she noted that the Committee had inserted text to allow the party to continue to trade in HCFCs with parties operating under paragraph 1 of Article 5 of the Protocol.

127. One draft decision concerned exports of HCFCs to Kazakhstan, the only State classified as a party not operating under paragraph 1 of Article 5 that was also a State not party to the Copenhagen, Montreal and Beijing Amendments. Kazakhstan had not ratified the Copenhagen and Beijing Amendments, and it was therefore considered a non-party to the Protocol under the provisions of the Montreal Protocol governing trade in HCFCs. The Committee, mindful that Kazakhstan would not be in a position to trade in ozone-depleting substances, particularly HCFCs, with parties to the Protocol, and also to alert parties of their legal obligations, had decided to recommend that the parties should adopt a draft decision urging Kazakhstan to ratify, approve or accede to all amendments to the Protocol, to enable the party both to engage in trade with parties to the Protocol and to phase out the ozone-depleting substances listed in those amendments.

128. Another draft decision was a standard one by which the Committee reported on the number of parties that had established systems for licensing the import and export of ozone-depleting substances, as required of all parties to the Montreal Amendment. The Committee was pleased to learn that just five parties to the Amendment had yet to implement licensing systems, including two that had only just ratified it. A further 12 parties who had not ratified the Amendment had nevertheless established licensing systems, leaving just eight parties to the Protocol without such systems.

129. The draft decisions, she said, illustrated the different stages of the Protocol's non-compliance procedure. It was worth remembering that the ozone community had built a flexible, sophisticated and successfully functioning compliance system that was internationally regarded with respect and as a model to be emulated under other agreements. It was important never to be complacent, however, particularly just a few months away from beginning to receive parties' ozone-depleting substance data for 2010 and checking those data to confirm whether parties had managed to achieve the Protocol's milestone for phasing-out most categories of ozone-depleting substances by 1 January 2010.

130. She highlighted an exchange of views between members of the Committee on future cases of potential non-compliance with the Protocol. Committee members had expressed concern that some countries might be unable to get their phase-out plans approved by the applicable deadlines and might as a result fall into non-compliance with the provisions of the Protocol. They had also said that there was a need to ensure the availability of alternatives, to strengthen trade regulations, to assess how efficiently licensing systems were being implemented and to assess feedstock uses of carbon tetrachloride. The Committee had agreed that the President would bring those views to the attention of the Meeting of the Parties.

131. In conclusion, she thanked her fellow Committee members, on the President's behalf, for their hard work, support and dedication in helping him to carry out his duties.

132. In the ensuing discussion the representative of the Libyan Arab Jamahiriya voiced concern that his country was listed as having not reported data when it had in fact done so. He explained that he had the data on his person and would submit it to the Secretariat officials present at the current meeting to avoid it being lost a second time. He also called for his country to be permitted further time to use methyl bromide, given the paucity of alternatives available.

133. The representative of Brazil drew attention to what he said were errors in the documentation before the parties regarding imports to his country of carbon tetrachloride and methyl bromide. He explained that the carbon tetrachloride had been intended for feedstock use and the methyl bromide for quarantine and pre-shipment use. Noting that neither of those uses was regulated under the Montreal Protocol, he said that his country's data for 2009 should be revised accordingly.

134. Following Ms. Munzert's presentation and the ensuing discussion the parties approved the draft decisions submitted by the Committee for further consideration during the high-level segment.

XIII. Other matters

A. Halons in airframes

135. The representative of the United States introduced a conferenceroom paper containing a draft decision prepared by his country recognizing the work by the International Civil Aviation Organization in evaluating the way forward in moving away from the use of halons in civil aviation. The parties approved the draft decision, as orally amended, for further consideration during the high-level segment.

B. Information documents submitted by the United States of America

136. The Co-Chair drew attention to documents UNEP/OzL.Pro.22/INF/7–10, which had been submitted by the United States, noting that they would be referred to during informal discussions and would not come before the parties in plenary session.

C. Import of hydrochlorofluorocarbons by Kazakhstan pending its ratification of the amendments to the Montreal Protocol

137. The representative of Kazakhstan outlined his country's status in respect of ratifications of the Protocol and its amendments, saying that it was doing its best to reduce its use of ozone-depleting substances and to ratify all amendments. It was hoped that the Montreal and Copenhagen Amendments would be ratified by the end of 2010, with the Beijing Amendment to follow swiftly thereafter. He expressed the hope that, given his country's efforts to comply with the Protocol, the parties would support its request to be permitted to continue to import HCFCs.

138. The representative of Kazakhstan introduced a conferenceroom paper containing a draft decision on an application by his country to trade in HCFCs with parties to the Beijing Amendment to the Montreal Protocol in 2011. A number of representatives said that they were unable to support the decision in its current form. The parties accordingly agreed that an informal group would meet to discuss the draft decision further in an effort to reach consensus.

139. Following those consultations it was agreed that the draft decision submitted by Kazakhstan would not be approved for further consideration during the high-level segment.

Part Two: High-level segment

I. Opening of the high-level segment

140. The high-level segment of the Twenty-Second Meeting of the Parties began at 10.15 a.m. on Thursday, 11 November, with an opening ceremony facilitated by Mr. Paul Horwitz, Deputy Executive Secretary of the Ozone Secretariat, who served as master of ceremonies.

141. Opening statements were delivered by Mr. Michael Church, President of the Twenty-First Meeting of the Parties to the Montreal Protocol; the Executive Secretary; and Mr. Trairong Suwankiri, Deputy Prime Minister of Thailand.

142. In his statement, the President welcomed the representatives to Thailand, expressing thanks to that country's Government for agreeing to host the meeting at short notice and to UNEP for facilitating the administrative and logistical arrangements. The many successes of the Montreal Protocol could be attributed to the parties and other experts involved. In that regard, he expressed thanks to the Protocol's assessment panels and national ozone officers and to the Ozone Secretariat, singling out the Executive Secretary for especial praise. During Mr. González's tenure, the Protocol's achievements had grown in depth and consistency. Accordingly, the Bureau had endorsed and recommended to the parties a proposal to upgrade the post of Executive Secretary to the level of Assistant-Secretary-General of the United Nations, a level commensurate with the Protocol's standing as the most successful negotiated multilateral environmental agreement.

143. He recalled that the decisions adopted by the Twenty-First Meeting of the Parties had been implemented and follow-up actions pursued; decisions on compliance had been particularly emphasized, as a small number of parties had fallen short of their obligations under the Protocol. He welcomed the constructive approach taken by the Implementation Committee in such cases and called for it to continue. He congratulated those parties that had completed ratification of all amendments to the Protocol and urged those that had not to do so promptly. He welcomed the vitality of the Protocol's

financial mechanism, saying that the terms of reference for the replenishment of the Fund should include all possible elements that would enable parties operating under paragraph 1 of Article 5 to implement and comply with their obligations under the Protocol for the period 2012–2014. In conclusion, he said that it had been an honour to serve as the President of the Twenty-First Meeting of the Parties and thanked all those who had assisted him during his term of office.

144. The Executive Secretary, in his statement, noted that 17 years earlier Thailand had hosted the Fifth Meeting of the Parties, and he thanked the Government for facilitating the hosting of the present meeting. Looking back over those 17 years, he pointed out that many undertakings that had been merely ideas on paper had borne fruit and become reality, which was a testament to the vision, commitment and dedication of the parties to the Montreal Protocol. In that period, the Protocol had achieved universal ratification, with the highest number of parties of any international treaty, a feat unparalleled in the United Nations system. It demonstrated that global efforts could succeed given sufficient political will and effective governance structures.

145. He noted that the current meeting was taking place after the final phase-out date for most ozone-depleting substances – 1 January 2010 – and acknowledged the hard work by parties, particularly those operating under paragraph 1 of Article 5, to make that historic milestone a reality. In recent years, the parties had increasingly emphasized the additional environmental benefits arising out of their actions to protect the ozone layer, leading the international community to view the Protocol as a treaty that both protected the ozone layer and made a significant contribution to protecting the global climate system.

146. In closing, he paid tribute to departed and departing members of the ozone community. He invited the parties to observe a minute of silence in memory of Mr. Madhava Sarma, Mr. Yuichi Fujimoto and Mr. Aharon Serry. Mr. Sarma had served as Executive Secretary of the Ozone Secretariat from 1991 to 2000 and as a senior expert member of the Technology and Economic Assessment Panel; Mr. Fujimoto had been a senior expert member of the Technology and Economic Assessment Panel and a member of the Solvents Technical Options Committee; and Mr. Serry had been the ozone layer protection focal point for Israel. He then offered praise for Mr. Jan van der Leun and Mr. José Pons Pons, who were stepping down as Co-Chair of the Environmental Effects Assessment Panel and Co-Chair of the Technology and Economic Assessment Panel, respectively, for their long and outstanding service to the Montreal Protocol.

147. Following the Executive Secretary's statement Ms. Jessica Eriyo, Minister of Environment of Uganda, presented, on behalf of the African group, a certificate of appreciation to Mr. Rajendra Shende, head of the UNEP Ozone Action Programme, who would be retiring in the near future after serving in that capacity since 1992.

148. In his statement, Mr. Suwankiri welcomed the representatives to Bangkok and to Thailand. He praised the work of the Protocol over the 17 years since Thailand had hosted the Fifth Meeting of the Parties, lauding the successful efforts to phase out the use of CFCs by 2010 and to achieve universal ratification, and drew attention to a number of national-level efforts to phase out ozone-depleting substances. He said that the task of phasing out HCFCs was arduous because alternatives and financing were both limited; he expressed confidence, however, that those limitations could be overcome if parties worked together in a spirit of cooperation, with support provided by partners, industry bodies and others.

149. In conclusion, he looked ahead to the deliberations on a number of items on the parties' agenda, including the terms of reference for a study on the replenishment of the Multilateral Fund and possible amendments to the Montreal Protocol. He called upon parties to strike a balance in their deliberations between economic development and environmental protection, suggesting that it behoved them to protect the environment and habitat, which was a legacy inherited from ancestors and bequeathed to future generations. He declared the high-level segment officially open at 10.55 a.m.

150. Following those opening statements, the Executive Secretary and Mr. Suwankiri presented Mr. van der Leun with a certificate of recognition.

151. The parties then enjoyed a cultural event, consisting of the screening of a message from Pakistani schoolchildren on ozone layer preservation and a performance by Thai dancers.

II. Organizational matters

A. Election of officers for the Twenty-Second Meeting of the Parties

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

President:	Mr. Steven Reeves (United Kingdom of Great Britain and Northern Ireland)	Western European and others group
Vice-Presidents:	Mr. Hassen Hannachi (Tunisia)	African group
	Mr. Abid Ali (Pakistan)	Asian and Pacific group
	Ms. Sonja Ruzin (Serbia)	Eastern European group
Rapporteur:	Mr. Michael Church (Grenada)	Latin American and Caribbean group

B. Adoption of the agenda of the Twenty-Second Meeting of the Parties

153. The following agenda for the high-level segment was adopted on the basis of the provisional agenda contained in document UNEP/OzL.Pro.22/1:

1. Opening of the high-level segment:
 - (a) Statements by representative(s) of the Government of Thailand;
 - (b) Statements by representative(s) of the United Nations;
 - (c) Statement by the President of the Twenty-First Meeting of the Parties.
2. Organizational matters:
 - (a) Election of officers for the Twenty-Second Meeting of the Parties;
 - (b) Adoption of the agenda of the Twenty-Second Meeting of the Parties;
 - (c) Organization of work;
 - (d) Credentials of representatives.
3. Status of ratification of the Vienna Convention, the Montreal Protocol and the amendments to the Montreal Protocol.
4. Presentation by the assessment panels on their quadrennial assessment.
5. Presentation by the Chair of the Executive Committee of the Multilateral Fund on the work of the Executive Committee, the Multilateral Fund Secretariat and the Fund's implementing agencies.
6. Statements by heads of delegations.
7. Report by the co-chairs of the preparatory segment and consideration of the decisions recommended for adoption by the Twenty-Second Meeting of the Parties.
8. Dates and venue for the Twenty-Third Meeting of the Parties.
9. Other matters.
10. Adoption of decisions by the Twenty-Second Meeting of the Parties.
11. Adoption of the report of the Twenty-Second Meeting of the Parties.
12. Closure of the meeting.

C. Organization of work

154. The parties agreed to follow their customary procedures.

D. Credentials of representatives

155. The Bureau of the Twenty-Second Meeting of the Parties to the Montreal Protocol approved the credentials of the representatives of 87 of the 140 parties represented. The Bureau provisionally approved the participation of other parties on the understanding that they would forward their credentials to the Secretariat as soon as possible. The Bureau 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 Bureau 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 Bureau 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. Status of ratification of the Vienna Convention, the Montreal Protocol and the amendments to the Montreal Protocol

156. The President 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.Pro.22/3, which was a standard decision of the kind that had been taken in the past to record the status of ratifications and to encourage further ratifications.

IV. Presentation by the assessment panels on their quadrennial assessment

157. Mr. Lambert Kuijpers, Co-Chair of the Technology and Economic Assessment Panel, gave a presentation on the overview assessment of the Panel. He mentioned that the 2010 assessment report would be based on the technical options committees' 2010 assessment reports, to be finalized by the end of 2010, and a selection of relevant topics from the Panel's assessment reports published in 2009 and 2010. The Panel's 2010 assessment report therefore could not be finalized before the beginning of 2011, and he could therefore present only a preliminary report of the main issues dealt with in the reports. He then continued, presenting separate lists of issues that would be dealt with in the six technical options committee 2010 assessment reports. He concluded by presenting one of the issues that were to be dealt with separately in the Panel's 2010 assessment report, the classification of global-warming potentials on a scale.

158. Mr. A. R. Ravishankara, Co-Chair of the Scientific Assessment Panel, reported on the progress and executive summary of the Panel's 2010 scientific assessment of ozone depletion. He discussed the terms of reference for the assessment process and the structure and development process of the assessment report, which was the culmination of nearly two years of work and the participation of over 300 scientists from 34 countries. The full assessment report would be delivered to the parties in early 2011.

159. The abundances of ozone-depleting substances in the atmosphere were responding as expected to the control measures of the Montreal Protocol. Total chlorine from ozone-depleting substances continued to decline in both the lower atmosphere and the stratosphere. CFCs (not methyl chloroform) were currently the main contributors to the chlorine decline. Carbon tetrachloride (in the troposphere) was declining more slowly than expected, but the exact cause was uncertain (the decline was not a result of a lifetime error). Total bromine from ozone-depleting substances was also declining in the lower atmosphere and no longer increasing in the stratosphere. For the first time, the global atmospheric abundance of bromine from halons had stopped increasing, and halon-1211 had actually declined. Abundances of most HFCs and HCFCs, however, were growing in the atmosphere, and some HCFCs (e.g., HCFC-22, HCFC-142b) had increased faster than expected during the past four years.

160. The ozone layer and climate change were intricately coupled, and climate change would become increasingly important to the future ozone layer. Increasing abundances of radiatively important gases, especially carbon dioxide and methane, were expected significantly to affect future stratospheric ozone through effects on temperature, winds and chemistry. While for the coming few decades the decline in ozone-depleting substances would dominate the recovery of the ozone layer, climate change and other factors were expected to become increasingly important to the ozone layer over time. Ozone levels globally and at middle latitudes might even become larger than those observed before 1980.

161. The Antarctic ozone hole continued to be observed during the austral spring. The ozone hole was projected to recover later in the century than any other region of the globe. The Antarctic ozone hole was much less influenced by climate change than other areas of the globe, and ozone-depleting substances would be the primary determinants of when the ozone hole would heal. The control of ozone-depleting substances by the Montreal Protocol had protected the globally averaged ozone layer

from much higher levels of depletion. Globally, the ozone layer was projected to recover to its 1980 level before the middle of the twenty-first century.

162. The ozone layer and surface ultraviolet radiation (UV) were responding as expected to the ozone-depleting substance reductions achieved under the Protocol. Global surface UV levels had not increased significantly because ozone losses had been limited by the Protocol. In the absence of the Protocol surface UV levels would have been large. Factors other than stratospheric ozone would determine surface UV levels in the future.

163. The control of ozone-depleting substances by the Montreal Protocol had had co-benefits for climate. The decrease in ozone-depleting substances achieved under the Protocol was equivalent to a reduction of carbon dioxide that was five times larger than the target for the first commitment period of the Kyoto Protocol. Projections of HFC growth scenarios that assumed no controls suggested that by 2050 global-warming-potential-weighted emissions of HFCs could be comparable to those of CFCs at their peak in 1988.

164. In addition to a discussion of the relationship of ozone-depleting substances to ozone, and of ozone to surface UV radiation and climate, the Panel provided additional information on a few topics. The accelerated HCFC phase-out agreed to in 2007 was projected to reduce ozone depletion and to help reduce climate forcing. New fluorocarbons, suggested as possible replacements for HCFCs and HFCs, potent greenhouse gases, were less potent greenhouse gases. Nitrous oxide was known both to deplete global ozone and to warm the climate. The current ODP-weighted anthropogenic emission of nitrous oxide was larger than that of any ozone-depleting substance. Deliberate large injections of sulphur-containing compounds into the stratosphere (geoengineering) would alter the radiative, dynamical and chemical state of the stratosphere and could be expected to have substantial unintended effects on stratospheric ozone levels.

165. He also discussed how the Antarctic ozone hole had had a number of impacts on climate. The impact of the Antarctic ozone hole on surface climate had become more evident, causing, in particular, wind pattern changes in the Southern Hemisphere lower atmosphere. Because of these changes, for example, the surface climate had warmed over the Antarctic Peninsula and cooled over the high plateau.

166. Finally, options for further limiting future emissions of ozone-depleting substances could advance recovery dates by a few years. The impact of those potential emission reductions on future ozone levels, however, would be much smaller than what had already been accomplished by the Montreal Protocol.

167. Ms. Janet Bornman, Co-Chair of the Environmental Effects Assessment Panel, gave a presentation on the environmental effects of ozone depletion and its interaction with climate change. She began by noting that the environmental effects of ozone depletion and their strong interactions with climate change had a wide range of consequences for life on earth. Implementation of the Montreal Protocol, however, had meant that large increases in the type of UV radiation that caused sunburn had been avoided. Currently, measurements at middle latitudes were showing as much as a 5 per cent increase in the so-called UV-B radiation range (280-315 nm) relative to 1980, and in areas of significant ozone depletion, large increases that were sufficient to cause sunburn. At the same time, there was uncertainty regarding the future of sun-burning UV radiation because penetration of UV radiation to the Earth's surface depended not only on the stratospheric ozone layer but also on climate change factors such as clouds, aerosols and land-use changes, which led to increased exposure to UV radiation. Cloud cover was predicted to increase at high latitudes; as UV radiation was normally relatively low at such latitudes, that would make it more difficult to achieve optimal exposure times for sufficient vitamin D production. At low latitudes, where UV radiation was relatively high, cloud cover was likely to decrease, which might result in additional sun-burning UV radiation.

168. In areas of high levels of UV radiation there was an increased likelihood of eye-related diseases (e.g., cataracts and melanoma of the eye) and skin cancer. Other effects of UV radiation included decreased immunity to some diseases, although they also included increased vitamin D production, which had beneficial effects for human health, including bone structure and resistance to certain diseases. The combined effects on human health of climate change factors and solar UV radiation, which might exacerbate some diseases, were being studied.

169. Terrestrial and aquatic ecosystems were also sensitive to the interplay of increased levels of – UV-B radiation and climate change factors. Decreased plant productivity in areas of large ozone depletion had been observed and increased ecosystem modifications and acclimation to UV radiation and climate were expected. Terrestrial ecosystems experienced both direct damage (e.g., reduced growth and impaired protective mechanisms) and indirect effects (e.g., modification of plant pests due

to altered plant chemistry induced by UV-B radiation). Climate change and UV radiation were likely to combine to increase the spread of plant pests in some areas with increasing temperature, rainfall and carbon dioxide levels, while extreme drought conditions and increased UV levels would reduce plant growth and survival.

170. Increased exposure to UV radiation from the predicted reduced cloud cover at low latitudes, coupled with deforestation and land-use changes, would promote the decay of dead plant material (breakdown of the material by UV radiation) and thus affect nutrient cycling and carbon dioxide loss to the atmosphere. Increased UV radiation and climate change were key players in accelerating the movement of carbon (known as carbon cycling) through terrestrial and aquatic ecosystems.

171. The negative effects of climate change and UV radiation on aquatic organisms decreased the uptake of atmospheric carbon dioxide by the oceans, thus reducing their capacity as carbon sinks. At the same time, climate-related increases in the run-off of organic material from land to oceans and the UV-induced breakdown of such material increased the emission of carbon dioxide from the oceans. As the oceans took up carbon dioxide the acidity (low pH) of the water rose, which in turn decreased skeletal formation in calcified organisms, making them more vulnerable to UV-B radiation. Climate-related increases in run-off from land also increased nitrogen input into the oceans. The increasing production of nitrous oxide enhanced not only ozone depletion, but also the greenhouse effect.

172. In the troposphere at low and middle latitudes, the projected increase in ozone concentrations due to human activity had implications for human health and the environment, further compounded by changes in climate and pollutants that would modify air quality. Since UV radiation initiated the production of hydroxyl radicals, which acted as atmospheric cleaning agents, UV was a controlling factor in photochemical smog. With ozone recovery and a resulting decrease in UV radiation, there was potential for increased photochemical smog, with negative effects on human health and the environment.

173. Based on current understanding, it appeared that the breakdown products of HCFCs and HFCs would probably pose only a negligible risk to human health and the environment. That included the breakdown of CFC replacements into trifluoroacetic acid.

174. Research on the effects of climate change and UV radiation on construction materials such as plastics and wood had shown increased damage by UV radiation in combination with high temperatures, humidity and atmospheric pollutants. Use of a range of stabilizers as protective agents, however, had helped to offset some of the degradation of those materials. The use of plastic nanocomposites and wood-plastic composites increased the service lifetimes of materials used outdoors.

175. The environmental effects assessment had shown that current and future climate change interactions with UV radiation added to the uncertainty of many aspects of environmental impacts on human health, terrestrial and aquatic ecosystems, cycling of nutrients, air quality, materials and transport of carbon dioxide, nitrogen oxides and other compounds. Environmental climate driven changes in UV radiation might be of such a magnitude that protective strategies to adapt to UV radiation would be ineffective or only partially effective.

176. Following the presentations one representative said that, while his party appreciated the efforts of the Technology and Economic Assessment Panel to bring some clarity to what parties meant when referring to high-global-warming-potential and low-global-warming-potential alternatives, the Panel's proposed classification of alternatives according to their global-warming potential was subjective. He proposed that the Panel should consider a sectoral identification of technically feasible alternatives with a view to maximizing the climate benefits of the accelerated HCFC phase-out.

V. Presentation by the Chair of the Executive Committee of the Multilateral Fund on the work of the Executive Committee, the Multilateral Fund Secretariat and the Fund's implementing agencies

177. Mr. Javier Camargo, chair of the Executive Committee of the Multilateral Fund, delivered a presentation on the Committee's activities since the Twenty-First Meeting of the Parties, encompassing the fifty-ninth, sixtieth and sixty-first meetings of the Committee. He summarized the report contained in document UNEP/OzL.Pro.22/8, including in respect of the significant progress the Committee had made in developing funding policies that would assist parties operating under paragraph 1 of Article 5 to phase out HCFCs.

178. With regard to CFCs, the Committee had decided to allow the submission of any remaining tranches of national phase-out plans and terminal phase-out plans for CFCs on the understanding that the parties concerned would consider implementing activities to sustain zero consumption of CFCs and other activities to facilitate the phase-out of HCFCs. With the exception of three countries, the funding of tranches for national phase-out plans had ceased and any remaining funding was being integrated into HCFC phase-out management plans. The era of funding CFC phase-out had drawn to a close, but its legacy would underpin the efforts of parties as they rose to the challenge of HCFC phase-out.

179. The Executive Committee had undertaken extensive discussions on funding and policies for HCFC phase-out, while ensuring that the full spirit of decision XIX/6, which included consideration of the climate impacts of technologies replacing HCFCs, was taken into account when developing and implementing phase-out projects. Most of the infrastructure to enable parties operating under paragraph 1 of Article 5 to initiate their HCFC phase-out activities was now in place, and guidelines had been developed setting out the criteria for funding. The Committee included consideration of additional funding for the introduction of alternatives to HCFCs with low global-warming potential rather than conversion to technologies that might be less expensive but used hydrocarbons with high global-warming potential, marking a significant change in the Multilateral Fund's approach. He also outlined a number of other policy issues related to HCFC phase-out, as detailed in document UNEP/OzL.Pro.22/8. HCFC production sector guidelines would be finalized at the sixty-second meeting of the Executive Committee.

180. The Executive Committee had been particularly concerned to ensure that funds were available for every party operating under paragraph 1 of Article 5 to receive assistance for projects to comply with the 2013 and 2015 control measures. To keep the budget within the remaining funds available for the 2009–2011 replenishment, the Committee had reallocated to the 2012–2014 triennium \$22,190,000 of HCFC investment project funding in the agencies' business plans for non-low-volume-consuming parties. The Committee had approved five HCFC phase-out management plans and a total of 246 additional projects and activities with a planned phase-out of 5,641 ODP-tonnes of controlled ozone-depleting substances. The total funds approved amounted to over \$96.5 million. In addition, \$20,000 had been provided as emergency assistance for institutional strengthening in Haiti following the devastation caused by the 2010 earthquake there.

181. Significant progress had been made regarding the outstanding contributions of the Russian Federation. The Secretariat of the Multilateral Fund had been informed that the Ministry of Finance of the Russian Federation had taken steps to resolve the issue, and dialogue was continuing.

182. In summary, he said that 2010 had particular significance for the Montreal Protocol's control measures for CFCs, halons and carbon tetrachloride. In addition to phasing out methyl chloroform and methyl bromide by 2015, the parties faced the challenge of accelerated phase-out of HCFC, but the work undertaken to date placed the goals of the 2013 freeze and the 2015 10 per cent reduction firmly within reach.

183. He then spoke on behalf of the implementing agencies. The United Nations Development Programme (UNDP) was operating a programme with a total value of \$525 million in over 100 countries, contributing, through the Multilateral Fund, to the phase-out of more than 64,700 tonnes per year of ozone-depleting substances. HCFC phase-out management plans and sector plans for 11 countries had been submitted to the Executive Committee, and were under development in another 20 countries where UNDP was the lead agency. UNDP had made progress with approved pilot and validation projects in the foam and refrigeration sectors in four countries, which aimed to develop replicable low-carbon options for replacing HCFCs. Work on ozone-depleting substance waste destruction projects was continuing in five countries. The Carbon Finance Unit of UNDP had worked with Montreal Protocol bodies to consider ways to gain access to carbon markets and design a facility to finance the climate benefits of HCFC phase-out and destruction of banks of ozone-depleting substances.

184. UNEP was currently working with 77 countries as lead agency and 24 countries as cooperating agency in the preparation of HCFC phase-out management plans. Under the Compliance Assistance Programme, UNEP had been providing support to Governments in achieving compliance in 2010, meeting their data reporting commitments under Article 7 and promoting mechanisms to prevent illegal trade in ozone-depleting substances. UNEP had also been prioritizing assistance to ensure that all countries operating under paragraph 1 of Article 5 had HCFC licensing systems in place, and had been active in facilitating network meetings and workshops to address current issues and coordination between national ozone units and climate change focal points.

185. The United Nations Industrial Development Organization (UNIDO) had recruited 11 national programme officers to assist in the delivery and monitoring of projects. UNIDO had had funds approved for HCFC sector-based investment activities for 15 countries. Two HCFC phase-out management plans had been approved and a further 40 were being developed. As part of its aim to take a more holistic approach to the implementation of its projects, UNIDO had established a carbon working group to analyse possible options for attaining carbon credits, and other sources of funding for the climate benefits of HCFC phase-out and destruction of banks of ozone-depleting substances were being investigated. UNIDO had submitted a large array of projects for consideration by the Executive Committee at its sixty-second meeting.

186. The World Bank reported that, through support to parties operating under paragraph 1 of Article 5, over 300,000 tonnes of consumption and production of ozone-depleting potential had been eliminated, representing 68 per cent of the total phase-out achieved under the Multilateral Fund, with only 44 per cent of the total resources. That cost-effective phase-out was linked to the innovative delivery mechanisms of World Bank projects. The Bank had commenced work with some countries on HCFC phase-out management plans and sector plans, including those with climate linkages and those that addressed the wider environmental impact of projects, in accordance with decision XIX/6.

187. The parties took note of the information presented.

VI. Statements by heads of delegation

188. During the high-level segment, statements were made by heads of delegation of the following parties, listed in the order in which they spoke: Grenada, Japan, United States, Indonesia, Uganda, Armenia, Bosnia and Herzegovina, Zimbabwe, Lao People's Democratic Republic, United Kingdom (on behalf of the European Union), Belgium (on behalf of the European Union), Samoa, Serbia, India, Kenya, Mongolia, Malawi, Solomon Islands, Bahrain, Democratic Republic of the Congo, Micronesia (Federated States of), Angola, New Zealand, Dominican Republic, Cuba, Democratic People's Republic of Korea, Bhutan, Mozambique, Afghanistan, Iran (Islamic Republic of), Cook Islands, Malaysia, Iraq, Nepal, Zambia, Marshall Islands, Bangladesh, Niger, Brazil, China, Mexico, South Africa, Pakistan, Maldives, Sri Lanka, Tanzania, Libyan Arab Jamahiriya, Liberia, Mauritius, Philippines.

189. A statement was made by a representative of the secretariats of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, of the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, and of the Stockholm Convention on Persistent Organic Pollutants. Statements were also made by representatives of Greenpeace International, the International Institute of Refrigeration, the Natural Resources Defense Council, the World Customs Organization and Technology Education Research and Rehabilitation for the Environment.

190. Many representatives congratulated the members of the bureau on their election and all thanked the Government and people of Thailand for their hospitality in hosting the current meeting. Many thanked UNEP and the Ozone Secretariat, the Multilateral Fund secretariat and implementing agencies, donor countries, the assessment panels, international organizations and other stakeholders for their roles in ensuring the success of the meeting and the successful development and implementation of the Protocol.

191. Many representatives outlined their countries' efforts to fulfil their obligations under the Protocol. Two announced that their Governments expected to phase out the use of CFCs in metered-dose inhalers ahead of the Protocol's target date of 2013. Achievements included the phase-out of the production and consumption of controlled substances, which in a notable number of cases had been achieved ahead of the deadlines under the Protocol; the promotion of alternative substances and technologies, including climate-friendly technologies; training and capacity-building; awareness-raising through the mass media and educational institutions; and the enhancement of cooperation between government ministries, public and private stakeholders, the countries of the various regions and international organizations.

192. Representatives celebrated the success of the Montreal Protocol, including its achievement of universal ratification and the 2010 phase-out of most ozone-depleting substances, which demonstrated that global solutions could be found when all countries made determined efforts to implement internationally agreed protocols on global environmental problems. They also observed, however, that much remained to be done, including the reduction of methyl bromide use for quarantine and pre-shipment applications; the management and destruction of banks of ozone-depleting substances;

combating illegal trade in ozone-depleting substances; and implementing the accelerated phase-out of HCFCs. Continued momentum was therefore needed to meet the remaining challenges.

193. Many representatives from parties operating under paragraph 1 of Article 5 said that implementing the accelerated phase-out schedule for HCFCs would require developed-country parties to fulfil their obligations to provide appropriate financial and technical assistance, capacity-building and technology transfer. Several stressed the need to provide financial and technical support to those industries that had already converted from CFCs to HCFCs and were being asked to undertake a second conversion to other climate-friendly technologies. One representative suggested that storage facilities for ozone-depleting substances should be constructed in small island countries and that periodic shipments of those substances to the nearest destruction facilities should be arranged. A number of representatives called for more analyses and information on HCFC alternatives, emphasizing the need for effective and economically, technically and environmentally viable alternatives for use in developing countries.

194. Many representatives, in particular from small island developing States, highlighted the growing threats associated with climate change. Many supported taking steps under the Protocol to begin addressing HFCs, noting that their expanding use was due almost entirely to the Protocol's controls on CFCs and HCFCs and that doing so would yield important climate benefits. Using the proven mechanisms of the Protocol would allow the parties to work synergistically with the Framework Convention on Climate Change and its Kyoto Protocol on a matter of significant common concern. One representative expressed disappointment that the Multilateral Fund provided no funding for activities under the Protocol that provided climate benefits. A number of other representatives, however, said that the parties should not address HFCs, arguing, among other things, that doing so was beyond the scope of the Protocol; that it was important not to infringe upon or impede the Framework Convention on Climate Change, which already covered HFCs; that time, effort and resources would be better spent ensuring the success of the CFC and HCFC phase-outs; that HFCs were required to achieve the HCFC phase-out; and that proven, cost-effective and environmentally safe alternatives to HFCs were not available in all sectors.

195. Many representatives agreed that ensuring the environmentally sound management and destruction of the growing amount of ozone-depleting-substance wastes, including those contained in banks, would help efforts to protect the ozone layer and mitigate climate change. A number of representatives of developing countries said that they were hampered in their ability to deal with banks of ozone-depleting substances owing to a lack of equipment and financial resources and called upon the Multilateral Fund to provide assistance in that area.

196. Many representatives, from both developed and developing countries, said that financial and technical assistance and the effective functioning of the Multilateral Fund had played a major role in the success of the Protocol. Many said that it was important for developed-country parties to fulfil their obligations to provide appropriate technical assistance; adequate financial assistance through the Multilateral Fund to meet the agreed incremental costs of developing-country parties in their transition away from ozone-depleting substances; and technology transfer as provided for in the Protocol.

197. Many representatives said that institutional strengthening had played an important role in building the capacity of developing countries to implement the Protocol. They called for continued funding for institutional strengthening in 2011 and beyond, for the accelerated phase-out of HCFCs, eliminating consumption of methyl bromide, including for quarantine and pre-shipment applications, and for tackling banks of obsolete ozone-depleting substances and illegal trade.

198. Many representatives expressed their appreciation for the long service and valuable work done by Mr. van der Leun. Many also paid tribute to the expertise, wisdom and generous spirit of Mr. Sharma, and expressed their condolences to his family at his passing.

199. The representative of the secretariats of the Basel, Rotterdam and Stockholm conventions reported that the secretariats of the Montreal Protocol and the Basel and Stockholm conventions, together with the OzonAction programme, were collaborating on an initiative for the destruction of ozone-depleting substances and persistent organic pollutants.

200. The representative of the International Institute of Refrigeration, an intergovernmental organization, noted that many refrigerants were ozone-depleting substances and greenhouse gases. With demand for refrigeration expected to grow, in particular in developing countries, the Institute had developed a number of recommendations, including coordination between the Kyoto and Montreal protocols, improved design and maintenance of refrigeration equipment, continued development of alternatives and elimination of incentives for projects that used substances with high global-warming potential.

201. The representative of the World Customs Organization (WCO) outlined the efforts of his organization to combat illegal trade in ozone-depleting substances worldwide and the results achieved, warning that illegal trade was likely to grow as further bans came into effect. WCO would continue to work with UNEP to control such trade and to help parties to remain in compliance with their obligations under the Protocol.

202. Noting that the Scientific Assessment Panel had concluded that HFCs could erase all climate gains made to date, the representative of an international environmental non-governmental organization urged the parties to take action on HFCs. It was not necessary to amend the Protocol to do so, since its preamble provided clearly that parties should take appropriate measures to protect human health and the environment against adverse effects of human activities likely to modify the ozone layer.

VII. Report by the co-chairs of the preparatory segment and consideration of the decisions recommended for adoption by the Twenty-Second Meeting of the Parties

203. Reporting on the preparatory segment of the meetings, the Co-Chair said that much had been achieved during the preparatory segment through negotiations that were difficult but marked throughout by cooperation and compromise. He thanked the parties for their great efforts, the contact group chairs for their leadership, the Secretariat for its excellent work and professionalism and the interpreters and other behind-the-scenes staff for making it possible for the parties to do their work.

VIII. Dates and venue for the Twenty-Third Meeting of the Parties

204. In his statement during the high-level segment, the representative of Indonesia conveyed an offer by his Government to host the Twenty-Third Meeting of the Parties. In the light of that offer the parties agreed that the Twenty-Third Meeting of the Parties would take place in 2011 in Bali, Indonesia, at a time to be determined.

IX. Other matters

Declaration on the global transition away from hydrochlorofluorocarbons and chlorofluorocarbons

205. The representative of Mexico introduced a declaration on the global transition away from HCFCs and CFCs, reporting that it had been signed by 91 parties. He then read the declaration, which is set out in annex III to the present report as submitted and without formal editing, and invited other parties to sign it.

X. Adoption of decisions by the Twenty-Second Meeting of the Parties

206. The Twenty-Second Meeting of the Parties decides:

XXII/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 at 1 November 2010, 195 parties had ratified the London Amendment to the Montreal Protocol, 192 parties had ratified the Copenhagen Amendment to the Montreal Protocol, 181 parties had ratified the Montreal Amendment to the Montreal Protocol and 165 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;

XXII/2: Terms of reference for an evaluation of the financial mechanism of the Montreal Protocol

1. To approve the terms of reference for an evaluation of the financial mechanism of the Montreal Protocol contained in the annex to the present decision;
2. To set up a steering panel of eight members to supervise the evaluation process, to select an evaluator to carry out the evaluation, to act as a point of contact for the evaluator during the evaluation and to ensure that the terms of reference are implemented in the most appropriate manner possible;
3. To select from among the parties to the Montreal Protocol the following eight parties to serve as the members of the steering panel: Austria, Canada, Colombia, India, Japan, Nigeria, the former Yugoslav Republic of Macedonia and the United States of America, thereby ensuring that the appointed panel has equal representation of individuals selected by parties operating under paragraph 1 of Article 5 of the Montreal Protocol and parties not so operating;
4. To request the Ozone Secretariat to finalize the procedure for the selection of the qualified external and independent evaluator: on the basis of submitted proposals, the Secretariat shall prepare a shortlist of qualified applicants and facilitate the review of relevant proposals by the steering panel;
5. To instruct the steering panel to organize its meetings with the assistance of the Ozone Secretariat with dates and venues selected, as far as possible, to coincide with other Montreal Protocol meetings, thereby reducing related costs;
6. To approve a total budget for the evaluation of up to 200,000 United States dollars, with the amount of \$70,000 to start the application bidding process to come from the 2011 budget of the Trust Fund for the Montreal Protocol on the understanding that the parties will decide in 2011 on the funding source for the balance of the budget;
7. To ensure that the final report and recommendations of the evaluator are made available to parties for consideration at the Twenty-Fourth Meeting of the Parties;

Annex to decision XXII/2

Terms of reference for an evaluation of the financial mechanism of the Montreal Protocol

A. Preamble

1. The achievements of the financial mechanism of the Montreal Protocol have often been recognized by the international community, and there is no doubt that the mechanism is both a cornerstone of the Protocol and an outstanding example of multilateral cooperation. Indeed, by the end of 2009 the Multilateral Fund had approved projects to phase out the consumption and production of about 458,000 ozone-depleting-potential (ODP) tonnes of ozone-depleting substances in developing countries, and over 85 per cent of this amount had already been phased out. As a result of those activities, nearly all parties operating under paragraph 1 of Article 5 of the Protocol are in compliance with their obligations under the Protocol, while most of their consumption and production of ozone-depleting substances, except for hydrochlorofluorocarbons (HCFCs), has been eliminated.
2. The financial mechanism was established by Article 10 of the Montreal Protocol to provide financial and technical cooperation to parties operating under paragraph 1 of Article 5 to enable their compliance with the Protocol's control measures. The Fourth Meeting of the Parties to the Montreal Protocol recognized the need to review periodically the operation of the financial mechanism to ensure maximum effectiveness in pursuing the goals of the Montreal Protocol. Since its inception in 1991, the mechanism, which includes the Multilateral Fund, an Executive Committee, a Secretariat and implementing and bilateral agencies, has been evaluated twice by the parties, in 1994–1995 and 2003–2004.
3. The year 2010 is a landmark year in the history of both the Montreal Protocol and the financial mechanism, as virtually all remaining production and consumption of chlorofluorocarbons (CFCs), halons and carbon tetrachloride was to be phased out by 1 January 2010. In the light of this major milestone, it is particularly timely for the parties to the Protocol to take a retrospective look at the achievements of the financial mechanism, the challenges that it has faced, the manner in which they have been addressed and the lessons that have been learned, with a view to ensuring that the

mechanism is well placed to address the challenges of the future effectively. Those challenges include phasing out HCFCs and the remaining consumption of methyl bromide and implementing ozone-depleting substance destruction pilot projects.

B. Purpose

4. In the light of the above, and considering that it has been more than five years since the last evaluation was conducted, the Twenty-Second Meeting of the Parties decided that it was appropriate to evaluate and review the financial mechanism with a view to ensuring its effective functioning in meeting the needs of parties operating under paragraph 1 of Article 5 and parties not so operating in accordance with Article 10 of the Protocol. The study should be based on the present terms of reference, defined by the scope described below and carried out by an independent evaluator and completed by May 2012, in time for consideration by the Open-ended Working Group of the Parties to the Montreal Protocol at its thirty-second meeting.

C. Scope

5. In carrying out the study, the evaluator should consider the results, policy framework, organizational structure and lessons learned associated with the financial mechanism as follows:

- (a) Results of the financial mechanism:
 - (i) Extent to which both investment and non-investment projects approved under the Multilateral Fund have contributed to phasing out ozone-depleting substances in parties operating under paragraph 1 of Article 5 in accordance with Montreal Protocol compliance targets;
 - (ii) Total reductions of ozone-depleting substances in ODP-tonnes and metric tonnes resulting from Multilateral Fund activities;
 - (iii) Analysis of other environmental and health co-benefits, including climate benefits, as well as adverse effects resulting from activities funded by the Multilateral Fund to phase out ozone-depleting substances;
 - (iv) Comparison of ozone-depleting substance phase-out planned in approved projects and ozone-depleting substance phase-out achieved;
 - (v) Comparison of planned cost-effectiveness of approved projects and actual cost-effectiveness;
 - (vi) Comparison of planned project implementation time and implementation time achieved;
 - (vii) Effectiveness of capacity-building provided, including institutional strengthening and compliance assistance;
- (b) Policies and procedures:
 - (i) Effectiveness of timing between meetings, submission deadlines and reporting deadlines;
 - (ii) Effectiveness, consistency and efficiency of procedures and practices to develop, review and approve project proposals under the Multilateral Fund;
 - (iii) Ability of the project and activity planning and implementation process to ensure compliance;
 - (iv) Effectiveness and efficiency of monitoring, reporting procedures and practices;
 - (v) Ability and efficiency of internal evaluation and verification mechanisms to monitor and confirm results, including an analysis of existing databases;
 - (vi) Extent to which policies and procedures are adapted or improved based on experiences and relevant circumstances;
- (c) Other issues:
 - (i) Review of the distribution of funding among regions where parties operating under paragraph 1 of Article 5 are located, as well as between low-volume consuming countries and non-low-volume consuming countries;

- (ii) Extent to which programmes and projects approved under the financial mechanism have facilitated the implementation of the technology transfer provisions under Articles 10 and 10A of the Montreal Protocol and related decisions of the Parties, taking into account the geographical origin by region of technology provided in a representative sample of projects;
- (d) Lessons learned:
 - (i) Lessons learned in view of the future challenges of the Montreal Protocol and the Multilateral Fund;
 - (ii) Lessons learned for other international environmental institutions and agreements.

D. Form and presentation of the study

6. The study shall be presented using a practical, easy-to-use and easy-to-read layout, and should include a comprehensive summary for policymakers of some 30 pages and a detailed index followed by the body of the study and its annexes.

E. Conclusions and recommendations

7. In carrying out the study, the evaluator will identify the strengths, weaknesses, opportunities and threats associated with the financial mechanism and, where relevant, make recommendations suggesting possible improvements with regard to: results achieved; organizational effectiveness and decision-making processes; effectiveness of technology transfer; information dissemination and capacity-building activities; cooperation with other organizations; and any other area of particular relevance.

F. Sources of information

8. The Multilateral Fund Secretariat, the Ozone Secretariat, the Executive Committee, the implementing and bilateral agencies, the Treasurer, ozone offices, recipient countries and companies are invited to cooperate with the evaluator and to provide all necessary information including information on cost-effectiveness. The Multilateral Fund Secretariat is invited to provide all necessary data related to the items listed above in paragraphs 5 (a) (i), (ii), (iv), (v) and (vi). The evaluation should take into account the relevant decisions of the Meeting of the Parties and the Executive Committee.

9. The evaluator should widely consult relevant persons and institutions and other relevant sources of information deemed useful.

G. Time frame and milestones

10. The following table presents a tentative time frame and milestones for the study.

November 2010	Approval of the terms of reference by the Meeting of the Parties
	Selection of a steering panel by the Meeting of the Parties
January 2011	Finalization of the criteria and procedure for the selection of the qualified external and independent evaluator
March 2011	Analysis of bids by the Ozone Secretariat and, on the basis of the criteria, recommendations to steering panel
	Independent evaluator selected by the panel
April 2011	Contract awarded
	Evaluator provides an inception report and meets the steering panel to discuss study modalities and details
December 2011	Mid-term review: preliminary draft report submitted to and reviewed by the steering panel
February 2012	Final draft report submitted to and reviewed by the steering panel
May 2012	Final draft report submitted to the Open-ended Working Group at its thirty-second meeting
September 2012	Final report submitted to the Twenty-Fourth Meeting of the Parties

XXII/3: Terms of reference for the study on the 2012–2014 replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol

Recalling the parties' decisions on previous terms of reference for studies on the replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol,

Recalling also the parties' decisions on previous replenishments of the Multilateral Fund,

1. To request the Technology and Economic Assessment Panel to prepare a report for submission to the Twenty-Third Meeting of the Parties, and to present it through the Open-ended Working Group at its thirty-first meeting, to enable the Twenty-Third Meeting of the Parties to take a decision on the appropriate level of the 2012–2014 replenishment of the Multilateral Fund;

2. That, in preparing the report referred to in the preceding paragraph, the Panel should take into account, among other things:

(a) All control measures and relevant decisions agreed upon by the parties to the Montreal Protocol and the Executive Committee, in particular those related to the special needs of low-volume- and very-low-volume-consuming countries, and decisions agreed upon by the Twenty-Second Meeting of the Parties and the Executive Committee at its sixty-first and sixty-second meetings insofar as those decisions will necessitate expenditure by the Multilateral Fund during the period 2012–2014;

(b) The need to allocate resources to enable all parties operating under paragraph 1 of Article 5 of the Montreal Protocol to maintain compliance with Articles 2A–2E, 2G and 2I of the Protocol;

(c) The need to allocate resources to enable all parties operating under paragraph 1 of Article 5 to meet 2013 and 2015 compliance obligations in respect of Articles 2F and 2H of the Protocol;

(d) Rules and guidelines agreed upon by the Executive Committee at all meetings, up to and including its sixty-second meeting, for determining eligibility for the funding of investment projects, non-investment projects, including institutional strengthening, measures to combat illegal trade and sectoral or national phase-out plans, including hydrochlorofluorocarbon phase-out management plans, measures to manage banks of ozone-depleting substances and ozone-depleting substance destruction projects;

(e) The impact that the international market, ozone-depleting substance control measures and country phase-out activities are likely to have on the supply of and demand for ozone-depleting substances, the corresponding effects on the price of ozone-depleting substances and the resulting incremental costs of investment projects during the period under review;

3. That, in preparing the report referred to above, the Panel should consult widely all relevant persons and institutions and other relevant sources of information deemed useful;

4. That the Panel shall strive to complete the report referred to above in time to enable it to be distributed to all parties two months before the thirty-first meeting of the Open-ended Working Group;

5. That the Panel should provide indicative figures for the periods 2015–2017 and 2018–2020 to support a stable and sufficient level of funding, on the understanding that those figures will be updated in subsequent replenishment studies;

XXII/4: Essential-use nominations for controlled substances for 2011

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 Panel's conclusion that technically satisfactory alternatives to chlorofluorocarbon-based metered-dose inhalers are available for some therapeutic formulations for treating asthma and chronic obstructive pulmonary disease,

Taking into account the Panel's analysis and recommendations for essential-use exemptions for controlled substances for the manufacture of metered-dose inhalers used for asthma and chronic obstructive pulmonary disease,

Noting that the Medical Technical Options Committee continued to have difficulty assessing some nominations submitted by parties in accordance with the criteria of decision IV/25 and subsequent relevant decisions owing to a lack of certain information,

Noting also that, notwithstanding the insufficient information referred to in the preceding paragraph, the Medical Technical Options Committee gave due consideration to the health and safety of patients with regard to the amounts recommended,

Welcoming the continued progress in several parties 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,

Welcoming the announcements by India and the Islamic Republic of Iran that they will not require pharmaceutical-grade chlorofluorocarbons under essential-use nominations for 2011 or beyond for the manufacture of metered-dose inhalers, and acknowledging their efforts in their phase-out of chlorofluorocarbons in metered-dose inhalers,

Acknowledging Bangladesh's efforts in its phase-out of chlorofluorocarbons in metered-dose inhalers, and taking into account the economic difficulties faced by that party,

Welcoming the announcement by Bangladesh that it will not, in the future, submit essential-use nominations for the use of chlorofluorocarbons in salbutamol, beclomethasone or levosalbutamol metered-dose inhalers,

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

Annex to decision XXII/4

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

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

XXII/5: Essential-use exemption for chlorofluorocarbon 113 for aerospace applications in the Russian Federation

Noting the evaluation and recommendation of the Technology and Economic Assessment Panel and its Chemicals Technical Options Committee in respect of the essential-use nomination for chlorofluorocarbon 113 (CFC-113) for aerospace applications in the Russian Federation,

Noting also that the Russian Federation has continued to explore the possibility of importing CFC-113 to meet its aerospace industry needs from available global stocks,

Noting further that the Russian Federation has been successful in reducing its use and emissions of CFC-113 in line with a timetable of technical transformation developed in collaboration with the Chemicals Technical Options Committee,

Noting, however, that the Chemicals Technical Options Committee has recommended greater efforts to introduce appropriate alternatives,

1. To authorize an essential-use exemption for the production and consumption in 2011 of 100 metric tonnes of CFC-113 in the Russian Federation for chlorofluorocarbons in its aerospace industry;
2. To request the Russian Federation to continue to explore further the possibility of importing CFC-113 for its aerospace industry needs from available global stocks;
3. To urge the Russian Federation to continue its efforts on the introduction of alternative solvents and the adoption of newly designed equipment to complete the phase-out of CFC-113 according to an accelerated time schedule;

XXII/6: Critical-use exemptions for methyl bromide for 2011 and 2012

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

Recognizing the significant reductions made in critical-use nominations for methyl bromide in many parties,

Recalling paragraph 10 of decision XVII/9,

Recalling also that all parties that have nominated critical-use exemptions are to report data on stocks using the accounting framework agreed on by the Sixteenth Meeting of the Parties,

Recognizing that the production and consumption of methyl bromide for critical uses should be permitted only if methyl bromide is not available in sufficient quantity and quality from existing stocks of banked or recycled methyl bromide,

Recognizing also that parties operating under a critical-use exemption should take into account the extent to which methyl bromide is available in sufficient quantity and quality from existing stocks of banked or recycled methyl bromide in licensing, permitting or authorizing the production and consumption of methyl bromide for critical uses,

Stressing that parties should reduce their stocks of methyl bromide retained for employment in critical-use exemptions to a minimum in as short a time period as possible,

1. To permit, for the agreed critical-use categories for 2011 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 2011 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 XXI/11;
2. To permit, for the agreed critical-use categories for 2012 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 2012 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. That parties shall endeavour to license, permit, authorize or allocate quantities of methyl bromide for critical uses as listed in tables A and C of the annex to the present decision;

4. 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 terms of reference of the Technology and Economic Assessment Panel, the Committee should ensure that it develops its recommendations in a consensus process that includes full discussion among all available Committee members and should ensure that members with relevant expertise are involved in developing its recommendations;

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

6. To urge parties operating under a critical-use exemption to put in place an effective system to discourage the accumulation of methyl bromide produced under the exemption;

Annex to decision XXII/6

Table A
Agreed critical-use categories for 2011 (metric tonnes)

Australia	Strawberry runners (5.950)
Canada	Pasta (2.084)
Israel	Broomrape – protected (12.500), cucumbers (12.500), cut flowers and bulbs – protected (52.330), cut flowers – open field (23.292), melons – protected and open field (35.000), strawberry fruit – Sharon and Gaza (41.875), strawberry runners – Sharon and Gaza (27.000), sweet potatoes (20.000)

Table B
Permitted levels of production and consumption for 2011 (metric tonnes)

Australia	5.950
Canada	2.084
Israel	224.497

Table C
Agreed critical-use categories for 2012 (metric tonnes)

Australia	Strawberry runners (29.760), rice (3.653)
Canada	Mills (11.020), strawberry runners (Prince Edward Island) (5.261)
Japan	Chestnuts (3.489), cucumbers (26.162), ginger – field (42.235), ginger – protected (6.558), melons (67.936), peppers – green and hot (61.154), watermelons (12.075)
United States of America	Commodities (2.419), National Pest Management Association food-processing structures (0.200), mills and processors (74.510), dried cured pork (3.730), cucurbits (59.500), eggplant – field (6.904), forest nursery seedlings (34.230), nursery stock – fruit, nuts, flowers (1.591), orchard replants (18.324), ornamentals (48.164), peppers – field (28.366), strawberry – field (678.004), strawberry runners (3.752), tomatoes – field (54.423), sweet potato slips (8.709)

Table D
Permitted levels of production and consumption for 2012 (metric tonnes)

Australia	33.413
Canada	16.281
Japan	219.609
United States of America	922.826*

[* Minus available stocks.]

XXII/7: Global laboratory and analytical use exemption

Recalling paragraph 7 of decision XXI/6, which allows parties operating under paragraph 1 of Article 5 until 31 December 2010 to deviate from the existing laboratory and analytical use bans in individual cases, where a party considers that this is justified, and asks parties to revisit the issue at the Twenty-Second Meeting of the Parties,

Considering that the Technology and Economic Assessment Panel did not provide all information requested by decision XXI/6 in time for the Twenty-Second Meeting of the Parties and that the parties were therefore unable to evaluate the situation in respect of laboratory and analytical uses by parties operating under paragraph 1 of Article 5 of the Protocol,

Noting that some parties operating under paragraph 1 of Article 5 continue to have difficulty adopting alternatives for those laboratory and analytical uses already banned under the global exemption and need more time for information collection and related policy framework development,

1. To allow parties operating under paragraph 1 of Article 5 until 31 December 2011 to deviate from the existing laboratory and analytical use bans in individual cases, where a party considers that this is justified, and to ask parties to revisit the issue at the Twenty-Third Meeting of the Parties;

2. To request parties to continue to investigate domestically the possibility of replacing ozone-depleting substances in those laboratory and analytical uses listed in the reports of the Technology and Economic Assessment Panel prepared in accordance with decisions XVII/10 and XIX/18 and to report progress to the Ozone Secretariat by 30 April 2011;

XXII/8: Uses of controlled substances as process agents

The Meeting of the Parties,

Noting with appreciation the 2009 and 2010 progress reports of the Technology and Economic Assessment Panel on process agents,

Noting that table A in decision X/14 on process-agent uses has been updated by decisions XV/6, XVII/7 and XIX/15,

Noting also that the Panel's 2010 progress report indicates that several parties not operating under paragraph 1 of Article 5 of the Montreal Protocol included in table B of decision X/14 have reported that they no longer use any controlled substances as process agents, and that three process-agent uses have been discontinued in the European Union,

Recalling that the Panel's 2009 progress report on process agents indicated that Israel had reported the use of controlled substances for a process-agent application included in table A of decision X/14,

Recalling also that, according to decision X/14, quantities of controlled substances produced or imported by parties operating under paragraph 1 of Article 5 for use as process agents in plants and installations in operation before 1 January 1999 should not be taken into account in the calculation of production and consumption from 1 January 2002 onwards, provided that emissions of those substances have been reduced to levels agreed by the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol to be reasonably achievable in a cost-effective manner without undue abandonment of infrastructure,

Recognizing that, in the light of the phase-out dates of 1 January 2010 applicable to chlorofluorocarbons and carbon tetrachloride under the Montreal Protocol, the Executive Committee is unlikely to agree on any further emission levels for the use of such substances as process agents in parties operating under paragraph 1 of Article 5 beyond 2010,

Recognizing also the substantial progress undertaken by parties operating under paragraph 1 of Article 5 in reducing the use and emissions of controlled substances used as process agents,

Aware that the use and emissions of controlled substances used as process agents will continue beyond 2010 in only two parties operating under paragraph 1 of Article 5,

Agreeing that both parties operating under paragraph 1 of Article 5 and those not so operating that report process agent uses should now be listed in table B of decision X/14 and that those of the latter parties not using controlled substances as process agents should be removed from that table,

Noting that the Technology and Economic Assessment Panel and the Executive Committee of the Multilateral Fund will provide a joint report to the Open-ended Working Group at its thirty-first meeting, in 2011, on further efforts to reduce uses of process agents,

1. That quantities of controlled substances produced or imported by parties operating under paragraph 1 of Article 5 for use as process agents in plants and installations in operation before 1 January 1999 should not be taken into account in the calculation of production and consumption from 1 January 2011 onwards, provided that emissions of those substances are within the levels defined in the updated table B of decision X/14 included in the annex to the present decision;
2. To update tables A and B of decision X/14 as set out in the annex to the present decision;
3. To request each party to report to the Ozone Secretariat, by 15 March 2011, if possible, or 1 July 2011 at the latest, the specific applications for which it uses controlled substances as process agents and to continue to report such information in the context of the annual reports required by decision X/14;
4. To request the Technology and Economic Assessment Panel to include, in its 2011 progress report, a table listing process agent uses by individual parties;
5. To request the Technology and Economic Assessment Panel, beyond the reporting and assessment in respect of process agent uses requested for 2011, to review in 2013, and every second year thereafter, progress made in reducing process agent uses and to make any additional recommendations to parties on further actions to reduce uses and emissions of process agents;
6. That, once all process agent projects approved by the Executive Committee are completed, reporting by the Executive Committee to the parties as requested in decision XVII/6 will no longer be required;

Annex to decision XXII/8

Table A: List of uses of controlled substances as process agents

No.	Process agent application	Substance
1	Elimination of NCl_3 in chlor-alkali production	CTC
2	Chlorine recovery by tail gas absorption in chlor-alkali production	CTC
3	Production of chlorinated rubber	CTC
4	Production of endosulfan	CTC
5	Production of chlorosulfonated polyolefin (CSM)	CTC
6	Production of aramid polymer (PPTA)	CTC
7	Production of synthetic fibre sheet	CFC-11
8	Production of chlorinated paraffin	CTC
9	Photochemical synthesis of perfluoropolyetherpolyperoxide precursors of Z-perfluoropolyethers and difunctional derivatives	CFC-12
10	Preparation of perfluoropolyether diols with high functionality	CFC-113
11	Production of cyclodime	CTC
12	Production of chlorinated polypropene	CTC
13	Production of chlorinated ethylene vinyl acetate (CEVA)	CTC
14	Production of methyl isocyanate derivatives	CTC
15	Production of 3-phenoxybenzaldehyde	CTC
16	Production of 2-chloro-5-methylpyridine	CTC
17	Production of imidacloprid	CTC
18	Production of buprofenzin	CTC
19	Production of oxadiazon	CTC
20	Production of chloradized N-methylaniline	CTC
21	Production of 1,3-dichlorobenzothiazole	CTC
22	Bromination of a styrenic polymer	BCM
23	Synthesis of 2,4-D (2,4-dichlorophenoxyacetic acid)	CTC
24	Synthesis of di-(2-ethylhexyl) peroxydicarbonate (DEHPC)	CTC
25	Production of high modulus polyethylene fibre	CFC-113
26	Production of vinyl chloride monomer	CTC
27	Production of sultamicillin	BCM
28	Production of prallethrin (pesticide)	CTC
29	Production of o-nitrobenzaldehyde (for dyes)	CTC
30	Production of 3-methyl-2-thiophenecarboxaldehyde	CTC

No.	Process agent application	Substance
31	Production of 2-thiophenecarboxaldehyde	CTC
32	Production of 2-thiophene ethanol	CTC
33	Production of 3,5-dinitrobenzoyl chloride (3,5-DNBC)	CTC
34	Production of 1,2-benzisothiazol-3-ketone	CTC
35	Production of <i>m</i> -nitrobenzaldehyde	CTC
36	Production of tichlopidine	CTC
37	Production of <i>p</i> -nitro benzyl alcohol	CTC
38	Production of tolclfos methyl	CTC
39	Production of polyvinylidene fluoride (PVdF)	CTC
40	Production of tetrafluorobenzoylethyl acetate	CTC
41	Production of 4-bromophenol	CTC

Table B: Limits for process-agent uses (all figures are in metric tonnes per year)

Party	Make-up or consumption	Maximum emissions
European Union	1 083	17
United States of America	2 300	181
Russian Federation	800	17
Switzerland	5	0.4
Israel	3.5	0
Brazil	2.2 ¹	2.2 ¹
China	1 103	1 103
Total	5 296.71	1 320.61

In accordance with decision 54/36 of the Executive Committee of the Multilateral Fund, the annual make-up or consumption and maximum emissions for Brazil will be 2.2 metric tonnes up to and including 2013 and zero thereafter.

XXII/9: Hydrochlorofluorocarbons preblended in polyols

Taking into account the importance of the phase-out of hydrochlorofluorocarbons in the polyurethane foams sector for compliance with the adjusted phase-out schedule for hydrochlorofluorocarbons in accordance with decision XIX/6,

Acknowledging with appreciation the efforts by India to bring the issue of hydrochlorofluorocarbons in preblended polyols to the attention of the parties,

Recognizing the fruitful discussions by the parties on the issue at the thirtieth meeting of the Open-ended Working Group,

1. To note with appreciation the cooperative manner in which the members of the Executive Committee of the Multilateral Fund addressed this issue at the Committee's sixty-first meeting through decision 61/47, by agreeing on a framework on eligible incremental costs for parties operating under paragraph 1 of Article 5 of the Montreal Protocol in their transition from the use of hydrochlorofluorocarbons in preblended polyols;

2. To affirm that the issue of the use of hydrochlorofluorocarbons in preblended polyols has been addressed to the satisfaction of the parties;

XXII/10: Destruction technologies with regard to ozone-depleting substances

Recalling the work of the Technology and Economic Assessment Panel and its associated task forces in assessing existing and emerging destruction technologies and in making recommendations for technologies to be added to the list of approved destruction technologies, as last requested in decision XVI/15,

Noting with appreciation the organization and content of the seminar on the environmentally sound management of banks of ozone-depleting substances held pursuant to decision XXI/2,

Acknowledging that one of the significant themes of the seminar was the need to ensure the appropriate destruction of ozone-depleting substances recovered from products and equipment at the end of their lives and that criteria for the verification of destruction of ozone-depleting substances would contribute to increased confidence in destruction capabilities in a number of regions of the world, including in parties operating under paragraph 1 of Article 5 of the Montreal Protocol,

Noting that paragraph 6 of decision XV/9 already includes in Annex II of the report of the Fifteenth Meeting of the Parties a useful code of good housekeeping on the appropriate handling, transportation, monitoring, measurement and control of ozone-depleting substances in destruction facilities that acts as a basis for local management but does not provide a framework that can be used for comprehensive verification,

Recalling decision XV/9 on the approval of destruction technologies and annex II to the report of the Fifteenth Meeting of the Parties,¹ which lists approved destruction processes by source and destruction method,

Recalling also that, by paragraph (c) of decision VII/5 and paragraph 7 of decision XI/13, parties are urged to adopt recovery and recycling technologies for quarantine and pre-shipment uses of methyl bromide, to the extent technically and economically feasible, until alternatives are available,

Recalling further that, by paragraph 6 of decision XX/6, the Technology and Economic Assessment Panel is requested, in its report on opportunities for reductions in methyl bromide use or emissions for quarantine and pre-shipment purposes, to provide to the Meeting of the Parties a list of available methyl bromide recapture technologies for consideration by the parties,

Noting that the Panel was able to provide a list of examples of commercial recapture units in operation in several countries in its report to the Twenty-First Meeting of the Parties,

Noting also that the Panel has reported on a number of emerging technologies for the destruction of ozone-depleting substances that complement those reported on previously,

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

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

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

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

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

XXII/11: Progress by the International Civil Aviation Organization in the transition from the use of halon

Recognizing with appreciation that the International Civil Aviation Organization General Assembly adopted resolution A37-9, on halon replacement, at its thirty-seventh session;

Acknowledging that resolution A37-9 states that there is an urgent need to continue developing and implementing halon alternatives for civil aviation; to intensify development of acceptable halon alternatives for fire-extinguishing systems in cargo compartments and engine/auxiliary power units; and to continue work to improve halon alternatives for hand-held fire extinguishers and directs the International Civil Aviation Organization Council to establish a mandate for the replacement of halon:

(a) In lavatory fire-extinguishing systems used in aircraft produced after a specified date in the 2011 time frame;

(b) In hand-held fire extinguishers used in aircraft produced after a specified date in the 2016 time frame;

(c) In engine and auxiliary power unit fire-extinguishing systems used in aircraft for which applications for type certification will be submitted after a specified date in the 2014 time frame,

1 UNEP/OzL.Pro.15/9.

Recalling that decision XXI/7 expresses the parties' continued support for the implementation of mandatory dates by which halon alternatives will be used in agreed applications for newly designed aircraft and requests that the Technology and Economic Assessment Panel and the Halons Technical Options Committee to continue to engage the International Civil Aviation Organization on this issue and report on progress at the Twenty-Second Meeting of the Parties to the Montreal Protocol,

1. To request the Secretariat to convey to the International Civil Aviation Organization secretariat the parties' appreciation for the continued work of its General Assembly and the adoption of resolution A37/9;
2. To express the parties' continued support for the implementation of mandatory dates by which halon alternatives will be used in previously agreed-on applications in newly designed or newly produced aircraft consistent with resolution A37/9;
3. To request that the Secretariat ask the International Civil Aviation Organization secretariat to send Halon reserves data reported to the International Civil Aviation Organization to the Secretariat annually;;
4. To request that the Technology and Economic Assessment Panel and the Halons Technical Options Committee continue to engage with the International Civil Aviation Organization on further uses of halon on aircraft and report on progress at the Twenty-Third Meeting of the Parties;

XXII/12: Situation of Haiti

Noting with appreciation the efforts and commitment made by the Government of Haiti to sustain compliance with the Montreal Protocol,

Recognizing the extraordinary difficulties now faced by Haiti as a result of the devastating 7.2 magnitude earthquake that occurred on 12 January 2010, which has had adverse effects on the economic and social welfare of the people of Haiti,

Understanding Haiti's commitment to meeting its obligations in respect of phasing out ozone-depleting substances under the Montreal Protocol and its amendments,

1. To encourage all parties to assist Haiti by controlling the export of ozone-depleting substances and technologies dependent on ozone-depleting substances to Haiti through the control of trade in accordance with decision X/9 and other relevant decisions;
2. To request the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol, when considering project proposals for Haiti, to take into account the special situation of Haiti and the special difficulties that it may pose in respect of the phase-out of ozone-depleting substances, including in particular the accelerated phase-out of hydrochlorofluorocarbons, in accordance with the requirements of the Montreal Protocol;
3. To request the implementing agencies to consider providing appropriate assistance to Haiti in the areas of institutional strengthening, capacity-building, data collection and monitoring and control of trade in ozone-depleting substances;
4. Also to request the implementing agencies to consider providing appropriate assistance for the development of a strategy to achieve the reorganization of Haiti's national ozone unit and in the continuation of its efforts to report to the Ozone Secretariat data on consumption of ozone-depleting substances in accordance with the requirements of the Montreal Protocol;
5. That recommendations made by the Implementation Committee under the Non-Compliance Procedure for the Montreal Protocol are to be considered in the light of the difficulties faced by Haiti as a result of the earthquake;

XXII/13: Non-compliance with the Montreal Protocol by Singapore

1. To note that Singapore reported the export of 32 metric tonnes of methyl bromide in 2008 to a State classified as operating under paragraph 1 of Article 5 of the Protocol that is also a State not party to the Copenhagen Amendment to the Montreal Protocol, which places the party in non-compliance with the restriction on trade with non-parties to the Protocol;
2. To urge Singapore to refrain from engaging in trade in methyl bromide with States not party to the Copenhagen Amendment;
3. To monitor closely the party's progress with regard to the implementation of its obligations under the Montreal Protocol;

XXII/14: Data and information provided by the parties in accordance with Article 7 of the Montreal Protocol

Noting with appreciation that 196 parties of the 196 that should have reported data for 2009 have done so and that 68 of those parties reported their data by 30 June 2010 in accordance with decision XV/15,

Noting further that reporting 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 of the Protocol to comply with the Protocol's control measures,

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;

XXII/15: Non-compliance with the Montreal Protocol by Saudi Arabia

Noting that Saudi Arabia ratified the Montreal Protocol and the London and Copenhagen Amendments on 1 March 1993 and is classified as a party operating under paragraph 1 of Article 5 of the Protocol,

Noting also that the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol has approved 2,749,975 United States dollars from the Multilateral Fund to enable Saudi Arabia's compliance in accordance with Article 10 of the Protocol, and that Saudi Arabia had its country programme approved by the Executive Committee in November 2007,

Noting further that Saudi Arabia reported annual consumption for the controlled substances listed in Annex A, group I (chlorofluorocarbons), of 657.8 ODP-tonnes for 2007 and of 365 ODP-tonnes for 2008, which exceeds the party's maximum allowable consumption of 269.8 ODP-tonnes for those controlled substances for those two years, and that the party was therefore in non-compliance with the control measures for chlorofluorocarbons under the Protocol for 2007 and 2008,

Noting, however, that Saudi Arabia reported consumption of Annex A, group I, substances (chlorofluorocarbons) of 190 ODP-tonnes for 2009, which places the party in compliance with the chlorofluorocarbon control measures for that year,

1. To note with appreciation Saudi Arabia's submission of a plan of action to ensure its prompt return to compliance with the Protocol's chlorofluorocarbon control measures, under which, without prejudice to the operation of the financial mechanism of the Protocol, Saudi Arabia specifically commits itself:
 - (a) To reducing chlorofluorocarbon consumption to no greater than zero ODP-tonnes in 2010, save for essential uses that may be authorized by the parties;
 - (b) To monitoring its system for licensing the import and export of ozone-depleting substances;
2. To urge Saudi Arabia to work with the relevant implementing agencies to implement its plan of action to phase out the consumption of chlorofluorocarbons;
3. To monitor closely the progress of Saudi Arabia with regard to the implementation of its plan of action and the phase-out of chlorofluorocarbons. To the degree that the party is working towards 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, Saudi Arabia 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 the Meeting of the Parties in respect of non-compliance;
4. To caution Saudi Arabia, in accordance with item B of the indicative list of measures that may be taken by the Meeting of the Parties in respect of non-compliance, that, in the event that it fails to return to 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 chlorofluorocarbons that are the subject of non-compliance is ceased so that exporting parties are not contributing to a continuing situation of non-compliance;

XXII/16: Non-compliance with the Montreal Protocol by the Republic of Korea

1. To note that the Republic of Korea reported the export of 37 metric tonnes of hydrochlorofluorocarbons in 2008 and 18.2 metric tonnes of hydrochlorofluorocarbons in 2009 to a State classified as not operating under paragraph 1 of Article 5 of the Montreal Protocol that is also a State not party to the Copenhagen Amendment to the Protocol, which places the party in non-compliance with the trade restriction against non-parties to the Protocol;
2. To note, however, that the party has taken measures not to export hydrochlorofluorocarbons to any State not party to the Copenhagen and Beijing Amendments to the Montreal Protocol in 2010 and in subsequent years except to parties operating under paragraph 1 of Article 5 of the Protocol;
3. That no further action is necessary in view of the undertaking by the Republic of Korea not to authorize any further exports of hydrochlorofluorocarbons to any non-party to the relevant amendments to the Montreal Protocol except to parties operating under paragraph 1 of Article 5 of the Protocol;
4. To monitor closely the party's progress with regard to the implementation of its obligations under the Montreal Protocol;

XXII/17: Ratification of the Copenhagen, Montreal and Beijing amendments to the Montreal Protocol by Kazakhstan

1. To note with concern that Kazakhstan is the only party not operating under paragraph 1 of Article 5 of the Montreal Protocol that has not ratified the Copenhagen Amendment to the Protocol;
2. Mindful that this situation prevents Kazakhstan from trading in ozone-depleting substances, and particularly in hydrochlorofluorocarbons, with parties to the Protocol;
3. To urge Kazakhstan to ratify, approve or accede to all amendments to the Montreal Protocol so that it can trade in all ozone-depleting substances with parties to those amendments;

XXII/18: Non-compliance with the Montreal Protocol by Vanuatu

Noting that Vanuatu ratified the Montreal Protocol and the London and Copenhagen Amendments on 21 November 1994 and is classified as a party operating under paragraph 1 of Article 5 of the Protocol,

Noting also that the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol has approved 120,520 United States dollars from the Multilateral Fund and additional assistance through projects approved for the Pacific Island countries, of which Vanuatu is an integral part, to enable Vanuatu's compliance in accordance with Article 10 of the Protocol, and that Vanuatu had its country programme approved by the Executive Committee in March 2002,

Noting further that Vanuatu reported annual consumption of the controlled substances listed in Annex A, group I (chlorofluorocarbons), of 0.3 ODP-tonnes for 2007 and 0.7 ODP-tonnes for 2008, which exceeded the party's maximum allowable consumption of zero ODP-tonnes for those controlled substances for those years, and that the party is therefore in non-compliance with the control measures for those substances under the Protocol for those years,

1. To note with appreciation Vanuatu's submission of a plan of action to ensure its prompt return to compliance with the Protocol's chlorofluorocarbon control measures under which, without prejudice to the operation of the financial mechanism of the Protocol, Vanuatu specifically commits itself:
 - (a) To reducing its consumption of chlorofluorocarbons to no greater than zero ODP-tonnes in 2010, save for essential uses that may be authorized by the parties;
 - (b) To monitoring its import licensing system for ozone-depleting substances;
2. To urge Vanuatu to work with the relevant implementing agencies to implement its plan of action to phase out consumption of chlorofluorocarbons;
3. To monitor closely the progress of Vanuatu with regard to the implementation of its plan of action and the phase-out of chlorofluorocarbons. To the degree that the party is working towards

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, Vanuatu 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 the Meeting of the Parties in respect of non-compliance;

4. To caution Vanuatu, in accordance with item B of the indicative list of measures that may be taken by the Meeting of the Parties in respect of non-compliance, that, in the event that Vanuatu fails to return to 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 chlorofluorocarbons that are the subject of non-compliance is ceased so that exporting parties are not contributing to a continuing situation of non-compliance;

XXII/19: Status of 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 176 of the 181 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 12 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 urge Brunei Darussalam, Ethiopia, Lesotho, San Marino and Timor-Leste, which are the remaining parties to the Montreal Amendment to the Protocol that have not yet established import and export licensing systems for ozone-depleting substances, to do so and to report to the Secretariat by 31 May 2011 in time for the Implementation Committee and the Twenty-Third Meeting of the Parties, in 2011, to review their compliance situation;

2. To encourage Angola, Botswana and Vanuatu, which are the remaining parties to the Protocol that have neither ratified the Montreal Amendment nor established import and export licensing systems for ozone-depleting substances, to do so;

3. 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;

4. 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;

XXII/20: Treatment of stockpiled ozone-depleting substances

Recalling that in decision XVIII/17 the Secretariat was requested to maintain a consolidated record of the cases in which parties had explained that their excess production and consumption of ozone-depleting substances in a given year were a consequence of the production or import of ozone-depleting substances in that year that were stockpiled for some specified purposes in a future year,

Recalling also that the Secretariat was also requested to incorporate that record in the documentation prepared for each meeting of the Implementation Committee, for information purposes only, as well as in the Secretariat's report on data submitted by the Parties in accordance with Article 7 of the Protocol,

Noting that the Secretariat has reported 29 cases since 1999 involving 12 parties that have exceeded the allowed level of production or consumption of a particular ozone-depleting substance in a given year and explained that their excess production or consumption resulted from one of the scenarios mentioned above,

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

XXII/21: Administrative and financial matters: financial reports and budgets

Recalling decision XX1/32 on financial matters,

Taking note of the financial report on the Trust Fund for the Montreal Protocol on Substances that Deplete the Ozone Layer for the biennium 2008–2009, ended 31 December 2009,

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

Welcoming the continued efficient management by the Secretariat of the finances of the Montreal Protocol Trust Fund,

1. To approve the revised 2010 budget in the amount of 4,955,743 United States dollars and the 2011 budget in the amount of \$4,835,740 and to take note of the proposed budget of \$4,943,796 for 2012, as set out in annex I to the report of the Twenty-Second Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer;²
2. To authorize the Secretariat to draw down \$558,807 in 2011 and to note the proposed drawdown of \$666,863 in 2012;
3. To approve, as a consequence of the drawdowns referred to in paragraph 2 above, total contributions to be paid by the parties of \$4,276,933 for 2011 and to note the contributions of \$4,276,933 for 2012, as set out in annex II to the report of the Twenty-Second Meeting of the Parties;
4. That the contributions of individual parties for 2011 shall be listed in annex II to the report of the Twenty-Second Meeting of the Parties;
5. To authorize the Secretariat to maintain the operating cash reserve at 15 per cent of the 2011 budget to be used to meet the final expenditures under the Trust Fund;
6. To urge all parties to pay both their outstanding contributions and their future contributions promptly and in full;

XXII/22: Membership changes on the assessment panels

1. To thank Mr. Jan C. van der Leun, who has served as Co-Chair of the Environmental Effects Assessment Panel since its inception, for his long and outstanding service on behalf of the Montreal Protocol;
2. To endorse Mr. Nigel D. Paul as Co-Chair of the Environmental Effects Assessment Panel;

3. To thank Mr. José Pons Pons for his long and outstanding service as Co-Chair of the Technology and Economic Assessment Panel;

4. To endorse the selection of Ms. Marta Pizano as Co-Chair of the Technology and Economic Assessment Panel for a term of four years, subject to re-endorsement by the parties in accordance with section 2.3 of the terms of reference of the Technology and Economic Assessment Panel;

5. To thank Mr. Thomas Moorehouse for his long and outstanding service as a Senior Expert of the Technology and Economic Assessment Panel and as a member and Co-Chair of the Halon Technical Options Committee;

6. To endorse the selection of Ms. Bella Maranion as a Senior Expert of the Technology and Economic Assessment Panel for a term of four years, subject to re-endorsement by the parties in accordance with section 2.3 of the terms of reference of the Technology and Economic Assessment Panel;

7. To request the Technology and Economic Assessment Panel and its technical option committees to draw up guidelines for the nomination of experts by the parties, in accordance with section 2.9 of the terms of reference of the Technology and Economic Assessment Panel, for presentation to the parties prior to the thirty-first meeting of the Open-Ended Working Group;

8. To request that the Technology and Economic Assessment Panel consider the need for balance and appropriate expertise when appointing members of the technical options committees, task forces and other subsidiary groups in accordance with sections 2.1, 2.5 and 2.8 of the terms of reference of the Panel;

XXII/23: 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 2010;

2. To confirm the positions of Egypt, Jordan, the Russian Federation, Saint Lucia and the United States of America as members of the Committee for one further year and to select Algeria, Armenia, Germany, Nicaragua and Sri Lanka as members of the Committee for a two-year period beginning 1 January 2011;

3. To note the selection of Ms. Elisabeth Munzert (Germany) to serve as President and of Mr. Ghazi Al Odat (Jordan) to serve as Vice-President and Rapporteur of the Committee for one year beginning 1 January 2011;

XXII/24: 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 2010;

2. To endorse the selection of Australia, Belgium, the Czech Republic, France, Japan, Switzerland 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 Argentina, China, Cuba, Grenada, Kenya, Kuwait and Morocco as members representing parties operating under that paragraph, for one year beginning 1 January 2011;

3. To note the selection of Mr. Patrick John McInerney (Australia) to serve as Chair and Mr. Wuruz Wen (China) to serve as Vice-Chair of the Executive Committee for one year beginning 1 January 2011;

XXII/25: Co-Chairs of the Open-ended Working Group of the Parties to the Montreal Protocol

To endorse the selection of Mr. Ndiaye Cheikh Sylla (Senegal) and Ms. Gudi Alkemade (Netherlands) as Co-Chairs of the Open-ended Working Group of the Parties to the Montreal Protocol in 2011;

XXII/26: Twenty-Third Meeting of the Parties to the Montreal Protocol

To convene the Twenty-Third Meeting of the Parties to the Montreal Protocol in Bali, Indonesia, and to announce a firm date for the meeting as soon as possible.

Comments made at the time of adoption of decisions

207. Following the adoption of the decision on administrative and financial matters the representative of Japan commented on footnote 1 of annex I to that decision, relating to the parties' desire to retain the services of the current Executive Secretary of the Montreal Protocol through 2015. He emphasized that there was very strong support for raising the level of the position from D-2 to the level of Assistant Secretary-General and that the parties called upon the President of the Bureau of the Twenty-First Meeting of the Parties to work with the Executive Director of UNEP to explore any means to retain the Executive Secretary through 2015 and to convey to the Secretary-General of the United Nations the parties' will in that regard. Asking that his comments be reflected in the present report, he also emphasized his country's strong desire that the President and the Executive Director should take the steps outlined in the footnote to ensure the continuity of the current Executive Secretary.

XI. Adoption of the report of the Twenty-Second Meeting of the Parties

208. The present report was adopted on Friday, 12 November 2010, on the basis of the draft report submitted to the parties.

209. Following adoption of the report Ms. Gudi Alkemade (Netherlands), speaking on behalf of herself and Mr. Ndiaye Cheikh Sylla (Senegal), expressed her gratitude to the parties for their trust and support in selecting her and Mr. Sylla as Co-Chairs of the Open-Ended Working Group for 2011. She pledged their best efforts in working with the parties and the Secretariat to achieve success in 2011.

XII. Closure of the meeting

210. Following the customary exchange of courtesies, the President declared the meeting closed at 8.15 p.m. on Friday, 12 November 2010.

Annex I

Trust Fund for the Montreal Protocol on Substances that Deplete the Ozone Layer

Approved 2010 and 2011 and proposed 2012 budgets (in United States dollars)

		w/m	2010 Approved revision	w/m	2011	w/m	2012	
10	Project personnel component							
	1100							
		Project personnel						
	1101	Executive Secretary (D-2) (shared with the Vienna Convention, (VC)) ¹	6	161 900	6	166 757	6	171 760
	1102	Deputy Executive Secretary (D-1)	12	252 000	12	259 560	12	267 347
	1103	Senior Legal Officer (P-5)	12	196 730	12	202 632	12	208 711
	1104	Senior Scientific Affairs Officer (P-5) (shared with VC)	6	128 159	6	130 000	6	133 900
	1105	Administrative Officer (P-5) (paid by UNEP)	12	—	—	—	—	—
	1106	Database Manager (Information Systems and Technology (P-4))	12	145 743	12	150 115	12	154 618
	1107	Programme Officer (Communication and Information (P-3)) (paid from VC)	12		12		12	
	1108	Programme Officer (Monitoring and Compliance (P4))	12	185 400	12	188 000	12	193 640
	1199	<i>Subtotal</i>		<i>1,069,932</i>		<i>1 097 064</i>		<i>1 129 976</i>
	1200	Consultants						
	1201	Assistance in data-reporting, analysis and promotion of the implementation of the Protocol		40 000		40 000		40 000
	1299	<i>Subtotal</i>		<i>40,000</i>		<i>40 000</i>		<i>40 000</i>
	1300	Administrative support						
	1301	Administrative Assistant (G-7) (shared with VC)	6	21 250	6	21 250	6	21 888
	1302	Administrative Assistant (G-6)	12	26 625	12	27 000	12	27 810
	1303	Programme Assistant (G-6) (paid from VC)	12	—	12	—	12	—

		w/m	2010 Approved revision	w/m	2011	w/m	2012
1304	Programme Assistant (Data) (G-6) (shared with VC)	6	17 573	6	17 573	6	17,573
1305	Information Assistant (Research) (G-6) (shared with VC)	6	16 295	6	16 295	6	16,295
1306	Information management (Assistant/Documentation Clerk) (G-6)	12	27 560	12	27 560	12	27,560
1307	Data Assistant (Computer Information Systems Assistant) (G-7)	12	42 174	12	42 174	12	43,439
1308	Administrative Assistant - Fund (G-7) (paid by UNEP)	12	—	12	—	12	—
1309	Team Assistant/Logistics Assistant (G-4) (paid by UNEP)	12	—	12	—	12	—
1310	Meetings services (Assistant/Bilingual Senior Secretary) (G-6) (paid from VC)	12	—	12	—	12	—
1320	Temporary assistance	12	21 300		21 300		21,300
1321	Open-ended Working Group Meetings ²		523 704		490 000		490,000
1322	Preparatory and parties meetings (shared with VC every three years, applies to the Twenty-Third Meeting of the Parties to the Montreal Protocol and Ninth meeting of the Conference of the Parties to the Vienna Convention in 2011)		500 000		350 000		500,000
1323	Assessment panel meetings		100 000		75 000		75,000
1324	Bureau meeting		20 000		20 000		20,000
1325	Implementation Committee meetings		111 200		111 200		111,200
1326	MP informal consultation meetings		10 000		10 000		10,000
1399	<i>Subtotal</i>		<i>1 437 681</i>		<i>1 229 352</i>		<i>1 382 065</i>
1600	Travel on official business						
1601	Staff travel on official business		210 000		210 000		210 000

		w/m	2010	w/m	2011	w/m	2012
			Approved revision				
	1602	Conference services staff travel on official business	15 000		15 000		15 000
	1699	<i>Subtotal</i>	225,000		225 000		225 000
1999	Component total		2,772,613		2 591 416		2 777 041
2000	Contracts³				70 000		
30	Meeting/participation component						
	3300	Support for participation					
	3301	Assessment panel meetings ⁴	500 000		500 000		500 000
	3302	Preparatory and party meetings (Montreal Protocol bears the cost of the participation of MP & VC representatives from article 5 parties at the joint 23rd MOP and 9th COP in 2011)	350 000		350 000		350 000
	3303	Open-ended Working Group meetings	300 000		300 000		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	<i>Subtotal</i>	1 305 000		1 305 000		1 305 000
3999	Component total		1 305 000		1 305 000		1 305 000
40	Equipment and premises component						
	4100	Expendable equipment (items under \$1,500)					
	4101	Miscellaneous expendables (shared with VC)	22 000		22 000		22 000
	4199	<i>Subtotal</i>	22,000		22 000		22 000
	4200	Non-expendable equipment					
	4201	Personal computers and accessories	10 000		20 000		5 000
	4202	Portable computers	5 000		5 000		15 000
	4203	Other office equipment (server, fax, scanner, furniture, etc.)	20 000		20 000		10 000
	4204	Photocopiers	5 000		5 000		5 000
	4299	<i>Subtotal</i>	40 000		50 000		35 000

		w/m	2010 Approved revision	w/m	2011	w/m	2012
	4300	Premises					
		4301 Rental of office premises (shared with VC)	48 000		48 000		48 000
	4399	<i>Subtotal</i>	<i>48 000</i>		<i>48 000</i>		<i>48 000</i>
4999	Component total		110 000		120 000		105 000
50	Miscellaneous component						
	5100	Operation and maintenance of equipment					
		5101 Maintenance of equipment and others (shared with VC)	25 000		25 000		25 000
	5199	<i>Subtotal</i>	<i>25 000</i>		<i>25 000</i>		<i>25 000</i>
	5200	Reporting costs					
		5201 Reporting	45 000		35 000		35 000
		5202 Reporting (assessment panels)	10 000		10 000		10 000
		5203 Reporting (Protocol awareness)	5 000		5 000		5 000
	5299	<i>Subtotal</i>	<i>60 000</i>		<i>50 000</i>		<i>50 000</i>
	5300	Sundry					
		5301 Communications	36 000		36 000		36 000
		5302 Freight charges	35 000		35 000		35 000
		5303 Training	12 000		12 000		12 000
		5304 Others (International Ozone Day)	10 000		10 000		10 000
	5399	<i>Subtotal</i>	<i>93 000</i>		<i>93 000</i>		<i>93 000</i>
	5400	Hospitality					
		5401 Hospitality	20 000		25 000		20 000
	5499	<i>Subtotal</i>	<i>20 000</i>		<i>25 000</i>		<i>20 000</i>
5999	Component total		198,000		193 000		188 000
99	Total direct project cost		4 385 613		4 279 416		4 375 041
	<i>Programme support costs (13 per cent)</i>		<i>570 130</i>		<i>556 324</i>		<i>568 755</i>
	Grand total (inclusive of programme support costs)		4 955 743		4 835 740		4 943 796
	Operating cash reserve exclusive of programme support costs		—		—		—
	Total budget		4 955 743		4 835 740		4 943 796
	Drawdown⁵		678 810		558 807		666 863
	Contribution from the parties		4 276 933		4 276 933		4 276 933

¹ In the light of the unparalleled effectiveness of the Montreal Protocol, the parties express their strong desire to ensure continued leadership and consistency in the Ozone Secretariat during the period leading up to 2015, which is a critical period for the implementation of the most recent adjustment to that treaty. There is a pressing need to retain the current Executive Secretary of the Ozone Secretariat through 2015 to provide this leadership and consistency during this critical period.

The parties therefore request the President of the Bureau of the Twenty-First Meeting of the Parties to work with the Executive Director of the United Nations Environment Programme

to explore any means to retain the current Executive Secretary through 2015 and to convey to the Secretary-General of the United Nations the parties' request to find means to extend the tenure of the current Executive Secretary of the Ozone Secretariat through 2015.

The parties authorize the use of budget line transfers of funds without increasing the size of the budget if such transfers are necessary to facilitate the extension. Regardless of any change in the post of Executive Secretary that may be used to achieve the extension through 2015, the position will revert to that of a non-extended D-2 position at the end of 2015 or, if the incumbent leaves earlier, at that earlier date.

² An amount up to \$400,000 had been added to the 2010 budget line to accommodate the cost of additional activities discussed by the Twenty-First Meeting of the Parties. Expenditure against this activity was \$50,000; hence budget line 1321 in 2010 is being reduced by \$350,000. The savings revert to the Trust Fund.

The parties request the Ozone Secretariat, in cases where Open-ended Working Group and Multilateral Fund Executive Committee meetings are held back to back, to consult with the Multilateral Fund Secretariat with a view to selecting meeting locations which are the most cost-effective, taking into account the budgets of both secretariats.

³ The Twenty-Second Meeting of the Parties approved a total budget for an evaluation of the Financial Mechanism of up to \$200,000 with the understanding that \$70,000 would be available to the Secretariat in 2011 to start the application and bidding process needed to hire an appropriate entity to undertake the evaluation and that the Twenty-Third Meeting of the Parties would decide on the funding source for the balance of the budget for the evaluation.

⁴ The budget line covers the participation of Technology and Economic Assessment Panel experts to enable the timely completion of the work requested by the parties.

⁵ Drawdown levels were set with a view to maintaining the level of contributions constant through 2013. A drawdown for 2012 has been included by the Secretariat only for information. The amount may be changed by the parties when the budget proposals for 2012 and 2013 are presented for consideration in 2011.

Annex II

Trust Fund for the Montreal Protocol on Substances that Deplete the Ozone Layer

Scale of contributions by the parties for 2011 and 2012 based on the United Nations scale of assessments

(General Assembly resolution A/64/482/Add.1 of 28 December 2009 with a maximum assessment rate of 22 per cent)

(in United States dollars)

	Name of party	UN scale of assessment for 2010–2012	Adjusted UN scale to exclude non-contributors	Adjusted UN scale with 22% maximum assessment rate considered	2011 contributions by parties	Indicative 2012 contributions by parties
1.	Afghanistan	0.004	0.000	0.000	—	—
2.	Albania	0.010	0.000	0.000	—	—
3.	Algeria	0.128	0.128	0.128	5 465	5 465
4.	Andorra	0.007	0.000	0.000	—	—
5.	Angola	0.010	0.000	0.000	—	—
6.	Antigua and Barbuda	0.002	0.000	0.000	—	—
7.	Argentina	0.287	0.287	0.287	12 255	12 255
8.	Armenia	0.005	0.000	0.000	—	—
9.	Australia	1.933	1.933	1.930	82 537	82 537
10.	Austria	0.851	0.851	0.850	36 337	36 337
11.	Azerbaijan	0.015	0.000	0.000	—	—
12.	Bahamas	0.018	0.000	0.000	—	—
13.	Bahrain	0.039	0.000	0.000	—	—
14.	Bangladesh	0.010	0.000	0.000	—	—
15.	Barbados	0.008	0.000	0.000	—	—
16.	Belarus	0.042	0.000	0.000	—	—
17.	Belgium	1.075	1.075	1.073	45 901	45 901
18.	Belize	0.001	0.000	0.000	—	—
19.	Benin	0.003	0.000	0.000	—	—
20.	Bhutan	0.001	0.000	0.000	—	—
21.	Bolivia (Plurinational State of)	0.007	0.000	0.000	—	—
22.	Bosnia and Herzegovina	0.014	0.000	0.000	—	—
23.	Botswana	0.018	0.000	0.000	—	—
24.	Brazil	1.611	1.611	1.608	68 788	68 788
25.	Brunei Darussalam	0.028	0.000	0.000	—	—
26.	Bulgaria	0.038	0.000	0.000	—	—
27.	Burkina Faso	0.003	0.000	0.000	—	—
28.	Burundi	0.001	0.000	0.000	—	—
29.	Cambodia	0.003	0.000	0.000	—	—
30.	Cameroon	0.011	0.000	0.000	—	—
31.	Canada	3.207	3.207	3.202	136 935	136 935

	Name of party	UN scale of assessment for 2010–2012	Adjusted UN scale to exclude non-contributors	Adjusted UN scale with 22% maximum assessment rate considered	2011 contributions by parties	Indicative 2012 contributions by parties
32.	Cape Verde	0.001	0.000	0.000	—	—
33.	Central African Republic	0.001	0.000	0.000	—	—
34.	Chad	0.002	0.000	0.000	—	—
35.	Chile	0.236	0.236	0.236	10 077	10 077
36.	China	3.189	3.189	3.184	136 167	136 167
37.	Colombia	0.144	0.144	0.144	6 149	6 149
38.	Comoros	0.001	0.000	0.000	—	—
39.	Congo	0.003	0.000	0.000	—	—
40.	Cook Islands	-	0.000	0.000	—	—
41.	Costa Rica	0.034	0.000	0.000	—	—
42.	Côte d'Ivoire	0.010	0.000	0.000	—	—
43.	Croatia	0.097	0.000	0.000	—	—
44.	Cuba	0.071	0.000	0.000	—	—
45.	Cyprus	0.046	0.000	0.000	—	—
46.	Czech Republic	0.349	0.349	0.348	14 902	14 902
47.	Democratic People's Republic of Korea	0.007	0.000	0.000	—	—
48.	Democratic Republic of the Congo	0.003	0.000	0.000	—	—
49.	Denmark	0.736	0.736	0.735	31 426	31 426
50.	Djibouti	0.001	0.000	0.000	—	—
51.	Dominica	0.001	0.000	0.000	—	—
52.	Dominican Republic	0.042	0.000	0.000	—	—
53.	Ecuador	0.040	0.000	0.000	—	—
54.	Egypt	0.094	0.000	0.000	—	—
55.	El Salvador	0.019	0.000	0.000	—	—
56.	Equatorial Guinea	0.008	0.000	0.000	—	—
57.	Eritrea	0.001	0.000	0.000	—	—
58.	Estonia	0.040	0.000	0.000	—	—
59.	Ethiopia	0.008	0.000	0.000	—	—
60.	European Union	2.500	2.500	2.496	106 747	106 747
61.	Fiji	0.004	0.000	0.000	—	—
62.	Finland	0.566	0.566	0.565	24 168	24 168
63.	France	6.123	6.123	6.113	261 445	261 445
64.	Gabon	0.014	0.000	0.000	—	—
65.	Gambia	0.001	0.000	0.000	—	—
66.	Georgia	0.006	0.000	0.000	—	—
67.	Germany	8.018	8.018	8.005	342 360	342 360
68.	Ghana	0.006	0.000	0.000	—	—
69.	Greece	0.691	0.691	0.690	29 505	29 505
70.	Grenada	0.001	0.000	0.000	—	—

	Name of party	UN scale of assessment for 2010–2012	Adjusted UN scale to exclude non-contributors	Adjusted UN scale with 22% maximum assessment rate considered	2011 contributions by parties	Indicative 2012 contributions by parties
71.	Guatemala	0.028	0.000	0.000	—	—
72.	Guinea	0.002	0.000	0.000	—	—
73.	Guinea-Bissau	0.001	0.000	0.000	—	—
74.	Guyana	0.001	0.000	0.000	—	—
75.	Haiti	0.003	0.000	0.000	—	—
76.	Holy See	0.001	0.000	0.000	—	—
77.	Honduras	0.008	0.000	0.000	—	—
78.	Hungary	0.291	0.291	0.291	12 425	12 425
79.	Iceland	0.042	0.000	0.000	—	—
80.	India	0.534	0.534	0.533	22 801	22 801
81.	Indonesia	0.238	0.238	0.238	10 162	10 162
82.	Iran (Islamic Republic of)	0.233	0.233	0.233	9 949	9 949
83.	Iraq	0.020	0.000	0.000	—	—
84.	Ireland	0.498	0.498	0.497	21 264	21 264
85.	Israel	0.384	0.384	0.383	16 396	16 396
86.	Italy	4.999	4.999	4.991	213 452	213 452
87.	Jamaica	0.014	0.000	0.000	—	—
88.	Japan	12.530	12.530	12.509	535 017	535 017
89.	Jordan	0.014	0.000	0.000	—	—
90.	Kazakhstan	0.076	0.000	0.000	—	—
91.	Kenya	0.012	0.000	0.000	—	—
92.	Kiribati	0.001	0.000	0.000	—	—
93.	Kuwait	0.263	0.263	0.263	11 230	11 230
94.	Kyrgyzstan	0.001	0.000	0.000	—	—
95.	Lao People's Democratic Republic	0.001	0.000	0.000	—	—
96.	Latvia	0.038	0.000	0.000	—	—
97.	Lebanon	0.033	0.000	0.000	—	—
98.	Lesotho	0.001	0.000	0.000	—	—
99.	Liberia	0.001	0.000	0.000	—	—
100.	Libyan Arab Jamahiriya	0.129	0.129	0.129	5 508	5 508
101.	Liechtenstein	0.009	0.000	0.000	—	—
102.	Lithuania	0.065	0.000	0.000	—	—
103.	Luxembourg	0.090	0.000	0.000	—	—
104.	Madagascar	0.003	0.000	0.000	—	—
105.	Malawi	0.001	0.000	0.000	—	—
106.	Malaysia	0.253	0.253	0.253	10 803	10 803
107.	Maldives	0.001	0.000	0.000	—	—
108.	Mali	0.003	0.000	0.000	—	—
109.	Malta	0.017	0.000	0.000	—	—
110.	Marshall Islands	0.001	0.000	0.000	—	—

	Name of party	UN scale of assessment for 2010–2012	Adjusted UN scale to exclude non-contributors	Adjusted UN scale with 22% maximum assessment rate considered	2011 contributions by parties	Indicative 2012 contributions by parties
111.	Mauritania	0.001	0.000	0.000	—	—
112.	Mauritius	0.011	0.000	0.000	—	—
113.	Mexico	2.356	2.356	2.352	100 599	100 599
114.	Micronesia (Federated States of)	0.001	0.000	0.000	—	—
115.	Monaco	0.003	0.000	0.000	—	—
116.	Mongolia	0.002	0.000	0.000	—	—
117.	Montenegro	0.004	0.000	0.000	—	—
118.	Morocco	0.058	0.000	0.000	—	—
119.	Mozambique	0.003	0.000	0.000	—	—
120.	Myanmar	0.006	0.000	0.000	—	—
121.	Namibia	0.008	0.000	0.000	—	—
122.	Nauru	0.001	0.000	0.000	—	—
123.	Nepal	0.006	0.000	0.000	—	—
124.	Netherlands	1.855	1.855	1.852	79 206	79 206
125.	New Zealand	0.273	0.273	0.273	11 657	11 657
126.	Nicaragua	0.003	0.000	0.000	—	—
127.	Niger	0.002	0.000	0.000	—	—
128.	Nigeria	0.078	0.000	0.000	—	—
129.	Niue	-	0.000	0.000	—	—
130.	Norway	0.871	0.871	0.870	37 191	37 191
131.	Oman	0.086	0.000	0.000	—	—
132.	Pakistan	0.082	0.000	0.000	—	—
133.	Palau	0.001	0.000	0.000	—	—
134.	Panama	0.022	0.000	0.000	—	—
135.	Papua New Guinea	0.002	0.000	0.000	—	—
136.	Paraguay	0.007	0.000	0.000	—	—
137.	Peru	0.090	0.000	0.000	—	—
138.	Philippines	0.090	0.000	0.000	—	—
139.	Poland	0.828	0.828	0.827	35 355	35 355
140.	Portugal	0.511	0.511	0.510	21 819	21 819
141.	Qatar	0.135	0.135	0.135	5 764	5 764
142.	Republic of Korea	2.260	2.260	2.256	96 499	96 499
143.	Republic of Moldova	0.002	0.000	0.000	—	—
144.	Romania	0.177	0.177	0.177	7 558	7 558
145.	Russian Federation	1.602	1.602	1.599	68 404	68 404
146.	Rwanda	0.001	0.000	0.000	—	—
147.	Saint Kitts and Nevis	0.001	0.000	0.000	—	—
148.	Saint Lucia	0.001	0.000	0.000	—	—
149.	Saint Vincent and the	0.001	0.000	0.000	—	—

	Name of party	UN scale of assessment for 2010–2012	Adjusted UN scale to exclude non-contributors	Adjusted UN scale with 22% maximum assessment rate considered	2011 contributions by parties	Indicative 2012 contributions by parties
	Grenadines					
150.	Samoa	0.001	0.000	0.000	—	—
151.	San Marino	0.003	0.000	0.000	—	—
152.	Sao Tome and Principe	0.001	0.000	0.000	—	—
153.	Saudi Arabia	0.830	0.830	0.829	35 440	35 440
154.	Senegal	0.006	0.000	0.000	—	—
155.	Serbia	0.037	0.000	0.000	—	—
156.	Seychelles	0.002	0.000	0.000	—	—
157.	Sierra Leone	0.001	0.000	0.000	—	—
158.	Singapore	0.335	0.335	0.334	14 304	14 304
159.	Slovakia	0.142	0.142	0.142	6 063	6 063
160.	Slovenia	0.103	0.103	0.103	4 398	4 398
161.	Solomon Islands	0.001	0.000	0.000	—	—
162.	Somalia	0.001	0.000	0.000	—	—
163.	South Africa	0.385	0.385	0.384	16 439	16 439
164.	Spain	3.177	3.177	3.172	135 654	135 654
165.	Sri Lanka	0.019	0.000	0.000	—	—
166.	Sudan	0.010	0.000	0.000	—	—
167.	Suriname	0.003	0.000	0.000	—	—
168.	Swaziland	0.003	0.000	0.000	—	—
169.	Sweden	1.064	1.064	1.062	45 432	45 432
170.	Switzerland	1.130	1.130	1.128	48 250	48 250
171.	Syrian Arab Republic	0.025	0.000	0.000	—	—
172.	Tajikistan	0.002	0.000	0.000	—	—
173.	Thailand	0.209	0.209	0.209	8 924	8 924
174.	The former Yugoslav Republic of Macedonia	0.007	0.000	0.000	—	—
175.	Timor-Leste	0.001	0.000	0.000	—	—
176.	Togo	0.001	0.000	0.000	—	—
177.	Tonga	0.001	0.000	0.000	—	—
178.	Trinidad and Tobago	0.044	0.000	0.000	—	—
179.	Tunisia	0.030	0.000	0.000	—	—
180.	Turkey	0.617	0.617	0.616	26 345	26 345
181.	Turkmenistan	0.026	0.000	0.000	—	—
182.	Tuvalu	0.001	0.000	0.000	—	—
183.	Uganda	0.006	0.000	0.000	—	—
184.	Ukraine	0.087	0.000	0.000	—	—
185.	United Arab Emirates	0.391	0.391	0.390	16 695	16 695
186.	United Kingdom of Great Britain and Northern Ireland	6.604	6.604	6.593	281 983	281 983

	Name of party	UN scale of assessment for 2010–2012	Adjusted UN scale to exclude non-contributors	Adjusted UN scale with 22% maximum assessment rate considered	2011 contributions by parties	Indicative 2012 contributions by parties
187.	United Republic of Tanzania	0.008	0.000	0.000	—	—
188.	United States of America	22.000	22.000	21.964	939 375	939 375
189.	Uruguay	0.027	0.000	0.000	—	—
190.	Uzbekistan	0.010	0.000	0.000	—	—
191.	Vanuatu	0.001	0.000	0.000	—	—
192.	Venezuela (Bolivarian Republic of)	0.314	0.314	0.313	13 407	13 407
193.	Vietnam	0.033	0.000	0.000	—	—
194.	Yemen	0.010	0.000	0.000	—	—
195.	Zambia	0.004	0.000	0.000	—	—
196.	Zimbabwe	0.003	0.000	0.000	—	—
	Total	102.501	100.165	100.000	4 276 933	4 276 933

Declaration on the global transition away from hydrochlorofluorocarbons (HCFCs) and chlorofluorocarbons (CFCs)

Recognizing that hydrofluorocarbons (HFCs) are replacements for ozone-depleting substances being phased out under the Montreal Protocol, and that the projected increase in their use is a major challenge for the world's climate system that must be addressed through concerted international action,

Recognizing also that the Montreal Protocol is well-suited to making progress in replacing hydrochlorofluorocarbons (HCFCs) and chlorofluorocarbons (CFCs) with low-global warming potential alternatives,

Mindful that certain high-global warming potential alternatives to HCFCs and other ozone-depleting substances are covered by the United Nations Framework Convention on Climate Change and its Kyoto Protocol and that action under the Montreal Protocol should not have the effect of exempting them from the scope of the commitments contained thereunder,

Interested in harmonizing appropriate policies toward a global transition from HCFCs to environmentally sound alternatives,

Encourage all Parties to promote policies and measures aimed at selecting low-GWP alternatives to HCFCs and other ozone-depleting substances;;

Declare our intent to pursue further action under the Montreal Protocol aimed at transitioning the world to environmentally sound alternatives to HCFCs and CFCs.

Afghanistan, Antigua and Barbuda, Armenia, Austria, Australia, Bahamas, Bangladesh, Belgium, Belize, Benin, Bosnia and Herzegovina, Bulgaria, Burkina Faso, Cambodia, Cameroon, Canada, Colombia, Comoros, Congo, Cook Islands, Costa Rica, Cyprus, Czech Republic, Democratic Republic of the Congo, Denmark, Dominican Republic, Egypt, Estonia, European Union, Federated States of Micronesia, Finland, France, Gabon, Gambia, Georgia, Germany, Ghana, Greece, Haiti, Hungary, Indonesia, Iraq, Ireland, Italy, Japan, Kazakhstan, Kyrgyzstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Madagascar, Mali, Mauritius, Macedonia, Malta, Mexico, Micronesia, Montenegro, Mozambique, Myanmar, Netherlands, New Zealand, Nicaragua, Niger, Nigeria, Norway, Palau, Philippines, Poland, Portugal, Republic of Moldova, Romania, Saint Lucia, Sao Tome and Principe, Senegal, Serbia, Slovakia, Slovenia, Spain, Somalia, Sri Lanka, Sweden, Switzerland, Timor-Leste, Togo, Tuvalu, Uganda, United Kingdom of Great Britain and Northern Ireland, United States of America, Viet Nam

XXII/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 at 1 November 2010, 195 parties had ratified the London Amendment to the Montreal Protocol, 192 parties had ratified the Copenhagen Amendment to the Montreal Protocol, 181 parties had ratified the Montreal Amendment to the Montreal Protocol and 165 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;

XXII/2: Terms of reference for an evaluation of the financial mechanism of the Montreal Protocol

1. To approve the terms of reference for an evaluation of the financial mechanism of the Montreal Protocol contained in the annex to the present decision;
2. To set up a steering panel of eight members to supervise the evaluation process, to select an evaluator to carry out the evaluation, to act as a point of contact for the evaluator during the evaluation and to ensure that the terms of reference are implemented in the most appropriate manner possible;
3. To select from among the parties to the Montreal Protocol the following eight parties to serve as the members of the steering panel: Austria, Canada, Colombia, India, Japan, Nigeria, the former Yugoslav Republic of Macedonia and the United States of America, thereby ensuring that the appointed panel has equal representation of individuals selected by parties operating under paragraph 1 of Article 5 of the Montreal Protocol and parties not so operating;
4. To request the Ozone Secretariat to finalize the procedure for the selection of the qualified external and independent evaluator; on the basis of submitted proposals, the Secretariat shall prepare a shortlist of qualified applicants and facilitate the review of relevant proposals by the steering panel;
5. To instruct the steering panel to organize its meetings with the assistance of the Ozone Secretariat with dates and venues selected, as far as possible, to coincide with other Montreal Protocol meetings, thereby reducing related costs;
6. To approve a total budget for the evaluation of up to 200,000 United States dollars, with the amount of \$70,000 to start the application bidding process to come from the 2011 budget of the Trust Fund for the Montreal Protocol on the understanding that the parties will decide in 2011 on the funding source for the balance of the budget;
7. To ensure that the final report and recommendations of the evaluator are made available to parties for consideration at the Twenty-Fourth Meeting of the Parties;

Annex to decision XXII/2

Terms of reference for an evaluation of the financial mechanism of the Montreal Protocol

A. Preamble

1. The achievements of the financial mechanism of the Montreal Protocol have often been recognized by the international community, and there is no doubt that the mechanism is both a cornerstone of the Protocol and an outstanding example of multilateral cooperation. Indeed, by the end of 2009 the Multilateral Fund had approved projects to phase out the consumption and production of about 458,000 ozone-depleting-potential (ODP) tonnes of ozone-depleting substances in developing

countries, and over 85 per cent of this amount had already been phased out. As a result of those activities, nearly all parties operating under paragraph 1 of Article 5 of the Protocol are in compliance with their obligations under the Protocol, while most of their consumption and production of ozone-depleting substances, except for hydrochlorofluorocarbons (HCFCs), has been eliminated.

2. The financial mechanism was established by Article 10 of the Montreal Protocol to provide financial and technical cooperation to parties operating under paragraph 1 of Article 5 to enable their compliance with the Protocol's control measures. The Fourth Meeting of the Parties to the Montreal Protocol recognized the need to review periodically the operation of the financial mechanism to ensure maximum effectiveness in pursuing the goals of the Montreal Protocol. Since its inception in 1991, the mechanism, which includes the Multilateral Fund, an Executive Committee, a Secretariat and implementing and bilateral agencies, has been evaluated twice by the parties, in 1994–1995 and 2003–2004.

3. The year 2010 is a landmark year in the history of both the Montreal Protocol and the financial mechanism, as virtually all remaining production and consumption of chlorofluorocarbons (CFCs), halons and carbon tetrachloride was to be phased out by 1 January 2010. In the light of this major milestone, it is particularly timely for the parties to the Protocol to take a retrospective look at the achievements of the financial mechanism, the challenges that it has faced, the manner in which they have been addressed and the lessons that have been learned, with a view to ensuring that the mechanism is well placed to address the challenges of the future effectively. Those challenges include phasing out HCFCs and the remaining consumption of methyl bromide and implementing ozone-depleting substance destruction pilot projects.

B. Purpose

4. In the light of the above, and considering that it has been more than five years since the last evaluation was conducted, the Twenty-Second Meeting of the Parties decided that it was appropriate to evaluate and review the financial mechanism with a view to ensuring its effective functioning in meeting the needs of parties operating under paragraph 1 of Article 5 and parties not so operating in accordance with Article 10 of the Protocol. The study should be based on the present terms of reference, defined by the scope described below and carried out by an independent evaluator and completed by May 2012, in time for consideration by the Open-ended Working Group of the Parties to the Montreal Protocol at its thirty-second meeting.

C. Scope

5. In carrying out the study, the evaluator should consider the results, policy framework, organizational structure and lessons learned associated with the financial mechanism as follows:

- (a) Results of the financial mechanism:
 - (i) Extent to which both investment and non-investment projects approved under the Multilateral Fund have contributed to phasing out ozone-depleting substances in parties operating under paragraph 1 of Article 5 in accordance with Montreal Protocol compliance targets;
 - (ii) Total reductions of ozone-depleting substances in ODP-tonnes and metric tonnes resulting from Multilateral Fund activities;
 - (iii) Analysis of other environmental and health co-benefits, including climate benefits, as well as adverse effects resulting from activities funded by the Multilateral Fund to phase out ozone-depleting substances;
 - (iv) Comparison of ozone-depleting substance phase-out planned in approved projects and ozone-depleting substance phase-out achieved;
 - (v) Comparison of planned cost-effectiveness of approved projects and actual cost-effectiveness;
 - (vi) Comparison of planned project implementation time and implementation time achieved;
 - (vii) Effectiveness of capacity-building provided, including institutional strengthening and compliance assistance;
- (b) Policies and procedures:
 - (i) Effectiveness of timing between meetings, submission deadlines and reporting deadlines;

-
- (ii) Effectiveness, consistency and efficiency of procedures and practices to develop, review and approve project proposals under the Multilateral Fund;
 - (iii) Ability of the project and activity planning and implementation process to ensure compliance;
 - (iv) Effectiveness and efficiency of monitoring, reporting procedures and practices;
 - (v) Ability and efficiency of internal evaluation and verification mechanisms to monitor and confirm results, including an analysis of existing databases;
 - (vi) Extent to which policies and procedures are adapted or improved based on experiences and relevant circumstances;
- (c) Other issues:
- (i) Review of the distribution of funding among regions where parties operating under paragraph 1 of Article 5 are located, as well as between low-volume consuming countries and non-low-volume consuming countries;
 - (ii) Extent to which programmes and projects approved under the financial mechanism have facilitated the implementation of the technology transfer provisions under Articles 10 and 10A of the Montreal Protocol and related decisions of the Parties, taking into account the geographical origin by region of technology provided in a representative sample of projects;
- (d) Lessons learned:
- (i) Lessons learned in view of the future challenges of the Montreal Protocol and the Multilateral Fund;
 - (ii) Lessons learned for other international environmental institutions and agreements.

D. Form and presentation of the study

6. The study shall be presented using a practical, easy-to-use and easy-to-read layout, and should include a comprehensive summary for policymakers of some 30 pages and a detailed index followed by the body of the study and its annexes.

E. Conclusions and recommendations

7. In carrying out the study, the evaluator will identify the strengths, weaknesses, opportunities and threats associated with the financial mechanism and, where relevant, make recommendations suggesting possible improvements with regard to: results achieved; organizational effectiveness and decision-making processes; effectiveness of technology transfer; information dissemination and capacity-building activities; cooperation with other organizations; and any other area of particular relevance.

F. Sources of information

8. The Multilateral Fund Secretariat, the Ozone Secretariat, the Executive Committee, the implementing and bilateral agencies, the Treasurer, ozone offices, recipient countries and companies are invited to cooperate with the evaluator and to provide all necessary information including information on cost-effectiveness. The Multilateral Fund Secretariat is invited to provide all necessary data related to the items listed above in paragraphs 5 (a) (i), (ii), (iv), (v) and (vi). The evaluation should take into account the relevant decisions of the Meeting of the Parties and the Executive Committee.

9. The evaluator should widely consult relevant persons and institutions and other relevant sources of information deemed useful.

G. Time frame and milestones

10. The following table presents a tentative time frame and milestones for the study.

November 2010	Approval of the terms of reference by the Meeting of the Parties
	Selection of a steering panel by the Meeting of the Parties
January 2011	Finalization of the criteria and procedure for the selection of the qualified external and independent evaluator
March 2011	Analysis of bids by the Ozone Secretariat and, on the basis of the criteria, recommendations to steering panel
	Independent evaluator selected by the panel
April 2011	Contract awarded
	Evaluator provides an inception report and meets the steering panel to discuss study modalities and details
December 2011	Mid-term review: preliminary draft report submitted to and reviewed by the steering panel
February 2012	Final draft report submitted to and reviewed by the steering panel
May 2012	Final draft report submitted to the Open-ended Working Group at its thirty-second meeting
September 2012	Final report submitted to the Twenty-Fourth Meeting of the Parties

XXII/3: Terms of reference for the study on the 2012–2014 replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol

Recalling the parties' decisions on previous terms of reference for studies on the replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol,

Recalling also the parties' decisions on previous replenishments of the Multilateral Fund,

1. To request the Technology and Economic Assessment Panel to prepare a report for submission to the Twenty-Third Meeting of the Parties, and to present it through the Open-ended Working Group at its thirty-first meeting, to enable the Twenty-Third Meeting of the Parties to take a decision on the appropriate level of the 2012–2014 replenishment of the Multilateral Fund;

2. That, in preparing the report referred to in the preceding paragraph, the Panel should take into account, among other things:

(a) All control measures and relevant decisions agreed upon by the parties to the Montreal Protocol and the Executive Committee, in particular those related to the special needs of low-volume- and very-low-volume-consuming countries, and decisions agreed upon by the Twenty-Second Meeting of the Parties and the Executive Committee at its sixty-first and sixty-second meetings insofar as those decisions will necessitate expenditure by the Multilateral Fund during the period 2012–2014;

(b) The need to allocate resources to enable all parties operating under paragraph 1 of Article 5 of the Montreal Protocol to maintain compliance with Articles 2A–2E, 2G and 2I of the Protocol;

(c) The need to allocate resources to enable all parties operating under paragraph 1 of Article 5 to meet 2013 and 2015 compliance obligations in respect of Articles 2F and 2H of the Protocol;

(d) Rules and guidelines agreed upon by the Executive Committee at all meetings, up to and including its sixty-second meeting, for determining eligibility for the funding of investment projects, non-investment projects, including institutional strengthening, measures to combat illegal trade and sectoral or national phase-out plans, including hydrochlorofluorocarbon phase-out management plans, measures to manage banks of ozone-depleting substances and ozone-depleting substance destruction projects;

(e) The impact that the international market, ozone-depleting substance control measures and country phase-out activities are likely to have on the supply of and demand for ozone-depleting substances, the corresponding effects on the price of ozone-depleting substances and the resulting incremental costs of investment projects during the period under review;

3. That, in preparing the report referred to above, the Panel should consult widely all relevant persons and institutions and other relevant sources of information deemed useful;

4. That the Panel shall strive to complete the report referred to above in time to enable it to be distributed to all parties two months before the thirty-first meeting of the Open-ended Working Group;

5. That the Panel should provide indicative figures for the periods 2015–2017 and 2018–2020 to support a stable and sufficient level of funding, on the understanding that those figures will be updated in subsequent replenishment studies;

XXII/4: Essential-use nominations for controlled substances for 2011

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 Panel's conclusion that technically satisfactory alternatives to chlorofluorocarbon-based metered-dose inhalers are available for some therapeutic formulations for treating asthma and chronic obstructive pulmonary disease,

Taking into account the Panel's analysis and recommendations for essential-use exemptions for controlled substances for the manufacture of metered-dose inhalers used for asthma and chronic obstructive pulmonary disease,

Noting that the Medical Technical Options Committee continued to have difficulty assessing some nominations submitted by parties in accordance with the criteria of decision IV/25 and subsequent relevant decisions owing to a lack of certain information,

Noting also that, notwithstanding the insufficient information referred to in the preceding paragraph, the Medical Technical Options Committee gave due consideration to the health and safety of patients with regard to the amounts recommended,

Welcoming the continued progress in several parties 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,

Welcoming the announcements by India and the Islamic Republic of Iran that they will not require pharmaceutical-grade chlorofluorocarbons under essential-use nominations for 2011 or beyond for the manufacture of metered-dose inhalers, and acknowledging their efforts in their phase-out of chlorofluorocarbons in metered-dose inhalers,

Acknowledging Bangladesh's efforts in its phase-out of chlorofluorocarbons in metered-dose inhalers, and taking into account the economic difficulties faced by that party,

Welcoming the announcement by Bangladesh that it will not, in the future, submit essential-use nominations for the use of chlorofluorocarbons in salbutamol, beclomethasone or levosalbutamol metered-dose inhalers,

1. To authorize the levels of production and consumption for 2011 necessary to satisfy essential uses of chlorofluorocarbons for metered-dose inhalers for asthma and chronic obstructive pulmonary disease as specified in the annex to the present decision;

2. To request nominating parties to supply to the Medical Technical Options Committee information to enable assessment of essential-use nominations in accordance with the criteria set out in decision IV/25 and subsequent relevant decisions as set out in the handbook on essential-use nominations;

3. To encourage parties with essential-use exemptions in 2011 to consider sourcing required pharmaceutical-grade chlorofluorocarbons initially from stockpiles where they are available and accessible;

4. To encourage parties with stockpiles of pharmaceutical-grade chlorofluorocarbons potentially available for export to parties with essential-use exemptions in 2011 to notify the Ozone Secretariat of such quantities and of a contact point by 31 December 2010;

5. To request the Secretariat to post on its website details of the potentially available stocks referred to in the preceding paragraph;

6. That the parties listed in the annex to the present decision shall have full flexibility in sourcing the quantity of pharmaceutical-grade chlorofluorocarbons to the extent required for manufacturing metered-dose inhalers, as authorized in paragraph 1 above, from imports, from domestic producers or from existing stockpiles;

7. To approve the authorization given to the Dominican Republic by the Secretariat, in consultation with the Technology and Economic Assessment Panel, of the emergency essential use of 1.832 metric tonnes of CFC-113 as a diluter for silicon grease during the manufacture of medical devices, to cover the period 2010–2011;

Annex to decision XXII/4

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

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

XXII/5: Essential-use exemption for chlorofluorocarbon 113 for aerospace applications in the Russian Federation

Noting the evaluation and recommendation of the Technology and Economic Assessment Panel and its Chemicals Technical Options Committee in respect of the essential-use nomination for chlorofluorocarbon 113 (CFC-113) for aerospace applications in the Russian Federation,

Noting also that the Russian Federation has continued to explore the possibility of importing CFC-113 to meet its aerospace industry needs from available global stocks,

Noting further that the Russian Federation has been successful in reducing its use and emissions of CFC-113 in line with a timetable of technical transformation developed in collaboration with the Chemicals Technical Options Committee,

Noting, however, that the Chemicals Technical Options Committee has recommended greater efforts to introduce appropriate alternatives,

1. To authorize an essential-use exemption for the production and consumption in 2011 of 100 metric tonnes of CFC-113 in the Russian Federation for chlorofluorocarbons in its aerospace industry;
2. To request the Russian Federation to continue to explore further the possibility of importing CFC-113 for its aerospace industry needs from available global stocks;
3. To urge the Russian Federation to continue its efforts on the introduction of alternative solvents and the adoption of newly designed equipment to complete the phase-out of CFC-113 according to an accelerated time schedule;

XXII/6: Critical-use exemptions for methyl bromide for 2011 and 2012

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

Recognizing the significant reductions made in critical-use nominations for methyl bromide in many parties,

Recalling paragraph 10 of decision XVII/9,

Recalling also that all parties that have nominated critical-use exemptions are to report data on stocks using the accounting framework agreed on by the Sixteenth Meeting of the Parties,

Recognizing that the production and consumption of methyl bromide for critical uses should be permitted only if methyl bromide is not available in sufficient quantity and quality from existing stocks of banked or recycled methyl bromide,

Recognizing also that parties operating under a critical-use exemption should take into account the extent to which methyl bromide is available in sufficient quantity and quality from existing stocks of banked or recycled methyl bromide in licensing, permitting or authorizing the production and consumption of methyl bromide for critical uses,

Stressing that parties should reduce their stocks of methyl bromide retained for employment in critical-use exemptions to a minimum in as short a time period as possible,

1. To permit, for the agreed critical-use categories for 2011 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 2011 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 XX1/11;

2. To permit, for the agreed critical-use categories for 2012 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 2012 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. That parties shall endeavour to license, permit, authorize or allocate quantities of methyl bromide for critical uses as listed in tables A and C of the annex to the present decision;

4. 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 terms of reference of the Technology and Economic Assessment Panel, the Committee should ensure that it develops its recommendations in a consensus process that includes full discussion among all available Committee members and should ensure that members with relevant expertise are involved in developing its recommendations;

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

6. To urge parties operating under a critical-use exemption to put in place an effective system to discourage the accumulation of methyl bromide produced under the exemption;

Annex to decision XXII/6

Table A
Agreed critical-use categories for 2011 (metric tonnes)

Australia	Strawberry runners (5.950)
Canada	Pasta (2.084)
Israel	Broomrape – protected (12.500), cucumbers (12.500), cut flowers and bulbs – protected (52.330), cut flowers – open field (23.292), melons – protected and open field (35.000), strawberry fruit – Sharon and Gaza (41.875), strawberry runners – Sharon and Gaza (27.000), sweet potatoes (20.000)

Table B
Permitted levels of production and consumption for 2011 (metric tonnes)

Australia	5.950
Canada	2.084
Israel	224.497

Table C
Agreed critical-use categories for 2012 (metric tonnes)

Australia	Strawberry runners (29.760), rice (3.653)
Canada	Mills (11.020), strawberry runners (Prince Edward Island) (5.261)
Japan	Chestnuts (3.489), cucumbers (26.162), ginger – field (42.235), ginger – protected (6.558), melons (67.936), peppers – green and hot (61.154), watermelons (12.075)
United States of America	Commodities (2.419), National Pest Management Association food-processing structures (0.200), mills and processors (74.510), dried cured pork (3.730), cucurbits (59.500), eggplant – field (6.904), forest nursery seedlings (34.230), nursery stock – fruit, nuts, flowers (1.591), orchard replants (18.324), ornamentals (48.164), peppers – field (28.366), strawberry – field (678.004), strawberry runners (3.752), tomatoes – field (54.423), sweet potato slips (8.709)

Table D
Permitted levels of production and consumption for 2012 (metric tonnes)

Australia	33.413
Canada	16.281
Japan	219.609
United States of America	922.826*

[* Minus available stocks.]

XXII/7: Global laboratory and analytical use exemption

Recalling paragraph 7 of decision XXI/6, which allows parties operating under paragraph 1 of Article 5 until 31 December 2010 to deviate from the existing laboratory and analytical use bans in individual cases, where a party considers that this is justified, and asks parties to revisit the issue at the Twenty-Second Meeting of the Parties,

Considering that the Technology and Economic Assessment Panel did not provide all information requested by decision XXI/6 in time for the Twenty-Second Meeting of the Parties and that the parties were therefore unable to evaluate the situation in respect of laboratory and analytical uses by parties operating under paragraph 1 of Article 5 of the Protocol,

Noting that some parties operating under paragraph 1 of Article 5 continue to have difficulty adopting alternatives for those laboratory and analytical uses already banned under the global exemption and need more time for information collection and related policy framework development,

1. To allow parties operating under paragraph 1 of Article 5 until 31 December 2011 to deviate from the existing laboratory and analytical use bans in individual cases, where a party considers that this is justified, and to ask parties to revisit the issue at the Twenty-Third Meeting of the Parties;

2. To request parties to continue to investigate domestically the possibility of replacing ozone-depleting substances in those laboratory and analytical uses listed in the reports of the Technology and Economic Assessment Panel prepared in accordance with decisions XVII/10 and XIX/18 and to report progress to the Ozone Secretariat by 30 April 2011;

XXII/8: Uses of controlled substances as process agents

The Meeting of the Parties,

Noting with appreciation the 2009 and 2010 progress reports of the Technology and Economic Assessment Panel on process agents,

Noting that table A in decision X/14 on process-agent uses has been updated by decisions XV/6, XVII/7 and XIX/15,

Noting also that the Panel's 2010 progress report indicates that several parties not operating under paragraph 1 of Article 5 of the Montreal Protocol included in table B of decision X/14 have reported that they no longer use any controlled substances as process agents, and that three process-agent uses have been discontinued in the European Union,

Recalling that the Panel's 2009 progress report on process agents indicated that Israel had reported the use of controlled substances for a process-agent application included in table A of decision X/14,

Recalling also that, according to decision X/14, quantities of controlled substances produced or imported by parties operating under paragraph 1 of Article 5 for use as process agents in plants and installations in operation before 1 January 1999 should not be taken into account in the calculation of production and consumption from 1 January 2002 onwards, provided that emissions of those substances have been reduced to levels agreed by the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol to be reasonably achievable in a cost-effective manner without undue abandonment of infrastructure,

Recognizing that, in the light of the phase-out dates of 1 January 2010 applicable to chlorofluorocarbons and carbon tetrachloride under the Montreal Protocol, the Executive Committee is unlikely to agree on any further emission levels for the use of such substances as process agents in parties operating under paragraph 1 of Article 5 beyond 2010,

Recognizing also the substantial progress undertaken by parties operating under paragraph 1 of Article 5 in reducing the use and emissions of controlled substances used as process agents,

Aware that the use and emissions of controlled substances used as process agents will continue beyond 2010 in only two parties operating under paragraph 1 of Article 5,

Agreeing that both parties operating under paragraph 1 of Article 5 and those not so operating that report process agent uses should now be listed in table B of decision X/14 and that those of the latter parties not using controlled substances as process agents should be removed from that table,

Noting that the Technology and Economic Assessment Panel and the Executive Committee of the Multilateral Fund will provide a joint report to the Open-ended Working Group at its thirty-first meeting, in 2011, on further efforts to reduce uses of process agents,

1. That quantities of controlled substances produced or imported by parties operating under paragraph 1 of Article 5 for use as process agents in plants and installations in operation before 1 January 1999 should not be taken into account in the calculation of production and consumption from 1 January 2011 onwards, provided that emissions of those substances are within the levels defined in the updated table B of decision X/14 included in the annex to the present decision;
2. To update tables A and B of decision X/14 as set out in the annex to the present decision;
3. To request each party to report to the Ozone Secretariat, by 15 March 2011, if possible, or 1 July 2011 at the latest, the specific applications for which it uses controlled substances as process agents and to continue to report such information in the context of the annual reports required by decision X/14;
4. To request the Technology and Economic Assessment Panel to include, in its 2011 progress report, a table listing process agent uses by individual parties;
5. To request the Technology and Economic Assessment Panel, beyond the reporting and assessment in respect of process agent uses requested for 2011, to review in 2013, and every second year thereafter, progress made in reducing process agent uses and to make any additional recommendations to parties on further actions to reduce uses and emissions of process agents;
6. That, once all process agent projects approved by the Executive Committee are completed, reporting by the Executive Committee to the parties as requested in decision XVII/6 will no longer be required;

Annex to decision XXII/8

Table A: List of uses of controlled substances as process agents

No.	Process agent application	Substance
1	Elimination of NCl_3 in chlor-alkali production	CTC
2	Chlorine recovery by tail gas absorption in chlor-alkali production	CTC
3	Production of chlorinated rubber	CTC
4	Production of endosulfan	CTC
5	Production of chlorosulfonated polyolefin (CSM)	CTC
6	Production of aramid polymer (PPTA)	CTC
7	Production of synthetic fibre sheet	CFC-11
8	Production of chlorinated paraffin	CTC
9	Photochemical synthesis of perfluoropolyetherpolyperoxide precursors of Z-perfluoropolyethers and difunctional derivatives	CFC-12
10	Preparation of perfluoropolyether diols with high functionality	CFC-113
11	Production of cyclodime	CTC
12	Production of chlorinated polypropene	CTC
13	Production of chlorinated ethylene vinyl acetate (CEVA)	CTC
14	Production of methyl isocyanate derivatives	CTC
15	Production of 3-phenoxybenzaldehyde	CTC
16	Production of 2-chloro-5-methylpyridine	CTC
17	Production of imidacloprid	CTC
18	Production of bupropfenin	CTC
19	Production of oxadiazon	CTC
20	Production of chloradized N-methylaniline	CTC
21	Production of 1,3-dichlorobenzothiazole	CTC
22	Bromination of a styrenic polymer	BCM
23	Synthesis of 2,4-D (2,4- dichlorophenoxyacetic acid)	CTC
24	Synthesis of di-(2-ethylhexyl) peroxydicarbonate (DEHPC)	CTC
25	Production of high modulus polyethylene fibre	CFC-113
26	Production of vinyl chloride monomer	CTC
27	Production of sultamicillin	BCM
28	Production of prallethrin (pesticide)	CTC
29	Production of o-nitrobenzaldehyde (for dyes)	CTC
30	Production of 3-methyl-2-thiophenecarboxaldehyde	CTC
31	Production of 2-thiophenecarboxaldehyde	CTC
32	Production of 2-thiophene ethanol	CTC
33	Production of 3,5-dinitrobenzoyl chloride (3,5-DNBC)	CTC
34	Production of 1,2-benzisothiazol-3-ketone	CTC
35	Production of m-nitrobenzaldehyde	CTC
36	Production of tichlopidine	CTC
37	Production of p-nitro benzyl alcohol	CTC
38	Production of tolclfos methyl	CTC
39	Production of polyvinylidene fluoride (PVdF)	CTC
40	Production of tetrafluorobenzoyl ethyl acetate	CTC
41	Production of 4-bromophenol	CTC

Table B: Limits for process-agent uses (all figures are in metric tonnes per year)

Party	Make-up or consumption	Maximum emissions
European Union	1 083	17
United States of America	2 300	181
Russian Federation	800	17
Switzerland	5	0.4
Israel	3.5	0
Brazil	2.2 ¹	2.2 ¹
China	1 103	1 103
Total	5 296.71	1 320.61

In accordance with decision 54/36 of the Executive Committee of the Multilateral Fund, the annual make-up or consumption and maximum emissions for Brazil will be 2.2 metric tonnes up to and including 2013 and zero thereafter.

XXII/9: Hydrochlorofluorocarbons preblended in polyols

Taking into account the importance of the phase-out of hydrochlorofluorocarbons in the polyurethane foams sector for compliance with the adjusted phase-out schedule for hydrochlorofluorocarbons in accordance with decision XIX/6,

Acknowledging with appreciation the efforts by India to bring the issue of hydrochlorofluorocarbons in preblended polyols to the attention of the parties,

Recognizing the fruitful discussions by the parties on the issue at the thirtieth meeting of the Open-ended Working Group,

1. To note with appreciation the cooperative manner in which the members of the Executive Committee of the Multilateral Fund addressed this issue at the Committee's sixty-first meeting through decision 61/47, by agreeing on a framework on eligible incremental costs for parties operating under paragraph 1 of Article 5 of the Montreal Protocol in their transition from the use of hydrochlorofluorocarbons in preblended polyols;

2. To affirm that the issue of the use of hydrochlorofluorocarbons in preblended polyols has been addressed to the satisfaction of the parties;

XXII/10: Destruction technologies with regard to ozone-depleting substances

Recalling the work of the Technology and Economic Assessment Panel and its associated task forces in assessing existing and emerging destruction technologies and in making recommendations for technologies to be added to the list of approved destruction technologies, as last requested in decision XVI/15,

Noting with appreciation the organization and content of the seminar on the environmentally sound management of banks of ozone-depleting substances held pursuant to decision XXI/2,

Acknowledging that one of the significant themes of the seminar was the need to ensure the appropriate destruction of ozone-depleting substances recovered from products and equipment at the end of their lives and that criteria for the verification of destruction of ozone-depleting substances would contribute to increased confidence in destruction capabilities in a number of regions of the world, including in parties operating under paragraph 1 of Article 5 of the Montreal Protocol,

Noting that paragraph 6 of decision XV/9 already includes in Annex II of the report of the Fifteenth Meeting of the Parties a useful code of good housekeeping on the appropriate handling, transportation, monitoring, measurement and control of ozone-depleting substances in destruction facilities that acts as a basis for local management but does not provide a framework that can be used for comprehensive verification,

Recalling decision XV/9 on the approval of destruction technologies and annex II to the report of the Fifteenth Meeting of the Parties,¹ which lists approved destruction processes by source and destruction method,

Recalling also that, by paragraph (c) of decision VII/5 and paragraph 7 of decision XI/13, parties are urged to adopt recovery and recycling technologies for quarantine and pre-shipment uses of methyl bromide, to the extent technically and economically feasible, until alternatives are available,

Recalling further that, by paragraph 6 of decision XX/6, the Technology and Economic Assessment Panel is requested, in its report on opportunities for reductions in methyl bromide use or emissions for quarantine and pre-shipment purposes, to provide to the Meeting of the Parties a list of available methyl bromide recapture technologies for consideration by the parties,

Noting that the Panel was able to provide a list of examples of commercial recapture units in operation in several countries in its report to the Twenty-First Meeting of the Parties,

Noting also that the Panel has reported on a number of emerging technologies for the destruction of ozone-depleting substances that complement those reported on previously,

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

1 UNEP/OzL.Pro.15/9.

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- (a) To evaluate and recommend the appropriate destruction and removal efficiency for methyl bromide and to update the destruction and removal efficiency for any other substance already listed in annex II to the report of the Fifteenth Meeting of the Parties;
 - (b) To review the list of destruction technologies adopted by parties, taking into account emerging technologies identified in its 2010 progress report and any other developments in this sector, and to provide an evaluation of their performance and commercial and technical availability;
 - (c) To develop criteria that should be used to verify the destruction of ozone-depleting substances at facilities that use approved ozone-depleting-substance destruction technologies, taking into account the recommended destruction and removal efficiencies for the relevant substance;
2. To invite submissions to the Ozone Secretariat by 1 February 2011 of data relevant to the tasks set out in paragraph 1 above;

XXII/11: Progress by the International Civil Aviation Organization in the transition from the use of halon

Recognizing with appreciation that the International Civil Aviation Organization General Assembly adopted resolution A37-9, on halon replacement, at its thirty-seventh session;

Acknowledging that resolution A37-9 states that there is an urgent need to continue developing and implementing halon alternatives for civil aviation; to intensify development of acceptable halon alternatives for fire-extinguishing systems in cargo compartments and engine/auxiliary power units; and to continue work to improve halon alternatives for hand-held fire extinguishers and directs the International Civil Aviation Organization Council to establish a mandate for the replacement of halon:

- (a) In lavatory fire-extinguishing systems used in aircraft produced after a specified date in the 2011 time frame;
- (b) In hand-held fire extinguishers used in aircraft produced after a specified date in the 2016 time frame;
- (c) In engine and auxiliary power unit fire-extinguishing systems used in aircraft for which applications for type certification will be submitted after a specified date in the 2014 time frame,

Recalling that decision XXI/7 expresses the parties' continued support for the implementation of mandatory dates by which halon alternatives will be used in agreed applications for newly designed aircraft and requests that the Technology and Economic Assessment Panel and the Halons Technical Options Committee to continue to engage the International Civil Aviation Organization on this issue and report on progress at the Twenty-Second Meeting of the Parties to the Montreal Protocol,

1. To request the Secretariat to convey to the International Civil Aviation Organization secretariat the parties' appreciation for the continued work of its General Assembly and the adoption of resolution A37/9;
2. To express the parties' continued support for the implementation of mandatory dates by which halon alternatives will be used in previously agreed-on applications in newly designed or newly produced aircraft consistent with resolution A37/9;
3. To request that the Secretariat ask the International Civil Aviation Organization secretariat to send halon reserves data reported to International Civil Aviation Organization to the Secretariat annually;
4. To request that the Technology and Economic Assessment Panel and the Halons Technical Options Committee continue to engage with the International Civil Aviation Organization on further uses of halon on aircraft and report on progress at the Twenty-Third Meeting of the Parties;

XXII/12: Situation of Haiti

Noting with appreciation the efforts and commitment made by the Government of Haiti to sustain compliance with the Montreal Protocol,

Recognizing the extraordinary difficulties now faced by Haiti as a result of the devastating 7.2 magnitude earthquake that occurred on 12 January 2010, which has had adverse effects on the economic and social welfare of the people of Haiti,

Understanding Haiti's commitment to meeting its obligations in respect of phasing out ozone-depleting substances under the Montreal Protocol and its amendments,

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1. To encourage all parties to assist Haiti by controlling the export of ozone-depleting substances and technologies dependent on ozone-depleting substances to Haiti through the control of trade in accordance with decision X/9 and other relevant decisions;
 2. To request the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol, when considering project proposals for Haiti, to take into account the special situation of Haiti and the special difficulties that it may pose in respect of the phase-out of ozone-depleting substances, including in particular the accelerated phase-out of hydrochlorofluorocarbons, in accordance with the requirements of the Montreal Protocol;
 3. To request the implementing agencies to consider providing appropriate assistance to Haiti in the areas of institutional strengthening, capacity-building, data collection and monitoring and control of trade in ozone-depleting substances;
 4. Also to request the implementing agencies to consider providing appropriate assistance for the development of a strategy to achieve the reorganization of Haiti's national ozone unit and in the continuation of its efforts to report to the Ozone Secretariat data on consumption of ozone-depleting substances in accordance with the requirements of the Montreal Protocol;
 5. That recommendations made by the Implementation Committee under the Non-Compliance Procedure for the Montreal Protocol are to be considered in the light of the difficulties faced by Haiti as a result of the earthquake;

XXII/13: Non-compliance with the Montreal Protocol by Singapore

1. To note that Singapore reported the export of 32 metric tonnes of methyl bromide in 2008 to a State classified as operating under paragraph 1 of Article 5 of the Protocol that is also a State not party to the Copenhagen Amendment to the Montreal Protocol, which places the party in non-compliance with the restriction on trade with non-parties to the Protocol;
2. To urge Singapore to refrain from engaging in trade in methyl bromide with States not party to the Copenhagen Amendment;
3. To monitor closely the party's progress with regard to the implementation of its obligations under the Montreal Protocol;

XXII/14: Data and information provided by the parties in accordance with Article 7 of the Montreal Protocol

Noting with appreciation that 196 parties of the 196 that should have reported data for 2009 have done so and that 68 of those parties reported their data by 30 June 2010 in accordance with decision XV/15,

Noting further that reporting 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 of the Protocol to comply with the Protocol's control measures,

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;

XXII/15: Non-compliance with the Montreal Protocol by Saudi Arabia

Noting that Saudi Arabia ratified the Montreal Protocol and the London and Copenhagen Amendments on 1 March 1993 and is classified as a party operating under paragraph 1 of Article 5 of the Protocol,

Noting also that the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol has approved 2,749,975 United States dollars from the Multilateral Fund to enable Saudi Arabia's compliance in accordance with Article 10 of the Protocol, and that Saudi Arabia had its country programme approved by the Executive Committee in November 2007,

Noting further that Saudi Arabia reported annual consumption for the controlled substances listed in Annex A, group I (chlorofluorocarbons), of 657.8 ODP-tonnes for 2007 and of 365 ODP-tonnes for 2008, which exceeds the party's maximum allowable consumption of 269.8 ODP-tonnes for those controlled substances for those two years, and that the party was therefore

in non-compliance with the control measures for chlorofluorocarbons under the Protocol for 2007 and 2008,

Noting, however, that Saudi Arabia reported consumption of Annex A, group I, substances (chlorofluorocarbons) of 190 ODP-tonnes for 2009, which places the party in compliance with the chlorofluorocarbon control measures for that year,

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

(a) To reducing chlorofluorocarbon consumption to no greater than zero ODP-tonnes in 2010, save for essential uses that may be authorized by the parties;

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

2. To urge Saudi Arabia to work with the relevant implementing agencies to implement its plan of action to phase out the consumption of chlorofluorocarbons;

3. To monitor closely the progress of Saudi Arabia with regard to the implementation of its plan of action and the phase-out of chlorofluorocarbons. To the degree that the party is working towards 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, Saudi Arabia 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 the Meeting of the Parties in respect of non-compliance;

4. To caution Saudi Arabia, in accordance with item B of the indicative list of measures that may be taken by the Meeting of the Parties in respect of non-compliance, that, in the event that it fails to return to 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 chlorofluorocarbons that are the subject of non-compliance is ceased so that exporting parties are not contributing to a continuing situation of non-compliance;

XXII/16: Non-compliance with the Montreal Protocol by the Republic of Korea

1. To note that the Republic of Korea reported the export of 37 metric tonnes of hydrochlorofluorocarbons in 2008 and 18.2 metric tonnes of hydrochlorofluorocarbons in 2009 to a State classified as not operating under paragraph 1 of Article 5 of the Montreal Protocol that is also a State not party to the Copenhagen Amendment to the Protocol, which places the party in non-compliance with the trade restriction against non-parties to the Protocol;

2. To note, however, that the party has taken measures not to export hydrochlorofluorocarbons to any State not party to the Copenhagen and Beijing Amendments to the Montreal Protocol in 2010 and in subsequent years except to parties operating under paragraph 1 of Article 5 of the Protocol;

3. That no further action is necessary in view of the undertaking by the Republic of Korea not to authorize any further exports of hydrochlorofluorocarbons to any non-party to the relevant amendments to the Montreal Protocol except to parties operating under paragraph 1 of Article 5 of the Protocol;

4. To monitor closely the party's progress with regard to the implementation of its obligations under the Montreal Protocol;

XXII/17: Ratification of the Copenhagen, Montreal and Beijing amendments to the Montreal Protocol by Kazakhstan

1. To note with concern that Kazakhstan is the only party not operating under paragraph 1 of Article 5 of the Montreal Protocol that has not ratified the Copenhagen Amendment to the Protocol;

2. Mindful that this situation prevents Kazakhstan from trading in ozone-depleting substances, and particularly in hydrochlorofluorocarbons, with parties to the Protocol;

3. To urge Kazakhstan to ratify, approve or accede to all amendments to the Montreal Protocol so that it can trade in all ozone-depleting substances with parties to those amendments;

XXII/18: Non-compliance with the Montreal Protocol by Vanuatu

Noting that Vanuatu ratified the Montreal Protocol and the London and Copenhagen Amendments on 21 November 1994 and is classified as a party operating under paragraph 1 of Article 5 of the Protocol,

Noting also that the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol has approved 120,520 United States dollars from the Multilateral Fund and additional assistance through projects approved for the Pacific Island countries, of which Vanuatu is an integral part, to enable Vanuatu's compliance in accordance with Article 10 of the Protocol, and that Vanuatu had its country programme approved by the Executive Committee in March 2002,

Noting further that Vanuatu reported annual consumption of the controlled substances listed in Annex A, group I (chlorofluorocarbons), of 0.3 ODP-tonnes for 2007 and 0.7 ODP-tonnes for 2008, which exceeded the party's maximum allowable consumption of zero ODP-tonnes for those controlled substances for those years, and that the party is therefore in non-compliance with the control measures for those substances under the Protocol for those years,

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

(a) To reducing its consumption of chlorofluorocarbons to no greater than zero ODP-tonnes in 2010, save for essential uses that may be authorized by the parties;

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

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

3. To monitor closely the progress of Vanuatu with regard to the implementation of its plan of action and the phase-out of chlorofluorocarbons. To the degree that the party is working towards 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, Vanuatu 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 the Meeting of the Parties in respect of non-compliance;

4. To caution Vanuatu, in accordance with item B of the indicative list of measures that may be taken by the Meeting of the Parties in respect of non-compliance, that, in the event that Vanuatu fails to return to 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 chlorofluorocarbons that are the subject of non-compliance is ceased so that exporting parties are not contributing to a continuing situation of non-compliance;

XXII/19: Status of 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 176 of the 181 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 12 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 urge Brunei Darussalam, Ethiopia, Lesotho, San Marino and Timor-Leste, which are the remaining parties to the Montreal Amendment to the Protocol that have not yet established import and export licensing systems for ozone-depleting substances, to do so and to report to the Secretariat by 31 May 2011 in time for the Implementation Committee and the Twenty-Third Meeting of the Parties, in 2011, to review their compliance situation;

2. To encourage Angola, Botswana and Vanuatu, which are the remaining parties to the Protocol that have neither ratified the Montreal Amendment nor established import and export licensing systems for ozone-depleting substances, to do so;

3. 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;

4. 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;

XXII/20: Treatment of stockpiled ozone-depleting substances

Recalling that in decision XVIII/17 the Secretariat was requested to maintain a consolidated record of the cases in which parties had explained that their excess production and consumption of ozone-depleting substances in a given year were a consequence of the production or import of ozone-depleting substances in that year that were stockpiled for some specified purposes in a future year,

Recalling also that the Secretariat was also requested to incorporate that record in the documentation prepared for each meeting of the Implementation Committee, for information purposes only, as well as in the Secretariat's report on data submitted by the Parties in accordance with Article 7 of the Protocol,

Noting that the Secretariat has reported 29 cases since 1999 involving 12 parties that have exceeded the allowed level of production or consumption of a particular ozone-depleting substance in a given year and explained that their excess production or consumption resulted from one of the scenarios mentioned above,

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

2. To request parties, when reporting data under Article 7 of the Protocol, to identify any excess production and consumption that is a consequence of ozone-depleting substance production in the reporting year:

(a) For domestic destruction or export for destruction in a future year;

(b) For domestic feedstock use or export for that use in a future year;

(c) For export to meet basic domestic needs of developing countries in a future year;

3. That in any case mentioned in paragraph 2 no follow-up action from the Implementation Committee is deemed necessary if the party reports that it has the necessary measures in place to prohibit the use of the ozone-depleting substances for any other purpose than those designated in items (a)–(c) of paragraph 2 at the time of production;

4. To request the Secretariat to continue to maintain a consolidated record of the cases covered by paragraph 2, to incorporate that record in the documentation prepared for each meeting of the Implementation Committee, and to include it in the Secretariat's report on data submitted by the parties in accordance with Article 7 of the Protocol;

XXII/21: Administrative and financial matters: Financial reports and budgets

Recalling decision XX1/32 on financial matters,

Taking note of the financial report on the Trust Fund for the Montreal Protocol on Substances that Deplete the Ozone Layer for the biennium 2008-2009, ended 31 December 2009,

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

Welcoming the continued efficient management by the Secretariat of the finances of the Montreal Protocol Trust Fund,

1. To approve the revised 2010 budget in the amount of 4,955,743 United States dollars and the 2011 budget in the amount of \$4,835,740 and to take note of the proposed budget of \$4,943,796 for 2012, as set out in annex I to the report of the Twenty-Second Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer;²
2. To authorize the Secretariat to draw down \$558,807 in 2011 and to note the proposed drawdown of \$666,863 in 2012;
3. To approve, as a consequence of the drawdowns referred to in paragraph 2 above, total contributions to be paid by the parties of \$4,276,933 for 2011 and to note the contributions of \$4,276,933 for 2012, as set out in annex II to the report of the Twenty-Second Meeting of the Parties;
4. That the contributions of individual parties for 2011 shall be listed in annex II to the report of the Twenty-Second Meeting of the Parties;
5. To authorize the Secretariat to maintain the operating cash reserve at 15 per cent of the 2011 budget to be used to meet the final expenditures under the Trust Fund;
6. To urge all parties to pay both their outstanding contributions and their future contributions promptly and in full;

XXII/22: Membership changes on the assessment panels

1. To thank Mr. Jan C. van der Leun, who has served as Co-Chair of the Environmental Effects Assessment Panel since its inception, for his long and outstanding service on behalf of the Montreal Protocol;
2. To endorse Mr. Nigel D. Paul as Co-Chair of the Environmental Effects Assessment Panel;
3. To thank Mr. José Pons Pons for his long and outstanding service as Co-Chair of the Technology and Economic Assessment Panel;
4. To endorse the selection of Ms. Marta Pizano as Co-Chair of the Technology and Economic Assessment Panel for a term of four years, subject to re-endorsement by the parties in accordance with section 2.3 of the terms of reference of the Technology and Economic Assessment Panel;
5. To thank Mr. Thomas Moorehouse for his long and outstanding service as a Senior Expert of the Technology and Economic Assessment Panel and as a member and Co-Chair of the Halon Technical Options Committee;
6. To endorse the selection of Ms. Bella Maranion as a Senior Expert of the Technology and Economic Assessment Panel for a term of four years, subject to re-endorsement by the parties in accordance with section 2.3 of the terms of reference of the Technology and Economic Assessment Panel;
7. To request the Technology and Economic Assessment Panel and its technical option committees to draw up guidelines for the nomination of experts by the parties, in accordance with section 2.9 of the terms of reference of the Technology and Economic Assessment Panel, for presentation to the parties prior to the thirty-first meeting of the Open-Ended Working Group;
8. To request that the Technology and Economic Assessment Panel consider the need for balance and appropriate expertise when appointing members of the technical options committees, task

forces and other subsidiary groups in accordance with sections 2.1, 2.5 and 2.8 of the terms of reference of the Panel;

XXII/23: 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 2010;

2. To confirm the positions of Egypt, Jordan, the Russian Federation, Saint Lucia and the United States of America as members of the Committee for one further year and to select Algeria, Armenia, Germany, Nicaragua and Sri Lanka as members of the Committee for a two-year period beginning 1 January 2011;

3. To note the selection of Ms. Elisabeth Munzert (Germany) to serve as President and of Mr. Ghazi Al Odat (Jordan) to serve as Vice-President and Rapporteur of the Committee for one year beginning 1 January 2011;

XXII/24: 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 2010;

2. To endorse the selection of Australia, Belgium, the Czech Republic, France, Japan, Switzerland 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 Argentina, China, Cuba, Grenada, Kenya, Kuwait and Morocco as members representing parties operating under that paragraph, for one year beginning 1 January 2011;

3. To note the selection of Mr. Patrick John McInerney (Australia) to serve as Chair and Mr. Wuruz Wen (China) to serve as Vice-Chair of the Executive Committee for one year beginning 1 January 2011;

XXII/25: Co-Chairs of the Open-ended Working Group of the Parties to the Montreal Protocol

To endorse the selection of Mr. Ndiaye Cheikh Sylla (Senegal) and Ms. Gudi Alkemade (Netherlands) as Co-Chairs of the Open-ended Working Group of the Parties to the Montreal Protocol in 2011.

XXII/26: Twenty-Third Meeting of the Parties to the Montreal Protocol

To convene the Twenty-Third Meeting of the Parties to the Montreal Protocol in Bali, Indonesia, and to announce a firm date for the meeting as soon as possible.

Annex I

Trust Fund for the Montreal Protocol on Substances that Deplete the Ozone Layer

Approved 2010 and 2011 and proposed 2012 budgets (in United States dollars)

		w/m	2010 Approved revision	w/m	2011	w/m	2012
10	Project personnel component						
	1100						
	Project personnel						
	1101 Executive Secretary (D-2) (shared with the Vienna Convention, (VC)) ¹	6	161 900	6	166 757	6	171 760
	1102 Deputy Executive Secretary (D-1)	12	252 000	12	259 560	12	267 347
	1103 Senior Legal Officer (P-5)	12	196 730	12	202 632	12	208 711
	1104 Senior Scientific Affairs Officer (P-5) (shared with VC)	6	128 159	6	130 000	6	133 900
	1105 Administrative Officer (P-5) (paid by UNEP)	12	—		—		—
	1106 Database Manager (Information Systems and Technology (P-4))	12	145 743	12	150 115	12	154 618
	1107 Programme Officer (Communication and Information (P-3)) (paid from VC)	12		12		12	
	1108 Programme Officer (Monitoring and Compliance (P4))	12	185 400	12	188 000	12	193 640
	1199 <i>Subtotal</i>		<i>1,069,932</i>		<i>1 097 064</i>		<i>1 129 976</i>
	1200						
	Consultants						
	1201 Assistance in data-reporting, analysis and promotion of the implementation of the Protocol		40 000		40 000		40 000
	1299 <i>Subtotal</i>		<i>40,000</i>		<i>40 000</i>		<i>40 000</i>
	1300						
	Administrative support						
	1301 Administrative Assistant (G-7) (shared with VC)	6	21 250	6	21 250	6	21 888
	1302 Administrative Assistant (G-6)	12	26 625	12	27 000	12	27 810

	w/m	2010 Approved revision	w/m	2011	w/m	2012	
1303	Programme Assistant (G-6) (paid from VC)	12	—	12	—	—	
1304	Programme Assistant (Data) (G-6) (shared with VC)	6	17 573	6	17 573	6	17,573
1305	Information Assistant (Research) (G-6) (shared with VC)	6	16 295	6	16 295	6	16,295
1306	Information management (Assistant/Documentation Clerk) (G-6)	12	27 560	12	27 560	12	27,560
1307	Data Assistant (Computer Information Systems Assistant) (G-7)	12	42 174	12	42 174	12	43,439
1308	Administrative Assistant - Fund (G-7) (paid by UNEP)	12	—	12	—	12	—
1309	Team Assistant/Logistics Assistant (G-4) (paid by UNEP)	12	—	12	—	12	—
1310	Meetings services (Assistant/Bilingual Senior Secretary) (G-6) (paid from VC)	12	—	12	—	12	—
1320	Temporary assistance	12	21 300		21 300		21,300
1321	Open-ended Working Group Meetings ²		523 704		490 000		490,000
1322	Preparatory and parties meetings (shared with VC every three years, applies to the Twenty-Third Meeting of the Parties to the Montreal Protocol and Ninth meeting of the Conference of the Parties to the Vienna Convention in 2011)		500 000		350 000		500,000
1323	Assessment panel meetings		100 000		75 000		75,000
1324	Bureau meeting		20 000		20 000		20,000
1325	Implementation Committee meetings		111 200		111 200		111,200
1326	MP informal consultation meetings		10 000		10 000		10,000
	<i>Subtotal</i>		<i>1 437 681</i>		<i>1 229 352</i>		<i>1 382 065</i>

1399

		w/m	2010 Approved revision	w/m	2011	w/m	2012
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	<i>Subtotal</i>		225,000		225 000		225 000
1999	Component total		2,772,613		2 591 416		2 777 041
2000	Contracts³				70 000		
30	Meeting/participation component						
3300	Support for participation						
	3301 Assessment panel meetings ⁴		500 000		500 000		500 000
	3302 Preparatory and party meetings (Montreal Protocol bears the cost of the participation of MP & VC representatives from article 5 parties at the joint 23rd MOP and 9th COP in 2011)		350 000		350 000		350 000
	3303 Open-ended Working Group meetings		300 000		300 000		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	<i>Subtotal</i>		1 305 000		1 305 000		1 305 000
3999	Component total		1 305 000		1 305 000		1 305 000
40	Equipment and premises component						
4100	Expendable equipment (items under \$1,500)						
	4101 Miscellaneous expendables (shared with VC)		22 000		22 000		22 000
4199	<i>Subtotal</i>		22,000		22 000		22 000
4200	Non-expendable equipment						

		w/m	2010 Approved revision	w/m	2011	w/m	2012
	4201		10 000		20 000		5 000
	4202		5 000		5 000		15 000
	4203		20 000		20 000		10 000
	4204		5 000		5 000		5 000
4299	<i>Subtotal</i>		<i>40 000</i>		<i>50 000</i>		<i>35 000</i>
4300	Premises						
	4301		48 000		48 000		48 000
4399	<i>Subtotal</i>		<i>48 000</i>		<i>48 000</i>		<i>48 000</i>
4999	Component total		110 000		120 000		105 000
50	Miscellaneous component						
5100	Operation and maintenance of equipment						
	5101		25 000		25 000		25 000
5199	<i>Subtotal</i>		<i>25 000</i>		<i>25 000</i>		<i>25 000</i>
5200	Reporting costs						
	5201		45 000		35 000		35 000
	5202		10 000		10 000		10 000
	5203		5 000		5 000		5 000
5299	<i>Subtotal</i>		<i>60 000</i>		<i>50 000</i>		<i>50 000</i>
5300	Sundry						
	5301		36 000		36 000		36 000
	5302		35 000		35 000		35 000
	5303		12 000		12 000		12 000
	5304		10 000		10 000		10 000
5399	<i>Subtotal</i>		<i>93 000</i>		<i>93 000</i>		<i>93 000</i>
5400	Hospitality						
	5401		20 000		25 000		20 000
5499	<i>Subtotal</i>		<i>20 000</i>		<i>25 000</i>		<i>20 000</i>
5999	Component total		198,000		193 000		188 000

	w/m	2010	w/m	2011	w/m	2012
		Approved revision				
99		4 385 613		4 279 416		4 375 041
		570 130		556 324		568 755
		4 955 743		4 835 740		4 943 796
		—		—		—
		4 955 743		4 835 740		4 943 796
		678 810		558 807		666 863
		4 276 933		4 276 933		4 276 933

¹ In the light of the unparalleled effectiveness of the Montreal Protocol, the parties express their strong desire to ensure continued leadership and consistency in the Ozone Secretariat during the period leading up to 2015, which is a critical period for the implementation of the most recent adjustment to that treaty. There is a pressing need to retain the current Executive Secretary of the Ozone Secretariat through 2015 to provide this leadership and consistency during this critical period.

The parties therefore request the President of the Bureau of the Twenty-First Meeting of the Parties to work with the Executive Director of the United Nations Environment Programme

to explore any means to retain the current Executive Secretary through 2015 and to convey to the Secretary-General of the United Nations the parties' request to find means to extend the tenure of the current Executive Secretary of the Ozone Secretariat through 2015. The parties authorize the use of budget line transfers of funds without increasing the size of the budget if such transfers are necessary to facilitate the extension. Regardless of any change in the post of Executive Secretary that may be used to achieve the extension through 2015, the position will revert to that of a non-extended D-2 position at the end of 2015 or, if the incumbent leaves earlier, at that earlier date.

² An amount up to \$400,000 had been added to the 2010 budget line to accommodate the cost of additional activities discussed by the Twenty-First Meeting of the Parties. Expenditure against this activity was \$50,000; hence budget line 1321 in 2010 is being reduced by \$350,000. The savings revert to the Trust Fund.

The parties request the Ozone Secretariat, in cases where Open-ended Working Group and Multilateral Fund Executive Committee meetings are held back to back, to consult with the Multilateral Fund Secretariat with a view to selecting meeting locations which are the most cost-effective, taking into account the budgets of both secretariats.

³ The Twenty-Second Meeting of the Parties approved a total budget for an evaluation of the Financial Mechanism of up to \$200,000 with the understanding that \$70,000 would be available to the Secretariat in 2011 to start the application and bidding process needed to hire an appropriate entity to undertake the evaluation and that the Twenty-Third Meeting of the Parties would decide on the funding source for the balance of the budget for the evaluation.

⁴ The budget line covers the participation of Technology and Economic Assessment Panel experts to enable the timely completion of the work requested by the parties.

⁵ Drawdown levels were set with a view to maintaining the level of contributions constant through 2013. A drawdown for 2012 has been included by the Secretariat only for information. The amount may be changed by the parties when the budget proposals for 2012 and 2013 are presented for consideration in 2011.

ADVANCE

Annex II

Trust Fund for the Montreal Protocol on Substances that Deplete the Ozone Layer

Scale of contributions by the parties for 2011 and 2012 based on the United Nations scale of assessments

(General Assembly resolution A/64/482/Add.1 of 28 December 2009 with a maximum assessment rate of 22 per cent)

(in United States dollars)

	Name of party	UN scale of assessment for 2010–2012	Adjusted UN scale to exclude non-contributors	Adjusted UN scale with 22% maximum assessment rate considered	2011 contributions by parties	Indicative 2012 contributions by parties
1.	Afghanistan	0.004	0.000	0.000	—	—
2.	Albania	0.010	0.000	0.000	—	—
3.	Algeria	0.128	0.128	0.128	5 465	5 465
4.	Andorra	0.007	0.000	0.000	—	—
5.	Angola	0.010	0.000	0.000	—	—
6.	Antigua and Barbuda	0.002	0.000	0.000	—	—
7.	Argentina	0.287	0.287	0.287	12 255	12 255
8.	Armenia	0.005	0.000	0.000	—	—
9.	Australia	1.933	1.933	1.930	82 537	82 537
10.	Austria	0.851	0.851	0.850	36 337	36 337
11.	Azerbaijan	0.015	0.000	0.000	—	—
12.	Bahamas	0.018	0.000	0.000	—	—
13.	Bahrain	0.039	0.000	0.000	—	—
14.	Bangladesh	0.010	0.000	0.000	—	—
15.	Barbados	0.008	0.000	0.000	—	—
16.	Belarus	0.042	0.000	0.000	—	—
17.	Belgium	1.075	1.075	1.073	45 901	45 901
18.	Belize	0.001	0.000	0.000	—	—
19.	Benin	0.003	0.000	0.000	—	—
20.	Bhutan	0.001	0.000	0.000	—	—
21.	Bolivia (Plurinational State of)	0.007	0.000	0.000	—	—
22.	Bosnia and Herzegovina	0.014	0.000	0.000	—	—
23.	Botswana	0.018	0.000	0.000	—	—
24.	Brazil	1.611	1.611	1.608	68 788	68 788
25.	Brunei Darussalam	0.028	0.000	0.000	—	—
26.	Bulgaria	0.038	0.000	0.000	—	—
27.	Burkina Faso	0.003	0.000	0.000	—	—
28.	Burundi	0.001	0.000	0.000	—	—
29.	Cambodia	0.003	0.000	0.000	—	—
30.	Cameroon	0.011	0.000	0.000	—	—

	Name of party	UN scale of assessment for 2010–2012	Adjusted UN scale to exclude non-contributors	Adjusted UN scale with 22% maximum assessment rate considered	2011 contributions by parties	Indicative 2012 contributions by parties
31.	Canada	3.207	3.207	3.202	136 935	136 935
32.	Cape Verde	0.001	0.000	0.000	—	—
33.	Central African Republic	0.001	0.000	0.000	—	—
34.	Chad	0.002	0.000	0.000	—	—
35.	Chile	0.236	0.236	0.236	10 077	10 077
36.	China	3.189	3.189	3.184	136 167	136 167
37.	Colombia	0.144	0.144	0.144	6 149	6 149
38.	Comoros	0.001	0.000	0.000	—	—
39.	Congo	0.003	0.000	0.000	—	—
40.	Cook Islands	-	0.000	0.000	—	—
41.	Costa Rica	0.034	0.000	0.000	—	—
42.	Côte d'Ivoire	0.010	0.000	0.000	—	—
43.	Croatia	0.097	0.000	0.000	—	—
44.	Cuba	0.071	0.000	0.000	—	—
45.	Cyprus	0.046	0.000	0.000	—	—
46.	Czech Republic	0.349	0.349	0.348	14 902	14 902
47.	Democratic People's Republic of Korea	0.007	0.000	0.000	—	—
48.	Democratic Republic of the Congo	0.003	0.000	0.000	—	—
49.	Denmark	0.736	0.736	0.735	31 426	31 426
50.	Djibouti	0.001	0.000	0.000	—	—
51.	Dominica	0.001	0.000	0.000	—	—
52.	Dominican Republic	0.042	0.000	0.000	—	—
53.	Ecuador	0.040	0.000	0.000	—	—
54.	Egypt	0.094	0.000	0.000	—	—
55.	El Salvador	0.019	0.000	0.000	—	—
56.	Equatorial Guinea	0.008	0.000	0.000	—	—
57.	Eritrea	0.001	0.000	0.000	—	—
58.	Estonia	0.040	0.000	0.000	—	—
59.	Ethiopia	0.008	0.000	0.000	—	—
60.	European Union	2.500	2.500	2.496	106 747	106 747
61.	Fiji	0.004	0.000	0.000	—	—
62.	Finland	0.566	0.566	0.565	24 168	24 168
63.	France	6.123	6.123	6.113	261 445	261 445
64.	Gabon	0.014	0.000	0.000	—	—
65.	Gambia	0.001	0.000	0.000	—	—
66.	Georgia	0.006	0.000	0.000	—	—
67.	Germany	8.018	8.018	8.005	342 360	342 360
68.	Ghana	0.006	0.000	0.000	—	—
69.	Greece	0.691	0.691	0.690	29 505	29 505

	Name of party	UN scale of assessment for 2010–2012	Adjusted UN scale to exclude non-contributors	Adjusted UN scale with 22% maximum assessment rate considered	2011 contributions by parties	Indicative 2012 contributions by parties
70.	Grenada	0.001	0.000	0.000	—	—
71.	Guatemala	0.028	0.000	0.000	—	—
72.	Guinea	0.002	0.000	0.000	—	—
73.	Guinea-Bissau	0.001	0.000	0.000	—	—
74.	Guyana	0.001	0.000	0.000	—	—
75.	Haiti	0.003	0.000	0.000	—	—
76.	Holy See	0.001	0.000	0.000	—	—
77.	Honduras	0.008	0.000	0.000	—	—
78.	Hungary	0.291	0.291	0.291	12 425	12 425
79.	Iceland	0.042	0.000	0.000	—	—
80.	India	0.534	0.534	0.533	22 801	22 801
81.	Indonesia	0.238	0.238	0.238	10 162	10 162
82.	Iran (Islamic Republic of)	0.233	0.233	0.233	9 949	9 949
83.	Iraq	0.020	0.000	0.000	—	—
84.	Ireland	0.498	0.498	0.497	21 264	21 264
85.	Israel	0.384	0.384	0.383	16 396	16 396
86.	Italy	4.999	4.999	4.991	213 452	213 452
87.	Jamaica	0.014	0.000	0.000	—	—
88.	Japan	12.530	12.530	12.509	535 017	535 017
89.	Jordan	0.014	0.000	0.000	—	—
90.	Kazakhstan	0.076	0.000	0.000	—	—
91.	Kenya	0.012	0.000	0.000	—	—
92.	Kiribati	0.001	0.000	0.000	—	—
93.	Kuwait	0.263	0.263	0.263	11 230	11 230
94.	Kyrgyzstan	0.001	0.000	0.000	—	—
95.	Lao People's Democratic Republic	0.001	0.000	0.000	—	—
96.	Latvia	0.038	0.000	0.000	—	—
97.	Lebanon	0.033	0.000	0.000	—	—
98.	Lesotho	0.001	0.000	0.000	—	—
99.	Liberia	0.001	0.000	0.000	—	—
100.	Libyan Arab Jamahiriya	0.129	0.129	0.129	5 508	5 508
101.	Liechtenstein	0.009	0.000	0.000	—	—
102.	Lithuania	0.065	0.000	0.000	—	—
103.	Luxembourg	0.090	0.000	0.000	—	—
104.	Madagascar	0.003	0.000	0.000	—	—
105.	Malawi	0.001	0.000	0.000	—	—
106.	Malaysia	0.253	0.253	0.253	10 803	10 803
107.	Maldives	0.001	0.000	0.000	—	—
108.	Mali	0.003	0.000	0.000	—	—

	Name of party	UN scale of assessment for 2010–2012	Adjusted UN scale to exclude non-contributors	Adjusted UN scale with 22% maximum assessment rate considered	2011 contributions by parties	Indicative 2012 contributions by parties
109.	Malta	0.017	0.000	0.000	—	—
110.	Marshall Islands	0.001	0.000	0.000	—	—
111.	Mauritania	0.001	0.000	0.000	—	—
112.	Mauritius	0.011	0.000	0.000	—	—
113.	Mexico	2.356	2.356	2.352	100 599	100 599
114.	Micronesia (Federated States of)	0.001	0.000	0.000	—	—
115.	Monaco	0.003	0.000	0.000	—	—
116.	Mongolia	0.002	0.000	0.000	—	—
117.	Montenegro	0.004	0.000	0.000	—	—
118.	Morocco	0.058	0.000	0.000	—	—
119.	Mozambique	0.003	0.000	0.000	—	—
120.	Myanmar	0.006	0.000	0.000	—	—
121.	Namibia	0.008	0.000	0.000	—	—
122.	Nauru	0.001	0.000	0.000	—	—
123.	Nepal	0.006	0.000	0.000	—	—
124.	Netherlands	1.855	1.855	1.852	79 206	79 206
125.	New Zealand	0.273	0.273	0.273	11 657	11 657
126.	Nicaragua	0.003	0.000	0.000	—	—
127.	Niger	0.002	0.000	0.000	—	—
128.	Nigeria	0.078	0.000	0.000	—	—
129.	Niue	-	0.000	0.000	—	—
130.	Norway	0.871	0.871	0.870	37 191	37 191
131.	Oman	0.086	0.000	0.000	—	—
132.	Pakistan	0.082	0.000	0.000	—	—
133.	Palau	0.001	0.000	0.000	—	—
134.	Panama	0.022	0.000	0.000	—	—
135.	Papua New Guinea	0.002	0.000	0.000	—	—
136.	Paraguay	0.007	0.000	0.000	—	—
137.	Peru	0.090	0.000	0.000	—	—
138.	Philippines	0.090	0.000	0.000	—	—
139.	Poland	0.828	0.828	0.827	35 355	35 355
140.	Portugal	0.511	0.511	0.510	21 819	21 819
141.	Qatar	0.135	0.135	0.135	5 764	5 764
142.	Republic of Korea	2.260	2.260	2.256	96 499	96 499
143.	Republic of Moldova	0.002	0.000	0.000	—	—
144.	Romania	0.177	0.177	0.177	7 558	7 558
145.	Russian Federation	1.602	1.602	1.599	68 404	68 404
146.	Rwanda	0.001	0.000	0.000	—	—
147.	Saint Kitts and Nevis	0.001	0.000	0.000	—	—

	Name of party	UN scale of assessment for 2010–2012	Adjusted UN scale to exclude non-contributors	Adjusted UN scale with 22% maximum assessment rate considered	2011 contributions by parties	Indicative 2012 contributions by parties
148.	Saint Lucia	0.001	0.000	0.000	—	—
149.	Saint Vincent and the Grenadines	0.001	0.000	0.000	—	—
150.	Samoa	0.001	0.000	0.000	—	—
151.	San Marino	0.003	0.000	0.000	—	—
152.	Sao Tome and Principe	0.001	0.000	0.000	—	—
153.	Saudi Arabia	0.830	0.830	0.829	35 440	35 440
154.	Senegal	0.006	0.000	0.000	—	—
155.	Serbia	0.037	0.000	0.000	—	—
156.	Seychelles	0.002	0.000	0.000	—	—
157.	Sierra Leone	0.001	0.000	0.000	—	—
158.	Singapore	0.335	0.335	0.334	14 304	14 304
159.	Slovakia	0.142	0.142	0.142	6 063	6 063
160.	Slovenia	0.103	0.103	0.103	4 398	4 398
161.	Solomon Islands	0.001	0.000	0.000	—	—
162.	Somalia	0.001	0.000	0.000	—	—
163.	South Africa	0.385	0.385	0.384	16 439	16 439
164.	Spain	3.177	3.177	3.172	135 654	135 654
165.	Sri Lanka	0.019	0.000	0.000	—	—
166.	Sudan	0.010	0.000	0.000	—	—
167.	Suriname	0.003	0.000	0.000	—	—
168.	Swaziland	0.003	0.000	0.000	—	—
169.	Sweden	1.064	1.064	1.062	45 432	45 432
170.	Switzerland	1.130	1.130	1.128	48 250	48 250
171.	Syrian Arab Republic	0.025	0.000	0.000	—	—
172.	Tajikistan	0.002	0.000	0.000	—	—
173.	Thailand	0.209	0.209	0.209	8 924	8 924
174.	The former Yugoslav Republic of Macedonia	0.007	0.000	0.000	—	—
175.	Timor-Leste	0.001	0.000	0.000	—	—
176.	Togo	0.001	0.000	0.000	—	—
177.	Tonga	0.001	0.000	0.000	—	—
178.	Trinidad and Tobago	0.044	0.000	0.000	—	—
179.	Tunisia	0.030	0.000	0.000	—	—
180.	Turkey	0.617	0.617	0.616	26 345	26 345
181.	Turkmenistan	0.026	0.000	0.000	—	—
182.	Tuvalu	0.001	0.000	0.000	—	—
183.	Uganda	0.006	0.000	0.000	—	—
184.	Ukraine	0.087	0.000	0.000	—	—
185.	United Arab Emirates	0.391	0.391	0.390	16 695	16 695

	Name of party	UN scale of assessment for 2010–2012	Adjusted UN scale to exclude non-contributors	Adjusted UN scale with 22% maximum assessment rate considered	2011 contributions by parties	Indicative 2012 contributions by parties
186.	United Kingdom of Great Britain and Northern Ireland	6.604	6.604	6.593	281 983	281 983
187.	United Republic of Tanzania	0.008	0.000	0.000	—	—
188.	United States of America	22.000	22.000	21.964	939 375	939 375
189.	Uruguay	0.027	0.000	0.000	—	—
190.	Uzbekistan	0.010	0.000	0.000	—	—
191.	Vanuatu	0.001	0.000	0.000	—	—
192.	Venezuela (Bolivarian Republic of)	0.314	0.314	0.313	13 407	13 407
193.	Vietnam	0.033	0.000	0.000	—	—
194.	Yemen	0.010	0.000	0.000	—	—
195.	Zambia	0.004	0.000	0.000	—	—
196.	Zimbabwe	0.003	0.000	0.000	—	—
	Total	102.501	100.165	100.000	4 276 933	4 276 933

TWENTY-SECOND MEETING OF THE PARTIES TO THE MONTREAL PROTOCOL ON SUBSTANCES THAT DEplete THE OZONE LAYER: 8–12 NOVEMBER 2010

The twenty-second Meeting of the Parties to the Montreal Protocol convenes from 8-12 November 2010, in Bangkok, Thailand. The preparatory segment will take place from Monday to Wednesday, and the high-level segment will convene on Thursday and Friday. During the meeting delegates are expected to consider decisions on a range of issues, *inter alia*: environmentally sound management of banks of ozone-depleting substances (ODS) and ODS destruction; terms of reference for the replenishment and for an evaluation of the financial mechanism; proposals to amend the Protocol to include hydrofluorocarbons (HFCs); essential uses; quarantine and pre-shipment (QPS) issues; critical use nominations; polyols; and hydrochlorofluorocarbon (HCFC) supply to ships.

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 196 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 ODS use before taking on commitments. The Protocol currently has 196 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, 195 parties have ratified the London Amendment. MOP-2 also established the Multilateral Fund (MLF), 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 MLF Secretariat. The Fund is replenished every three years, and has received pledges of over US\$2.8 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, 192 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 ban trade in methyl bromide with non-parties to the Copenhagen Amendment. To date, 181 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, 165 parties have ratified the Beijing Amendment.

MOP-15 AND FIRST EXTRAORDINARY MOP: 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 were available. Delegates could not reach agreement and took the unprecedented step of calling for an “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 on 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 AND EX-MOP2: MOP-16 took place in Prague, the Czech Republic, in 2004. Work on methyl bromide exemptions for 2006 was not completed and parties decided to hold a second ExMOP. ExMOP-2 was held in July 2005, in Montreal, Canada. Parties agreed to supplementary levels of critical use exemptions (CUEs) for 2006. 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 (COP-7) 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 included a US\$470.4 million replenishment of the MLF with for 2006-2008, and agreement on 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, *inter alia*: future work following the Ozone Secretariat’s workshop on the Special Report of the Intergovernmental Panel on Climate Change and the Technical and Economic Assessment Panel (TEAP); difficulties faced by some Article 5 parties manufacturing CFC-based metered dose inhalers (MDIs); treatment of stockpiled ODS relative to compliance; and a feasibility study on developing a system for monitoring the transboundary movement of ODS.

MOP-19: MOP-19 took place in Montreal, Canada in 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.

COP-8/MOP-20: MOP-20 was held jointly with COP-8 of the Vienna Convention in Doha, Qatar in November 2008. Parties agreed to replenish the MLF with US\$490 million for 2009-2011 and adopted other decisions concerning, *inter alia*: the environmentally sound disposal of ODS; approval

of 2009 and 2010 CUEs for methyl bromide; and compliance and reporting issues. This meeting was also the Protocol’s first paperless meeting.

MOP 21: MOP-21 took place in Port Ghalib, Egypt, from 4-8 November 2009 and adopted decisions on: alternatives to HCFCs; institutional strengthening; essential uses; environmentally sound management of banks of ODS; methyl bromide; budget; and data and compliance issues. Delegates considered a proposal to amend the Montreal Protocol to include HFCs, but this was not agreed.

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. Article 5 parties were required to phase out production and consumption of hydrobromochlorofluorocarbons by 1996 and bromochloromethane by 2002. Article 5 parties must still phase out: production and consumption of CFCs, halons and CTC by 2010; and methyl chloroform and methyl bromide by 2015. Under the accelerated phase-out of HCFC adopted at MOP-19, HCFC production and consumption by Article 2 countries was to be frozen in 2004 and phased-out by 2020, while in Article 5 parties, HCFC production and consumption is to be frozen by 2013 and phased-out by 2030 (with interim targets prior to those dates, starting in 2015 for Article 5 parties). There are exemptions to these phase-outs to allow for certain uses lacking feasible alternatives.

INTERSESSIONAL HIGHLIGHTS

EXECUTIVE COMMITTEE: The Executive Committee of the MLF held its sixty-first meeting from 5-9 July 2010 in Montreal, Canada. The Committee approved investment projects and work programme activities with a value of approximately US\$21.4 million, plus US\$1.6 million in support costs for bilateral/implementing agencies. It also approved the first tranches of HCFC phase-out management plans (HPMPs) for Cambodia, Croatia and Ghana.

OPEN-ENDED WORKING GROUP: The thirtieth meeting of the Montreal Protocol’s Open-ended Working Group (OEWG-30) convened in Geneva, Switzerland from 15-18 June 2010. Parties discussed, among other things, issues related to: the financial mechanism; HCFCs and their alternatives; polyols; and environmentally sound management of banks of ODS. Parties also considered issues concerning exemptions for ODS uses, including: essential- and critical-use exemptions for 2011 and 2012; transitions to CFC-free MDIs; laboratory and analytical uses of ODS; and use of ODS as process agents. OEWG-30 also considered two proposals, from the Federated States of Micronesia and from the US, Canada and Mexico, for amendments to the Montreal Protocol to control HFCs.

TEAP AND TOCs: Several of the Technical Options Committees (TOCs) met between May and October 2010 to further their work in the lead-up to MOP-22. The work of the TOCs and the Task Force are included in the TEAP’s 2010 reports, which will be considered at MOP-22.

IMPLEMENTATION COMMITTEE: The forty-fifth meeting of the Implementation Committee under the Non-Compliance Procedure convened in Bangkok, Thailand, from 4-5 November 2010. The Implementation Committee considered information provided by the Secretariat of the MLF on relevant decisions of the Executive Committee of the Fund and on activities carried out by implementing agencies and non-compliance related issues. Its recommendations will be considered at MOP-22.

MOP-22 HIGHLIGHTS: MONDAY, 8 NOVEMBER 2010

The preparatory segment of the twenty-second Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer (MOP-22) opened in Bangkok, Thailand, on Monday, 8 November 2010.

In the morning, delegates agreed on the organization of work and initiated discussions on issues related to the financial mechanism, status of HCFCs blended in polyols and environmentally sound management (ESM) of banks of ODS.

During the afternoon, delegates began consideration of the proposals to amend the Montreal Protocol to include HFCs.

OPENING OF THE PREPARATORY SEGMENT

Prepat Vanapitaksa, Director General, Department of Industrial Works (Thailand), opened MOP-22 and called for stronger cooperation between parties, industry, civil society and business to enhance the implementation of the Protocol.

Lauding developing countries for their efforts to meet the 2010 target by phasing out a majority of the substances under the Protocol, Marco González, Executive Secretary, Ozone Secretariat, suggested that the focus of parties shift to proposals for the phase-out of HCFCs, methyl bromide and methyl chloroform. He also highlighted the need to resolve outstanding issues on, *inter alia*: the evaluation of the financial mechanism; the phase-out of HFC-23 as a by-product of HCFC-22; synergies with other bodies including the International Civil Aviation Organization (ICAO), International Treaty on Plant Genetic Resources (ITPGR) and the UN Framework Convention on Climate Change (UNFCCC); and critical use exemptions, using guidance from the TEAP.

ORGANIZATIONAL MATTERS

Preparatory Segment Co-Chair Martin Sirois (Canada) introduced the provisional agenda (UNEP/OzL.Pro.22/1). Stating HFCs are not ODS, INDIA, supported by CHINA and BRAZIL but opposed by the US, proposed removing the agenda item on the phase-out of HFC-23 as a by-product of HCFC-22 production. The agenda was adopted with an amendment proposed by KAZAKHSTAN, to add discussion on ratification of the amendments. Co-Chair Sirois outlined, and participants agreed to, the proposed organization of work.

CONSIDERATION OF MEMBERSHIP OF MONTREAL PROTOCOL BODIES FOR 2011

Co-chairs of the assessment panels: Co-Chair Freznel Díaz (Venezuela) introduced draft decisions on new co-chairs of the TEAP (UNEP/OzL.Pro.22/3, XXII/[A]) and Environmental Effects Assessment Panel (EEAP) (UNEP/OzL.Pro.22/3, XXII/[B]). The US, supported by the UK and COLOMBIA, proposed merging the proposals submitted by COLOMBIA, the UK and the US on nominations to the TEAP and the EEAP, with COLOMBIA noting that some elements of their proposal may

require separate discussion.

FINANCIAL REPORTS OF THE TRUST FUNDS FOR THE VIENNA CONVENTION AND THE MONTREAL PROTOCOL AND BUDGETS OF THE MONTREAL PROTOCOL

Co-Chair Díaz introduced the documents UNEP/OzL.Pro.22/4 and Add 1, noting that the document contains a provision for upgrading the post of the Executive Secretary. Delegates then mandated a Budget Committee to begin work.

ISSUES RELATED TO THE FINANCIAL MECHANISM UNDER ARTICLE 10 OF THE MONTREAL PROTOCOL

Terms of Reference (ToR) for an evaluation of the financial mechanism and ToR for a study on the 2012–2014 replenishment of the Multilateral Fund (MLF): Delegates heard a report on the status of discussion on the TORs and the contact group Co-Chair Paul Krajnik (Austria) requested additional time to complete discussions. A contact group on the financial mechanism was established, with CHINA reiterating that HFCs should not be discussed.

Assessment of the HCFC guidelines: Contact Group Co-Chair Krajnik introduced the draft decision (UNEP/OzL.Pro.22/3, XXII[E]) on Executive Committee of the MLF's (Excom) HCFC guidelines and the financing of low global warming potential (GWP) alternatives. The US suggested further discussion on this issue in a contact group. Brazil stressed that the issue of HFCs should not be dealt with by this group.

STATUS OF HCFCs BLENDED IN POLYOLS AS CONTROLLED SUBSTANCES UNDER THE MONTREAL PROTOCOL

Co-Chair Díaz introduced draft decision UNEP/OzL.Pro.22/3, XXII/[F], proposed by India, on the status of HCFCs preblended in polyols as controlled substances, explaining that the ExCom had agreed on funding for phasing out these HCFCs. INDIA and DENMARK, as co-chairs of the OEWG-30 contact group, clarified that while the ExCom had resolved questions of funding, definitional issues still remained. The US proposed meeting with India and interested parties to resolve outstanding issues.

ENVIRONMENTALLY SOUND MANAGEMENT (ESM) OF ODS BANKS

Technologies and related facilities for the destruction of ODS: AUSTRALIA reported on the OEWG-30 consolidation of proposals by Australia and Nigeria, draft decision UNEP/OzL.Pro.22/3, XXII/[I], and a contact group was established for further discussion.

Environmentally sound management of ODS banks: AUSTRALIA introduced a consolidated draft decision (UNEP/OzL.Pro.22/3, XXII/[L]) of proposals by the EU and Mauritius. Co-Chair Díaz established a contact group on the issue.

PROPOSED AMENDMENTS TO THE MONTREAL PROTOCOL AND PHASE-OUT OF HFC-23 AS A BY-PRODUCT EMISSION OF THE PRODUCTION OF HCFC-22

Two draft decisions on amendments to the Montreal Protocol to address HFCs were presented by the US, on behalf of Canada and Mexico (UNEP/OzL.Pro.22/5), and the FEDERATED STATES OF MICRONESIA (FSM) (UNEP/OzL.Pro.22/6).

Emphasizing that HFCs are potent greenhouse gases, the US stressed that including HFCs in the Montreal Protocol would build on efforts of the UNFCCC to address climate change and of the ExCom to provide incentives for low-GWP alternatives to ODS. MEXICO added that the amendment aims to assist parties with the requisite technical, financial and institutional support for developing alternatives to HFCs. The FSM underscored that parties have a moral and legal responsibility to address HFCs.

On behalf of Canada and Mexico, the US also introduced a draft decision on the phase-out of HFC-23 as a by-product of HCFC-22 (UNEP/OzL.Pro.22/3, XXII/[M]). He explained the draft decision requests the ExCom to update information on HCFC-22 production facilities and further efforts to implement projects to mitigate HFC-23 emissions, and asks the TEAP and Scientific Assessment Panel (SAP) to study the costs and benefits of HCFC-22 by-product control. The US requested that a formal contact group be established.

In the ensuing discussion diverse views were expressed. CUBA noted that HFCs are under the mandate of the UNFCCC, and called on delegates not to prejudge decisions on this issue that may be taken at UNFCCC COP 16 in Cancún later this year. INDIA said that discussion of this issue was an attempt to deviate from the Montreal Protocol's mandate, noting its view that the proposals were recommending "an amalgamation of the Vienna Convention and the UNFCCC." Noting that the resources for the Montreal Protocol are limited, ARGENTINA objected to the proposed amendment. BRAZIL, with CHINA, called on parties to consider the proposals submitted in informal consultations only, as HFCs are already covered under the UNFCCC. VENEZUELA objected to the initiation of a contact group. Others supported the establishment of a contact group including SWITZERLAND, JAPAN, AUSTRALIA, GABON, ARMENIA, INDONESIA, CAMEROON and the EU.

General support for the proposals was expressed by the FORMER YUGOSLAV REPUBLIC OF MACEDONIA, the PHILIPPINES, KENYA, Tuvalu, on behalf of PACIFIC ISLAND COUNTRIES, GREENPEACE and EIA. CANADA recalled the Montreal Protocol's history of addressing HFCs, and suggested discussing the proposal by Brazil and other Latin American countries on the ExCom's HCFC guidelines in conjunction with the amendment proposals.

ISSUES RELATED TO EXEMPTIONS FROM ARTICLE 2 OF THE MONTREAL PROTOCOL

Nominations for critical use exemptions for 2011 and 2012: The TEAP presented their final recommendations on critical use exemptions (CUEs), proposed in the Methyl Bromide Technical Options Committee (MBTOC) workplan for 2011 and quarantine and pre-shipment (QPS). They discussed an overview of the final recommendations of the methyl bromide pre-plant soil use; and structural and commodity critical use nominations (CUNs) in 2010.

In the ensuing discussion, TEAP responded to inquiries on, *inter alia*: funding for pilot projects in Article 5 countries on alternatives to methyl bromide; efficacy of methyl iodide in treating high-moisture content dates and other post-harvest commodities; and guidance to the TEAP on emergency uses of methyl bromide, with reference to a recent application for strawberries in Canada.

Co-Chair Díaz then introduced the nominations for critical use exemptions for methyl bromide use as proposed by the TEAP MBTOC. CANADA, highlighting progress by parties on reducing methyl bromide use, introduced a conference room paper (CRP) on these nominations for methyl bromide production and consumption CUEs for 2011-2012 (UNEP/OzL.Pro.22/CRP.1).

The US outlined its efforts to reduce methyl bromide use, questioned the process by which the MBTOC evaluated the requests for CUEs, and called for increased transparency in MBTOC's review process.

In response to queries from Cuba and the EU on how methyl bromide stockpiles are considered in evaluations of CUE requests from parties, the TEAP clarified that it does not consider stockpiles in its assessments and Executive Secretary González emphasized that parties are responsible for determining how stockpiles are managed. The EU and CUBA agreed to have bilateral discussions on the issue of stockpiles.

The Natural Resources Defense Council (NRDC) noted that CUEs are sometimes reduced when countries have large stockpiles, and encouraged the reduction of the US's exemption accordingly. He also suggested the US establish a date by which it would end its requests for exemptions.

Quarantine and pre-shipment (QPS) uses of methyl bromide: New Zealand reported on the work of an OEWG-30 contact group considering QPS uses of methyl bromide included in draft decision XXII/[L], UNEP/OzL.Pro.22/3. She noted that a proposal submitted by the EU had been bracketed and submitted to MOP-22 for further deliberation. Co-Chair Díaz suggested, and delegates agreed, that a contact group on QPS finalize this matter.

Nominations for essential use exemptions for 2011-12: IRAN and INDIA discussed their phase-outs of CFCs, and delegates considered Bangladesh's nomination of CFCs for MDIs. The TEAP reported its recommendation of 37 tonnes of CFCs for MDI, requesting that Bangladesh consider the use of alternatives in the manufacture of some pharmaceutical products. BANGLADESH requested that the TEAP reconsider its nomination. Executive Secretary González reported an emergency use exemption of CFC-113 called for by the Dominican Republic.

Laboratory and analytical use exemptions: Co-Chair Sirois outlined that TEAP had recommended that global exemptions for 15 laboratory and analytical uses with alternatives be eliminated, and three uses be exempted. CHINA noted that since no alternative technologies were available in developing countries, exemptions should be considered and a grace period required. Sirois noted that TEAP would look at laboratory and analytical uses in Article 5 parties and produce a report.

Issues relating to the use of ODS as process agents: Co-Chair Sirois noted that OEWG-30 considered the TEAP's recommendation on possible deletions of some uses from tables of approved process agent uses. CANADA introduced a draft decision on the use of controlled substances as process agents (UNEP/OzL.Pro.22/CRP.2), which, *inter alia*, requested TEAP to report in 2013, and every second year thereafter, on progress made in reducing process agent uses, and to make any additional recommendations to parties on further actions to reduce process agent uses or their emissions.

CONTACT GROUPS

Financial Mechanism: The contact group on the financial mechanism, co-chaired by Paul Krajnik, Austria, and David Bola Omotosho (Nigeria) met on Monday evening and agreed to first address the ToR on the evaluation of the MLF on Tuesday.

ODS Destruction: Co-chaired by Annie Gabriel (Australia) and Javier Ernesto Camargo Cubillos (Colombia), the contact group met for a preliminary reading of the decision on destruction technologies with regard to ODS, and highlighted, *inter alia*, the need to define "criteria" to quantify ODS to be destroyed.

IN THE CORRIDORS

As delegates entered the first day of MOP-22 at the UN Center in Bangkok, conversations outside plenary halls were lively, with some participants discussing whether progress might be made on HFCs at this round of talks. While many were circumspect about their predictions for the issue, others detected a gain in momentum from the previous discussions in Geneva at the OEWG-30. Citing the potential for the formation of a formal contact group to consider HFCs, they noted that although agreement on amending the Protocol at MOP-22 remains unlikely, one said "incremental steps" may be taken in addressing HFCs.

MOP-22 HIGHLIGHTS: TUESDAY, 9 NOVEMBER 2010

The preparatory segment of MOP-22 convened for its second day in Bangkok, Thailand, on Tuesday, 9 November 2010.

In the morning, delegates considered the special situation of Haiti and compliance and reporting issues. The co-chairs also led delegates through a review of the agenda and decisions to be forwarded to the high-level segment. Plenary was adjourned mid-morning to allow contact groups on QPS, ODS destruction, the ToR for the evaluation of the financial mechanism, as well as the Budget Committee, to convene throughout the day.

Plenary reconvened in the evening and heard updates from contact and informal groups.

SPECIAL SITUATION OF HAITI

Co-Chair Díaz recalled that at the OEWG-30, Grenada and Saint Lucia had proposed a draft decision calling all parties to assist Haiti in their control of ODS (UNEP/OzL.Pro.22/3, XXII[O]).

The US supported the intent of the proposal, but said it would consult with concerned parties on some issues.

During the evening plenary, the US and GRENADA reported progress in these discussions and said the revised decision would be circulated on Wednesday.

COMPLIANCE AND DATA-REPORTING ISSUES

Treatment of stockpiled ODS relative to compliance:

Co-Chair Sirois recalled that OEWG-30 decided to forward to MOP-22 a draft decision on the treatment of stockpile ODS relative to compliance (UNEP/OzL.Pro.22/3, XXII[P]).

The EU reported on consultations held with concerned parties on the draft decision and said it had produced a revised draft, which will be released as a CRP. The US said the revised draft was closer to something they could support. JORDAN said that the draft decision should include the provision of finance and technologies to Article 5 countries for addressing the issue of ODS stockpiles. Co-Chair Sirois suggested, and parties agreed, to consult informally on the draft decision.

Presentation on and consideration of the work and recommended decisions of the implementation committee:

Co-Chair Díaz deferred discussion of compliance and reporting

issues considered by the Implementation Committee (ImpCom), noting that the documents still needed to be translated before substantive discussions could be undertaken.

During the evening plenary, Elizabeth Munzert (Germany), on behalf of the ImpCom President Ezzat Lewis (Egypt), presented the decisions of the 45th meeting of the ImpCom under the Non-Compliance Procedure (UNEP/OzL.Pro.22/CRP.4), noting a full report of the meeting would be available later in the week. She highlighted the high rate of reporting, with 191 of 196 countries reporting production and consumption data for 2009.

Delegates agreed to forward the draft decision to the high-level segment for consideration.

MEMBERSHIP OF MONTREAL PROTOCOL BODIES FOR 2011

The US presented a consolidated proposal thanking outgoing co-chairs José Pons Pons and Jan van der Leun of the TEAP and EEAP and senior expert Thomas Morehouse of the TEAP, and proposing new appointees Nigel Paul, Marta Pizano and Bella Moranion for these positions (UNEP/OzL.Pro.22/CRP.5). The decision also requests the TEAP to consider the ToRs for the nomination of experts, including a reassessment of term limits. Delegates agreed to forward the decisions to the high-level segment.

During the evening plenary, noting many positions for the Protocol bodies are open and only one nomination had been received, Co-Chair Sirois invited parties to submit nominations promptly.

ISSUES RELATED TO EXEMPTIONS FROM ARTICLE 2 OF THE PROTOCOL

Nominations for essential use exemptions: On essential use nominations, the RUSSIAN FEDERATION presented a draft decision for an exemption for CFC-113 for aerospace applications (UNEP/OzL.Pro.22/CRP.6). During the evening plenary, CHINA said that they were close to an agreement on the proposal. The EU noted their consultations with the Russian Federation were fruitful, but that they would need more time to reach agreement.

Laboratory and analytical uses of ODS (decision XXI/6):

No decision was proposed on this issue and delegates agreed that nothing would be forwarded to the high-level segment.

PROPOSED AMENDMENTS TO THE MONTREAL PROTOCOL AND PHASE-OUT OF HFC-23 AS A BY-PRODUCT EMISSION OF THE PRODUCTION OF HCFC-22

After Monday's discussion, the Co-Chairs proposed a way forward for consideration of the proposed amendments to the Montreal Protocol (UNEP/OzL.Pro.22/6 and UNEP/OzL.Pro.22/5) and the phase-out of HFC-23 as a by-product of HCFC-22 (draft decision UNEP/OzL.Pro.22/3, XXII/[M]). Delegates agreed to convene an informal contact group to consider these issues, as well as the assessment of the ExCom's HCFC guidelines (draft decision UNEP/OzL.Pro.22/3, XXII/[E]).

OTHER MATTERS

The US presented a draft decision, also on behalf of Canada and Australia, on progress by ICAO in the transition out of halon use in civil aviation (UNEP/OzL.Pro.22/CRP.7). He explained the draft decision appreciated efforts by ICAO in transitioning away from halon use and for providing a forum for identifying and adopting alternatives to halons. He also noted the proposal, *inter alia*, asked parties to support mandatory dates for transitioning out of halons, and asked the TEAP and Halon Technical Options Committee to continue to engage with ICAO counterparts on this issue. The EU said it needed some time to compare the proposal with EU legislation on halon phase-outs, and agreed to consult with the US on this issue.

CONTACT GROUPS

Financial Mechanism: The contact group on the ToR for an evaluation of the financial mechanism and replenishment of the MLF, co-chaired by Paul Krajnik (Austria) and David Bola Omotosho (Nigeria), met on Tuesday afternoon. As agreed on Monday, the group began with work on the ToR for the evaluation, deliberating on the text of the draft decision (UNEP/OzL.Pro.22/3, XXII/[C]), to narrow the scope of the evaluation and clarify the tasks that would be required of the consultant.

The contact group addressed sub-sectors A and B of the Annex to the draft decision, on the preamble and purpose of the evaluation, along with policy issues and the analysis of results. In-depth discussions were held on how to conduct the evaluations for all stages of the ExCom and MLF processes, from the preparation and submission of projects, to review of projects and results by the Secretariat. Delegates considered issues that should be addressed in the evaluation, including, *inter alia*: diverse indicators for the evaluation; ODS phase-out; project timing; additional benefits; and climate effects.

With outstanding issues and text in square brackets remaining at the end of the contact group's allotted time, the group agreed to reconvene to continue their work.

ODS Destruction: The contact group on ODS destruction, co-chaired by Annie Gabriel (Australia) and Javier Ernesto Camargo Cubillos (Colombia), met to consider a draft decision on destruction technologies with regard to ODS (UNEP/OzL.Pro.22/3, XXII/[I]). The group discussed a verbal proposal from one party that calls on the TEAP to develop criteria for verification of the destruction of ODS, which was welcomed by TEAP. Delegates also debated including these criteria, when available, in the Montreal Protocol Handbook, eventually agreeing to request the TEAP to, *inter alia*, "develop criteria that should be used to verify the destruction of ODS in facilities that use appropriate ODS destruction technologies, taking into account the recommended destruction and removal efficiencies

for the relevant substance." The reference to the inclusion of the verification criteria in the Handbook was retained in the chapeau of the paragraph. On a preambular reference to the Handbook's code of housekeeping regarding ODS in destruction facilities, delegates agreed to note that the code does not provide a framework that can be used for verification.

QPS uses of methyl bromide: Co-chaired by Robyn Washbourne (New Zealand) and Tri Widayati (Indonesia), the contact group discussed a revised draft decision, proposed by the EU on methyl bromide use for QPS (UNEP/OzL.Pro.22/CRP.3). Several parties expressed their concern about a provision in the proposal that requests all parties to implement monitoring procedures to gather available data about the sectors that use methyl bromide for QPS purposes, and to provide those data to the Ozone Secretariat by 31 January 2011. Some questioned the purpose of such a request, as well as the precise data requested. Several parties also disagreed with the proposal for the TEAP to assess the data on methyl bromide use for QPS purposes on a party-by-party basis, noting that this is not the TEAP's mandate. The EU explained that it intended to establish a process in which the TEAP could enter into a dialogue with parties to acquire available data for the assessment. A pre-drafting group was established to conduct informal consultations.

Budget Committee: The budget committee, chaired by Ives Enrique Gómez Salas (Mexico), met on Tuesday, and discussed the Secretariat proposal to upgrade the post of the Executive Secretary to Assistant Secretary General (ASG) level. Delegates considered including this upgrade in a footnote in the revised version of the approved 2010 and proposed 2011-2012 budgets of the Trust Fund for the Protocol (UNEP/OzL.Pro.22/4). While discussing options for retaining the Executive Secretary, some delegates ruled out the possibility of taking him on under a consultant's contract, citing the need for the continuity of strong leadership of the Protocol. One party registered opposition to upgrading the post to the ASG level, but agreed to further negotiation on this matter, based on the Secretariat's text. The Committee will continue work on Wednesday.

IN THE CORRIDORS

As negotiations continued predominantly in contact groups on Tuesday, some MOP-22 participants were adversely impacted by heavy use of refrigerants. In one particularly cold meeting room, some delegates braced themselves against the cold, committing to "negotiate until our dying breaths" to come to consensus on issues related to the evaluation of the Multilateral Fund.

With UN rules on a mandatory retirement age poised to affect the leadership of the Montreal Protocol, parties discussed possible ways of keeping the current Executive Secretary at the helm. However, the option of upgrading the position to the ASG level was not supported by all parties, with rumors in the halls suggesting that opponents would prefer to avoid setting such a precedent. Several predicted the need to "get creative" with perhaps a time-limited upgrade to ASG, extendable by a decision of the parties.

On HFCs, many participants remarked on the informative nature of the US side event on its proposal to include HFCs in the Montreal Protocol, as well as some surprising attendees representing parties that have traditionally been opposed to the proposal. Others were hedging their bets on any progress, and looking forward to the initiation of a contact group on Low-GWP alternatives to HCFCs (HFCs – by another name) on Wednesday.

MOP-22 HIGHLIGHTS: WEDNESDAY, 10 NOVEMBER 2010

The preparatory segment of Montreal Protocol MOP-22 convened for its third day in Bangkok, Thailand, on Wednesday, 10 November 2010.

In the morning, delegates participated in contact groups on the ToR for the evaluation of the financial mechanism and the ToR for the MLF replenishment study, and on ODS destruction.

During the afternoon, the Budget Committee, the contact group on QPS uses of methyl bromide and an informal group on low-GWP alternatives to ODS convened.

Plenary reconvened in the evening, where delegates agreed to forward several decisions to the high-level segment.

CONTACT GROUPS

Financial mechanism: This contact group, co-chaired by Paul Krajnik (Austria) and David Bola Omotosho (Nigeria), began with an open session on deliberations on the draft decision on MLF replenishment (UNEP/OzL.Pro.22/3, XXII/[D]), and then continued work in a closed contact group on the draft decision on the financial mechanism evaluation (UNEP/OzL.Pro.22/3, XXII/[C]).

On the ToR for replenishment of the MLF, noting that the decision had been discussed in detail at OEWG-30 in Geneva, discussions focused on the text remaining in square brackets.

Clarifying wording was suggested for a paragraph asking the TEAP to provide updated figures needed to maintain stable and sufficient funding for the MLF. Participants considered the bracketed text on potential compliance scenarios for HFCs, with some preferring that any mention of additional compliance obligations be removed from the text completely.

While some delegates stressed that there are no obligations on HFCs under the Protocol, others noted that the word “potential” recognized the current situation but allowed flexibility to accommodate future obligations. Another delegate agreed that such text would not prejudice the outcome of discussions on whether to consider new obligations under the Montreal Protocol. One cautioned against including text that is too general, explaining that the TEAP, as a technical body, should not be asked to make political decisions about the scope of their work.

Disagreements remained on whether to retain two paragraphs, one asking the TEAP to provide information on resources that would be needed to meet potential compliance obligations

resulting from amendment proposals being considered by MOP-22, and another asking the TEAP to provide information on the additional resources that would be needed to promote low-GWP alternatives to HFCs. Delegates agreed to consider again the bracketed text following the discussions of the informal group on low-GWP alternatives.

In the closed session on the evaluation ToR, delegates continued line-by-line consideration of the text, focusing their discussions on sections on the scope and on conclusions and recommendations of the study. Under the scope, delegates deliberated on, *inter alia*, the issue of technology transfer, and on conclusions and recommendations, some parties agreed to work bilaterally on draft text for consideration by the contact group.

ODS destruction: The contact group, co-chaired by Annie Gabriel (Australia) and Javier Ernesto Camargo Cubillos (Colombia), met on Wednesday morning and finalized their consideration of a draft decision on destruction technologies with regards to ODS (UNEP/OzL.Pro.22/3 XXII/[I]), agreeing to reference “comprehensive verification criteria.”

The contact group also considered a draft decision on environmentally sound management of ODS banks (UNEP/OzL.Pro.22/3 XXII/[L]). Discussion focused on a request to the ExCom of the MLF to, *inter alia*, continue its efforts on further cost-effective projects for the destruction of ODS banks during the next replenishment and provide Article 5 parties with the funding necessary to manage ODS banks. Some parties called for the definition of the term “cost-effective,” with others noting that a definition like this would be difficult to formulate given the time constraints. Parties discussed the MLF guidelines, noting that the term “cost-effective” was dealt with in the guidelines, and agreed to delete this reference.

Delegates then discussed the MLF-funded demonstration projects in relation to the aforementioned request to the ExCom. Some developed country delegates were concerned that the request to the ExCom to further its efforts on ODS bank destruction projects at this point may be preemptive, as the “learn by doing” demonstration projects have not been executed. One developing country party stressed that as the projects were yet to be executed, and therefore no feedback had been received, there was a need to maintain the request to the MLF for assistance to Article 5 parties to fully manage ODS banks, through activities including national inventories of banks, the development of legislative frameworks and strategies for sound waste management.

One developed country delegate called for a reference to “further assistance” for Article 5 parties for the management of ODS banks, as opposed to “funding,” and delegates agreed.

QPS uses of methyl bromide: Co-chaired by Robyn Washbourne (New Zealand) and Tri Widayati (Indonesia), the contact group on QPS uses of methyl bromide met on Wednesday afternoon.

The EU presented part of the revised text of the annex to the draft decision (UNEP/OzL.Pro.22/CRP.3), requesting the TEAP to provide information related to QPS uses of methyl bromide, including: international trade and technology; trends and potential fluctuations in the use of methyl bromide for QPS; the main commercial, technical and regulatory drivers for such methyl bromide use; the most significant economical and environmental impacts of each use; and biosecurity risks.

One party requested a simple CRP indicating quarantine challenges that will impact methyl bromide use for QPS, and what a strategic analysis would look like and who would undertake this analysis. Several parties requested the full text of the revised draft decision, especially regarding the obligations of parties.

The EU announced that the pre-drafting group would resume work in order to produce a short CRP for discussion Thursday.

Budget Committee: Chaired by Ives Enrique Gómez Salas (Mexico), the Committee continued discussing the possibility of upgrading the post of Executive Secretary to ASG. Chair Salas introduced the Secretariat’s text, as well as a proposed amendment. The text requested the President of the Bureau of MOP-22 to work with UNEP’s Executive Director to request the Secretary General to raise the level of the Executive Secretary. The proposed amendment noted the “administrative impossibility of maintaining the Executive Secretary,” and requested a “temporary” upgrade of the post to ASG.

Most parties supported ensuring continued and consistent leadership in the period leading up to 2015, and some parties emphasized that the upgrade be time-bound.

One developed country party requested time to conduct additional research on the possibility of extending the current holder’s tenure. The Secretariat informed delegates that an extension of three years would be impossible, according to UN rules. Discussion will continue on Thursday.

Informal group on low-GWP alternatives to ODS:

Co-chaired by Blaise Horisberger (Switzerland) and Leslie Smith (Grenada), the informal group on low-GWP alternatives to ODS met on Wednesday afternoon. It was noted that Brazil and four other Latin American countries had proposed a draft decision, which among other things, requests the TEAP to assess the extent to which the ExCom funding guidelines on HCFCs allow for the selection and financing of low-GWP alternatives to HCFCs in Article 5 countries (UNEP/OzL.Pro.22/CRP.13).

Introducing the proposal, Brazil highlighted that it requests the TEAP to assess the quantities and types of high-GWP substances that are likely to be phased in as alternatives to HCFCs, as well as to identify the affected sectors and the extent to which the funding guidelines on HCFCs would allow for the selection and financing of low-GWP alternatives to HCFCs by Article 5 parties. He said that once the TEAP has fully assessed the situation regarding low-GWP alternatives, parties could consider how to address the problem by the rules of the Montreal Protocol.

In the ensuing discussion, some developing country parties noted their reservations about introducing discussions on HFCs into the Montreal Protocol, and stressed that if discussions proceeded, any assessment should be comprehensive and exhaustive, ensuring that technologies with low-GWP do not possess other hazardous properties. Another party preferred

referring to “environmentally friendly” or “environmentally benign” and avoiding reference to low-GWP or high-GWP alternatives.

Some parties lauded the Brazilian proposal as an “excellent” basis from which to initiate discussion, and highlighted the need to broaden the focus to also consider the issue of growing demand for HCFC alternatives, the cost implications of the path forward, and the environmental, health and safety aspects of alternatives.

Delegates then made specific suggestions to the draft decision and subsequently considered amendments to the text proposed by several parties. One developed country party explained that collecting data on the quantities and types of high-GWP alternatives that have been phased in under the Montreal Protocol would not pre-judge policy responses to address these substances, but emphasized that parties should acquire these data as they have a responsibility to be aware of the impacts of the Protocol on other environmental issues. Another elaborated that the information would be relevant for following through on commitments to support the introduction of low-GWP alternatives to HCFCs and CFCs.

Some developing countries questioned the need for such information under the Montreal Protocol, noting that data on greenhouse gases should already be available in parties’ national inventories under the UNFCCC and the Kyoto Protocol, and are relevant to work in the climate, not the ozone, regime.

No consensus was reached on the proposed text, and, citing the need to dedicate time and energy to other contact groups and agenda items of the meeting, BRAZIL suggested asking the MOP to “take note” of the work done in the informal contact group and to continue discussions at OEWG-31. Some other developing country parties supported this, noting the issue was “not a priority” for them; others disagreed, asking for the issue to be given further attention at this meeting.

The group will meet briefly on Thursday.

PLENARY

Delegates convened in plenary during the evening to hear reports from the various contact groups and to consider decisions to be forwarded to the high-level segment.

Parties agreed to forward decisions to the high-level segment on: essential uses of CFCs by the Russian Federation (UNEP/OzL.Pro.22/CRP.6/Rev.1), process agents (UNEP/OzL.Pro.22/CRP.2/Rev.2), the situation of Haiti (UNEP/OzL.Pro.22/CRP.12), stockpiles (UNEP/OzL.Pro.22/CRP.10), the report of the ImpCom (UNEP/OzL.Pro.22/3), and ICAO and halons (UNEP/OzL.Pro.22/CRP.7).

IN THE CORRIDORS

On a day packed with back-to-back contact groups, delegates filled the room for the informal group on low-GWP alternatives on Wednesday afternoon to discuss: the proposal on ExCom HCFC funding guidelines, the phase-out of HFC-23 as a by-product emission of the production of HCFC-22, and the Protocol amendment proposals.

Some participants speculated that the inclusion of the proposal on an assessment of the ExCom HCFC funding guidelines in this cluster of issues provided a mechanism through which progress could be made on addressing HFCs under the Protocol. Potential progress stalled when Brazil proposed deferring discussion on the assessment of the HCFC guidelines to the OEWG.

With one participant commenting that Brazil initiated the draft decision as a result of its frustration with the limited funding allocated by the guidelines on HCFC phase-outs, seasoned delegates suggested the party might alternatively address the issue in the contact group on the ToR for the TEAP study on MLF replenishment. HFC Amendment proposal proponents were left questioning – where to from here?

MOP-22 HIGHLIGHTS: THURSDAY, 11 NOVEMBER 2010

The preparatory segment of Montreal Protocol MOP-22 convened for its fourth day in Bangkok, Thailand, on Thursday, 11 November 2010.

In the morning, delegates attended the opening of the High-level segment. Delegates then convened in plenary throughout the day to hear presentations by heads of delegations.

Contact groups on ODS destruction, QPS uses of methyl bromide and ToRs on evaluation of the financial mechanism and replenishment of the MLF, an informal group on low-GWP alternatives, and the Budget Committee met throughout the day.

OPENING OF THE HIGH-LEVEL SEGMENT

Michael Church, Minister of Environment (Grenada), MOP-21 President, applauded the universal ratification of the Protocol and appealed to the few parties that have not ratified the amendments to do so expeditiously.

Executive Secretary Marco González, on behalf of UNEP Executive Secretary Achim Steiner, thanked the government of Thailand for hosting the meeting. He highlighted that parties to Montreal Protocol have not only succeeded in protecting the ozone layer, but also contributing to protecting the global climate system, and appealed to parties to make greater efforts. He paid tribute to Madhava Sarma, former Executive Secretary of the Ozone Secretariat, and other two distinguished members of the ozone community who recently passed away. Participants held a moment of silence to express condolences. González also expressed appreciation for the contribution made by TEAP Co-Chair Jose Pons Pons, EEAP Co-Chair Jan van der Leun and UNEP OzonAction Branch Head Rajendra Shende, who are retiring.

Trairong Suwankiri, Deputy Prime Minister (Thailand), opened the High-level segment of MOP-22, and highlighted Thailand's success in having phased-out more than 10,000 tonnes of CFCs. He stressed the most important issues under MOP-22's consideration are: the ToR for the TEAP study of the replenishment of the MLF; the HFC amendment proposals; and the issue of ODS destruction.

ORGANIZATIONAL MATTERS

MOP-22 elected by acclamation Steven Reeves (UK) as President; Hassen Hannachi, (Tunisia), Abid Ali (Pakistan) and Sonja Ruzin (Serbia) as Vice Presidents; and Michael Church (Grenada) as Rapporteur. Delegates also adopted the agenda (UNEP/OzL.Pro.22/1/Add.1).

MOP-22 President Reeves encouraged participants to submit any outstanding credentials to the Secretariat.

PRESENTATIONS OF ASSESSMENT PANELS ON THEIR QUADRENNIAL ASSESSMENT

Noting the Executive Summary had been released, and the full report would be available in early 2011, SAP Co-Chair A.R. Ravishankara (US) emphasized that the SAP findings strengthen its 2004 conclusions that the Montreal Protocol is achieving its objectives.

EEAP Co-Chair Janet Bornman (Denmark) presented on the EEAP's findings on links between climate change, ozone depletion and UV radiation, noting, among other issues, human health, terrestrial and aquatic ecosystems and biogeochemical cycles.

TEAP Co-Chair Lambert Kuijpers (the Netherlands) presented the preliminary TEAP assessment report, and outlined the content of each TOC report. In a short question period, participants discussed the TEAP's proposed GWP classification scale and HCFCs in the foam sector.

PRESENTATION BY THE MULTILATERAL FUND

ExCom Chair Javier Ernesto Camargo Cubillos (Colombia) presented the work of the ExCom's past three meetings (UNEP/OzL/Pro.22/8). He highlighted, among other things: progress on funding to support accelerated HCFC phase-outs; additional funding for low-GWP alternatives to HCFCs; and the development of an MLF Climate Impact Indicator to evaluate technologies for replacing HCFCs.

He outlined efforts by the UNDP, UNEP, the United Nations Industrial Development Organization (UNIDO) and the World Bank to assist in implementation of the Protocol, particularly for Article 5 countries. He noted, *inter alia*, work on HCFC phase-outs and licensing systems, ODS destruction projects, and possible uses of carbon markets.

STATEMENTS BY HEADS OF DELEGATIONS

GRENADA reiterated its support for upgrading the post of Executive Secretary of the Ozone Secretariat to ASG. JAPAN stressed that incentives for all parties to address ODS banks must be explored, and that the scope of the MLF should be clear, to avoid duplication. The US underscored the need to avoid undoing the Protocol's achievements and said his country would not tolerate inaction based on bureaucratic excuses. INDONESIA highlighted its commitment to phasing out HCFCs, stressed the need to reduce halon dependency of aircraft and offered to host MOP-23. UGANDA said existing networks tackling illegal trade of ODS require strengthening at the national and regional levels.

ARMENIA outlined its efforts to phase-out the consumption of ODS. BOSNIA AND HERZEGOVINA explained it has phased out 250 tonnes of CFCs and initiated implementation

of its HCFC management plan. ZIMBABWE noted his country lacks feasible ODS disposal options, said a mobile destruction facility was necessary, and promoted natural refrigerants. LAOS PDR outlined its work in developing its HCFC management plan. Highlighting the importance of addressing ODS destruction, the EU stressed that innovative and collaborative ways to address banks to capture the climate benefits are required. SAMOA and the SOLOMON ISLANDS highlighted the need for assistance for ODS destruction and expressed interest in working with other Pacific island countries on this.

SERBIA described his government's ozone awareness-raising work with the education ministry. INDIA stressed that many policy issues on funding for HCFC phase-out are yet to be resolved, and emphasized HFCs are outside the scope of the Protocol. Highlighting the scope of the Protocol's work ahead, KENYA called on all parties to be prepared to compromise. MONGOLIA stressed the importance of the involvement of the business community in meeting Protocol commitments. MALAWI described its efforts at phasing out methyl bromide in the agricultural sector.

BAHRAIN underscored its interest in supporting the HFC amendment proposal. The DEMOCRATIC REPUBLIC OF CONGO expressed concern over the low levels of financing for HCFC activities due to recent decisions of the ExCom. FSM said the best reason for phasing out HFCs was "because we can." ANGOLA described a proposed initiative to prevent illegal trade with neighboring countries. NEW ZEALAND described its efforts to balance biosecurity priorities with ozone protection, through capture of methyl bromide used for QPS. Describing the reconversion of a foam factory, the DOMINICAN REPUBLIC said this was a key activity in phasing out HCFCs.

CONTACT GROUPS

Financial mechanism: In the afternoon, delegates met to continue considering the text of ToRs on the evaluation of the financial mechanism and replenishment of the MLF. In the open session on replenishment, no consensus was found on the text remaining in square brackets, but participants agreed to consider compromise text proposed by one party and to return to the issue in a later session.

Parties then discussed the outstanding evaluation issues, in a closed session. Delegates considered operative issues, including questions of budgets and who should undertake the evaluation. They also discussed the text of the annex, and agreed to consider some compromise text drafted in informal consultations. The group agreed to meet again on Friday in an effort to complete its work.

ODS destruction: The contact group met on Thursday to resume consideration of a draft decision on environmentally sound management of ODS banks (UNEP/OzL.Pro.22/3 XXII/[L]). Delegates agreed to delete a paragraph calling on the ExCom to consider the funding of cost-effective destruction projects during the next replenishment period.

Delegates then discussed additional funding opportunities for the management of ODS banks. Many developed country parties recalled the seminar on the sound management of ODS banks held in July 2010, and called for including the GEF as a funding source, noting the opportunities for partnership and co-financing that the GEF presents. Disagreeing and calling for removal of all references to the GEF, one developing country party expressed concern that the GEF may give higher priority to other MEAs in their current and future replenishments, and had not provided adequate financing for destruction of ODS banks in the past. He stressed that all funding for the destruction of ODS banks should come from the MLF. The Secretariat briefed parties that, although the GEF replenishment is not as "robust as hoped for," there may still be a small amount of funding available for possible investment in ODS destruction projects if, *inter alia*, POPs destruction could be carried out simultaneously. Trying

to break the deadlock, one developed country party suggested inviting parties to explore the many possible opportunities for financial resources and synergies described in the document and presentations from the seminar for the sound management of ODS banks.

In the afternoon, noting that no consensus could be reached on the decision, the contact group suspended discussion. They agreed to reconvene briefly on Friday to discuss the way forward in future sessions.

QPS uses of methyl bromide: Co-chaired by Robyn Washbourne (New Zealand) and Tri Widayati (Indonesia), the contact group on QPS uses of methyl bromide met on Thursday afternoon.

The EU presented a revised CRP on the subject. Some parties did not agree to references to developing a strategic view on methyl bromide use for QPS, or to encouraging parties to report the main categories of use for methyl bromide. No consensus was reached in the group on these issues.

Budget Committee: The group continued consideration of an amended proposal by the Secretariat to upgrade the post of Executive Secretary to the level of ASG, which it said considered all parties' concerns. One developed country party reiterated their inability to agree to the upgrade, and preferred that the wording be kept general to allow the President of the MOP-21 Bureau a "wide range of options for the extension" of the Executive Secretary's term. The committee agreed to add a footnote on the Executive Secretary's budget line (UNEP/OzL.Pro.22/4), requesting UNEP's Executive Director and the UN Secretary-General "to explore any means to retain the current Executive Secretary until 2015," dropping the reference to the ASG upgrade.

Delegates also discussed the Secretariat's proposed draft decision on financial matters. On funding the evaluation of the financial mechanism, one delegate informed participants that current discussions in the financial mechanism contact group indicate that the required funds may either come from the drawdown, authorized by the parties, or from the MLF. One delegate informed delegates of another option put forward by the ToR group of having the UN's joint inspection unit carry out the evaluation. Delegates agreed to finalize deliberations once the contact group on the financial mechanism had completed its work.

Informal group on low-GWP alternatives to ODS: Co-chaired by Blaise Horisberger (Switzerland) and Leslie Smith (Grenada), the informal group on low-GWP alternatives to ODS met briefly on Thursday afternoon.

Explaining that he had consulted with several parties, Co-Chair Horisberger introduced a draft decision requesting the TEAP to "review and update the report pursuant to decision XXI/9 and to provide a draft report to OEWG-31 and final report at MOP-23," and the informal group agreed to it. The group also agreed to a draft factual report on its work, which stated the group's decision to continue discussions at OEWG-31.

IN THE CORRIDORS

As the high-level segment launched on Thursday with colorful Thai dancers, many delegates were absent from the plenary hall, instead convening in parallel to resolve outstanding issues still facing the contact groups. In reference to this apparent diligence, some delegates were left questioning: to what end? Despite lengthy deliberations in several groups, square brackets still remained for key issues, and some delegates left for the evening cultural reception wondering if their work over the week would lead to resolution of many (or any) significant issues.

ENB SUMMARY AND ANALYSIS: The *Earth Negotiations Bulletin* summary and analysis of MOP-22 will be available on Monday, 15 November 2010 online at: <http://www.iisd.ca/ozone/mop22/>

SUMMARY OF THE TWENTY-SECOND MEETING OF THE PARTIES TO THE MONTREAL PROTOCOL ON SUBSTANCES THAT DEplete THE OZONE LAYER: 8-12 NOVEMBER 2010

The twenty-second Meeting of the Parties (MOP-22) to the Montreal Protocol on Substances that Deplete the Ozone Layer took place in Bangkok, Thailand, from 8-12 November 2010. The meeting was attended by over 400 participants representing governments, UN agencies, intergovernmental and non-governmental organizations, academia, industry and the agricultural sector.

MOP-22 opened with a preparatory segment from Monday to Wednesday, 8-10 November, which addressed the MOP's substantive agenda items and related draft decisions. This was followed by a high-level segment on Thursday and Friday, 11-12 November, which 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 Wednesday, it reconvened several times during the high-level segment to address outstanding issues.

MOP-22 adopted 16 substantive and several procedural decisions, including on: the terms of reference (ToR) for the Technical and Economic Assessment Panel study on the replenishment of the Multilateral Fund; the ToR for the evaluation of the financial mechanism; assessment of technologies for ozone-depleting substances (ODS) destruction; budget; and data and compliance issues. MOP-22 was not able to make progress on low-global warming potential alternatives, or ODS destruction, which many delegates said were issues key to the long-term future of the Protocol. Although the draft decisions to amend the Montreal Protocol to include hydrofluorocarbons (HFCs) were not successful, their proponents remained committed to addressing HFCs through the Montreal Protocol in the future.

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 196 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

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parties). Developing countries (Article 5 parties) were granted a grace period allowing them to increase their ODS use before taking on commitments. The Protocol currently has 196 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, 195 parties have ratified the London Amendment. MOP-2 also established the Multilateral Fund (MLF), 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 MLF Secretariat. The Fund is replenished every three years, and has received pledges of over US\$2.8 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, 192 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 ban trade in methyl bromide with non-parties to the Copenhagen Amendment. To date, 181 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, 165 parties have ratified the Beijing Amendment.

MOP-15 AND FIRST EXTRAORDINARY MOP: 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 were available. Delegates could not reach agreement and took the unprecedented step of calling for an "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 on 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 AND EX-MOP-2: MOP-16 took place in Prague, the Czech Republic, in 2004. Work on methyl bromide exemptions for 2006 was not completed and parties decided to hold a second ExMOP. ExMOP-2 was held in July 2005, in Montreal, Canada. Parties agreed to supplementary levels of CUEs for 2006. 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 (COP-7) 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 included a US\$470.4 million replenishment of the MLF with for 2006-2008, and agreement on 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, *inter alia*: future work following the Ozone Secretariat's workshop on the Special Report of the Intergovernmental Panel on Climate Change and the Technical and Economic Assessment Panel (TEAP); difficulties faced by some Article 5 parties manufacturing CFC-based metered dose inhalers (MDIs); treatment of stockpiled ODS relative to compliance; and a feasibility study on developing a system for monitoring the transboundary movement of ODS.

MOP-19: MOP-19 took place in Montreal, Canada, in 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.

COP-8/MOP-20: MOP-20 was held jointly with COP-8 of the Vienna Convention in Doha, Qatar, in November 2008. Parties agreed to replenish the MLF with US\$490 million for 2009-2011 and adopted other decisions concerning, *inter alia*: the environmentally sound disposal of ODS; approval of 2009 and 2010 CUEs for methyl bromide; and compliance and reporting issues. This meeting was also the Protocol's first paperless meeting.

MOP 21: MOP-21 took place in Port Ghalib, Egypt, from 4-8 November 2009 and adopted decisions on: alternatives to HCFCs; institutional strengthening; essential uses; environmentally sound management of banks of ODS; methyl bromide; budget; and data and compliance issues. Delegates considered, but did not agree to, a proposal to amend the Montreal Protocol to include HFCs.

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. Article 5 parties were required to phase out production and consumption of hydrobromochlorofluorocarbons by 1996 and bromochloromethane by 2002. Article 5 parties must still phase out: production and consumption of CFCs, halons and CTC by 2010; and methyl chloroform and methyl bromide by 2015. Under the accelerated phase-out of HCFC adopted at MOP-19, HCFC production and consumption by Article 2 countries was to be frozen in 2004 and phased-out by 2020, while in Article 5 parties, HCFC production and consumption is to be frozen by 2013 and phased-out by 2030 (with interim targets prior to those dates, starting in 2015 for Article 5 parties). There are exemptions to these phase-outs to allow for certain uses lacking feasible alternatives.

MOP-22 REPORT

PREPARATORY SEGMENT

On Monday morning, 8 November 2010, the twenty-second Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer (MOP-22) preparatory segment was opened by Prepat Vanapitaksa, Director General, Department of Industrial Works (Thailand). He called for stronger cooperation between parties, industry, civil society and business to enhance the implementation of the Protocol.

Lauding developing countries for their efforts to meet the 2010 target by phasing out a majority of the substances under the Protocol, Marco González, Executive Secretary, Ozone Secretariat, suggested that parties shift their focus to proposals for the phase-out of hydrochlorofluorocarbons (HCFCs), methyl bromide and methyl chloroform. He also highlighted the need to resolve outstanding issues on, *inter alia*: the evaluation of the financial mechanism; the phase-out of hydrofluorocarbon (HFC)-23 as a by-product of HCFC-22; synergies with other bodies, including the International Civil Aviation Organization, the International Treaty on Plant Genetic Resources and the UN Framework Convention on Climate Change (UNFCCC); and critical use exemptions, using guidance from the Technology and Economic Assessment Panel (TEAP).

The preparatory segment was co-chaired by Fresnel Díaz (Venezuela) and Martin Sirois (Canada). Sirois introduced the provisional agenda (UNEP/OzL.Pro.22/1). Stating that HFCs are not ozone-depleting substances (ODS), India, supported by China and Brazil but opposed by the US, proposed removing the agenda item on the phase-out of HFC-23 as a by-product of HCFC-22 production. This change was not agreed to by parties. The agenda was adopted with an amendment proposed by Kazakhstan, to add discussion on ratification of the amendments.

Throughout MOP-22, delegates discussed agenda items and corresponding draft decisions in plenary, contact groups and bilateral consultations. Rather than addressing agenda items in order, issues likely to lead to the establishment of contact groups were addressed first, in an effort to ensure as little overlap between contact group meeting times as possible. Draft decisions were approved by the preparatory segment and

forwarded to the high-level segment for adoption on Friday evening. The description of the negotiations, the summary of the decisions and other outcomes are found below.

HIGH-LEVEL SEGMENT

On Thursday morning, delegates attended the opening of the high-level segment. MOP-21 President Michael Church, Minister of Environment of Grenada, applauded the universal ratification of the Protocol and appealed to the few parties that have not ratified the amendments to do so expeditiously.

Executive Secretary Marco González, on behalf of United Nations Environment Programme (UNEP) Executive Secretary Achim Steiner, thanked the government of Thailand for hosting the meeting. He highlighted that parties to the Montreal Protocol have not only succeeded in protecting the ozone layer, but have also contributed to protecting the global climate system, and appealed to parties to make greater efforts. He paid tribute to Madhava Sarma, former Executive Secretary of the Ozone Secretariat, and two other distinguished members of the ozone community who recently passed away. Participants held a moment of silence to express condolences. González also expressed appreciation for the contribution made by TEAP Co-Chair José Pons Pons, the Environmental Effects Assessment Panel Co-Chair Jan van der Leun and UNEP OzonAction Branch Head Rajendra Shende, who are retiring.

Trairong Suwankiri, Deputy Prime Minister of Thailand, then opened the high-level segment of MOP-22, and highlighted Thailand's success in having phased out more than 10,000 tonnes of chlorofluorocarbons (CFCs). He stressed the most important issues under MOP-22's consideration are: the terms of reference (ToR) for the TEAP study of the replenishment of the Multilateral Fund; the HFC amendment proposals; and the issue of ODS destruction.

MOP-22 then elected by acclamation Steven Reeves (UK) as President; Hassen Hannachi, (Tunisia), Abid Ali (Pakistan) and Sonja Ruzin (Serbia) as Vice Presidents; and Michael Church (Grenada) as Rapporteur. Delegates also adopted the agenda (UNEP/OzL.Pro.22/1/Add.1).

PRESENTATIONS BY THE ASSESSMENT PANELS ON THEIR QUADRENNIAL ASSESSMENT: On Thursday, MOP-22 President Steven Reeves (UK) invited reports from the assessment panels.

Scientific Assessment Panel (SAP): Noting the Executive Summary had been released, and the full report would be available in early 2011, SAP Co-Chair A.R. Ravishankara (US) emphasized that the SAP findings strengthen its 2004 conclusions that the Montreal Protocol is achieving its objectives.

Environmental Effects Assessment Panel (EEAP): EEAP Co-Chair Janet Bornman (New Zealand) presented the panel's findings on links between climate change, ozone depletion and UV radiation, noting, among other issues, human health, terrestrial and aquatic ecosystems and biogeochemical cycles.

Technology and Economic Assessment Panel (TEAP): TEAP Co-Chair Lambert Kuijpers (the Netherlands) presented the preliminary TEAP assessment report and outlined the content of each technical option committee (TOC) report.

Participants then briefly discussed the TEAP's proposed global warming potential (GWP) classification scale and HCFCs in the foam sector.

PRESENTATION BY THE MLF: On Thursday, MLF Executive Committee (ExCom) Chair Javier Ernesto Camargo Cubillos (Colombia) presented the work of the ExCom's past three meetings. He highlighted, among other things: progress on funding to support accelerated HCFC phase-outs; additional funding for low-GWP alternatives to HCFCs; and the development of an MLF Climate Impact Indicator to evaluate technologies for replacing HCFCs. He outlined efforts by the United Nations Development Programme (UNDP), UNEP, the United Nations Industrial Development Organization (UNIDO) and the World Bank to assist in implementation of the Protocol, particularly for Article 5 countries. He noted the work of these implementing agencies on, *inter alia*, HCFC phase-outs and licensing systems, ODS destruction projects, and possible uses of carbon markets.

STATEMENTS BY HEADS OF DELEGATIONS: On Thursday and Friday, delegates heard statements from heads of delegations and senior officials.

Grenada reiterated its support for upgrading the post of Executive Secretary of the Ozone Secretariat to the Assistant Secretary-General (ASG) level. Japan stressed that incentives for all parties to address ODS banks must be explored, and also said that the scope of the MLF should be clear, to avoid duplication. The US underscored the need to avoid undoing the Protocol's achievements and said his country would not tolerate inaction based on bureaucratic excuses. Indonesia highlighted its commitment to phasing out HCFCs, stressed the need to reduce aircraft dependency on halons and offered to host MOP-23. Uganda said existing networks tackling illegal trade of ODS require strengthening at the national and regional levels.

Armenia outlined its efforts to phase out the consumption of ODS. Bosnia and Herzegovina explained it had phased out 250 tonnes of CFCs and initiated implementation of its HCFC Phase-out Management Plan (HPMP). Zimbabwe noted his country lacks feasible ODS disposal options, said a mobile destruction facility was necessary and promoted natural refrigerants. Lao People's Democratic Republic outlined its work in developing its HPMP. Highlighting the importance of addressing ODS destruction, the European Union (EU) stressed that innovative and collaborative ways to address banks to capture the climate benefits are required. Samoa and the Solomon Islands highlighted the need for assistance with ODS destruction and expressed interest in working with other Pacific island countries on this.

Serbia described his government's ozone awareness-raising campaign. India stressed that many policy issues on funding for HCFC phase-out remain unresolved, and emphasized that HFCs are outside the scope of the Protocol. Highlighting the scope of the Protocol's work ahead, Kenya called on all parties to be prepared to compromise. Mongolia stressed the importance of the involvement of the business community in meeting Protocol commitments. Malawi described its efforts at phasing out methyl bromide in the agricultural sector.

Bahrain underscored its interest in supporting the amendment proposal to include HFCs into the Protocol. The Democratic Republic of Congo expressed concern over the low levels of financing for HCFC activities under recent decisions of the ExCom. The Federated States of Micronesia (FSM) said the best reason for phasing out HFCs was "because we can." Angola described a proposed initiative to prevent illegal trade with neighboring countries. New Zealand described its efforts to balance biosecurity priorities with ozone protection through the capture of methyl bromide used for quarantine and preshipment (QPS). Describing the reconversion of a foam factory, the Dominican Republic said this was a key activity in phasing out HCFCs.

Noting with appreciation the work of the TEAP, Cuba called for synergies between the Montreal Protocol and the UNFCCC in order to address issues of common concern. The Democratic People's Republic of Korea called for financial and technical support to enable developing countries to meet their obligations under the Protocol. Recognizing the importance of the MLF and of partnerships with other countries, Bhutan reported the successful phase-out of CFCs in his country. Mozambique highlighted her country's vulnerability to climate change and called for the financial and technical assistance required to phase out HCFCs. Informing delegates of his country's successful phase-out of CFCs in metered dose inhalers (MDIs), Iran stressed that collaborative and preemptive action is required for the phase out of HCFCs. The Cook Islands supported the FSM proposal on Protocol amendments to include HFCs.

Malaysia reported that it had formulated its HPMP and would phase out HCFCs by 2030, objected to the Protocol amendments to include HFCs and urged the MLF to provide additional funds for the destruction of ODS banks. Iraq reported that it had acceded to the Vienna Convention and Montreal Protocol, outlined efforts and activities undertaken as a new party, and requested technical and financial assistance for the destruction of ODS banks.

Nepal highlighted the importance of linkages between the ozone and climate regimes, and appealed for financial and technical support in implementing the Protocol. Zambia reported that his country is in the process of phasing out methyl bromide and is still facing the challenge of phasing out HCFCs. Bangladesh reported his country's 100% phase-out of CFCs in refrigeration and air-conditioning. Niger called for capacity building and information exchange to enhance the implementation of the Protocol.

Thanking the MLF for support provided for the phase-out of CFCs, Brazil urged the use of environmentally-friendly alternatives to HCFCs. Noting the challenges that still face the Protocol in the phase-out of HCFCs, China urged delegates not to focus on the politically-sensitive proposal to phase out HFCs under the Montreal Protocol. Reporting on her country's successful CFC phase-out strategy, Mexico welcomed increased synergies between the Montreal Protocol and the UNFCCC. South Africa outlined the efforts made by her country and urged parties to address the challenge in protecting the ozone layer with a spirit of dedication and cooperation. Noting its full compliance

with obligations in phasing out ODS in the first phase, Pakistan called for providing funding for institutional strengthening beyond 2011 for phasing out HCFCs.

The Maldives noted that it had succeeded in phasing out the first generation of ODS far ahead of schedule, committed to phasing out HCFCs in 2020, and urged the MLF to consider funding ozone-climate co-benefit activities. Sri Lanka said that without financial and technical assistance, it is hard to fulfill obligations to phase out HCFCs and other ODS. Tanzania said that decisions reached at this meeting should meet the financial needs for collection, transportation, storage and destruction of ODS in Article 5 countries. Libya outlined its efforts in phasing out HCFCs and methyl bromide. Liberia stressed the challenge in phasing out HCFCs, and called for phasing out HFCs through a synergetic approach. Mauritius underscored the need to evaluate HCFC replacements holistically. The Philippines outlined its achievements in phasing out ODS, and announced that it would implement its HPMP.

The Basel Convention reported its cooperation with the Ozone Secretariat and committed to continuing these efforts.

NGO STATEMENTS: On Friday, Greenpeace urged parties to form an HFC regime under the Montreal Protocol in cooperation with the UNFCCC, called on industrialized countries to take the lead in phasing out HFCs immediately, and encouraged donors to contribute US\$1 billion for phasing out HFCs in each of the MLF replenishment periods. The International Institute of Refrigeration explained that natural refrigerants are already available for many applications. Highlighting that concerns on alternatives are valid, the Natural Resources Defense Council (NRDC) said that an adequate replenishment was necessary to make further transitions possible. The Technology Education and Research for the Environment Centre suggested providing more funding to women's groups.

MOP-22 OUTCOMES AND DECISIONS

MEMBERSHIP OF MONTREAL PROTOCOL BODIES FOR 2011: The issue was raised in the preparatory segment on Monday, and on Friday during the high-level segment.

Members of the Implementation Committee: The high-level segment confirmed the positions of Egypt, Jordan, the Russian Federation, Saint Lucia and the US as members of the Implementation Committee (ImpCom) for one additional year, and elected Algeria, Armenia, Germany, Nicaragua and Sri Lanka as members of the Committee for a two-year period beginning 1 January 2011. It also noted the selection of Elisabeth Munzert (Germany) to serve as President and Ghazi Al Odat (Jordan) to serve as Vice-President and Rapporteur of the ImpCom for one year beginning 1 January 2011.

Members of the ExCom: Parties elected Australia, Belgium, the Czech Republic, France, Japan, Switzerland and the US as members of the ExCom representing the non-Article 5 parties, and elected Argentina, China, Cuba, Grenada, Kenya, Kuwait and Morocco as members representing Article 5 parties, for one year beginning 1 January 2011. It also noted the selection of Patrick John McInerney (Australia) to serve as Chair and Wuruz Wen (China) to serve as Vice-Chair of the ExCom for one year beginning 1 January 2011.

Co-chairs of the Open-Ended Working Group

(OEWG): Parties endorsed the selection of Ndiaye Cheikh Sylla (Senegal) and Gudi Alkemade (the Netherlands) as Co-Chairs of the OEWG in 2011.

Co-chairs of the assessment panels: On Monday, Co-Chair Díaz introduced draft decisions on new co-chairs of the TEAP (UNEP/OzL.Pro.22/3, XXII/[A]) and EEAP (UNEP/OzL.Pro.22/3, XXII/[B]). In Friday's high-level segment, parties endorsed: Nigel Paul (UK) as Co-Chair of the EEAP; Marta Pizano (Colombia) as Co-Chair of the TEAP for a term of four years; and Bella Maranion (US) as a Senior Expert of the TEAP for a term of four years. Parties also requested that the TEAP and its technical option committees (TOCs) draw up guidelines for the nomination of experts prior to OEWG-31, and also requested that the TEAP consider the need for balance and appropriate expertise when appointing members of the TOCs, task forces and other subsidiary groups.

FINANCIAL REPORTS AND BUDGETS: On Monday, Co-Chair Díaz introduced the documents UNEP/OzL.Pro.22/4 and Add 1, noting that the draft decision contains a provision for upgrading the post of the Executive Secretary and mandated the Budget Committee to begin work.

The Budget Committee, chaired by Ives Enrique Gómez Salas (Mexico), met on Tuesday, and discussed the Secretariat proposal to upgrade the post of the Executive Secretary to Assistant Secretary-General (ASG). Delegates considered including this upgrade in a footnote contained in the revised version of the approved 2010 and proposed 2011-2012 budgets of the Trust Fund for the Protocol (UNEP/OzL.Pro.22/4). While discussing options for retaining the current Executive Secretary, some delegates ruled out the possibility of taking him on under a consultant's contract, citing the need for the continuity of strong leadership of the Protocol. One party registered opposition to upgrading the post to the ASG level, but agreed to further negotiation on this matter.

On Wednesday, Chair Salas introduced a proposed amendment requesting the President of the Bureau of MOP-21 to work with UNEP's Executive Director to request the Secretary-General to raise the level of the Executive Secretary. The proposed amendment noted the "administrative impossibility of maintaining the Executive Secretary," and requested a "temporary" upgrade of the post to ASG. Most parties supported ensuring continued and consistent leadership in the period leading up to 2015, and some parties preferred that the upgrade be time-bound. One developed country party requested time to conduct additional research on the possibility of extending the current holder's tenure.

On Thursday, the Committee considered an amended proposal, which the Secretariat said included all parties' concerns. One developed country party reiterated its inability to agree to the upgrade, and preferred that the wording be kept general to allow MOP-21 President Michael Church (Grenada) a "wide range of options for the extension" of the Executive Secretary's term. The committee agreed to add a footnote on the Executive Secretary's budget line (UNEP/OzL.Pro.22/4), requesting UNEP's Executive Director and the UN Secretary-General "to explore any means to retain the current Executive Secretary until 2015," dropping the reference to the ASG upgrade.

On funding the evaluation of the financial mechanism, one delegate informed participants that current discussions in the financial mechanism contact group indicated that the required funds may either come from the drawdown, authorized by the parties, or from the MLF. Delegates agreed to finalize deliberations once the contact group on the financial mechanism had completed its work.

On Friday, Co-Chair Sirois introduced the draft decision on financial matters including financial reports and budgets (UNEP/OzL.Pro.22/CRP.16). Budget Committee Chair Salas noted that figures for 2011 were still in brackets awaiting a decision from the ToR contact group on the amount to be designated for the evaluation of the financial mechanism. Delegates agreed to forward this decision to the high-level segment, with Co-Chair Sirois later announcing an addition of US\$70,000 for activities related to the evaluation of the financial mechanism.

During the adoption of the decision in the closing plenary, Japan reiterated its desire to upgrade the post of Executive Secretary to ASG.

Final Decision: In the final decision (UNEP/OzL.Pro.22/CRP.16/Rev.1), the MOP, welcoming the continued efficient management by the Secretariat of the finances of the Montreal Protocol Trust Fund, *inter alia*:

- approves the revised 2010 budget in the amount of US\$4,955,743 and the 2011 budget in the amount of US\$4,756,640 and to take note of the proposed budget of US\$4,943,796 for 2012;
- authorizes the Secretariat to draw down US\$479,707 in 2011 and notes the proposed drawdown of US\$666,863 in 2012;
- approves total contributions to be paid by the parties of US\$4,276,933 for 2011 and notes the contributions of \$4,276,933 for 2012;
- authorizes the Secretariat to maintain the operating cash reserve at 15% of the 2011 budget to be used to meet the final expenditures under the Trust Fund; and
- urges all parties to pay their outstanding contributions as well as their future contributions promptly and in full.

The decision also contains footnotes which, *inter alia*: request the President of the Bureau of MOP-21 to work with the Executive Director of UNEP to explore any means to retain the current Executive Secretary through 2015 and to convey to the UN Secretary-General the parties' request to find means to extend the tenure of the current Executive Secretary of the Ozone Secretariat through 2015; and request the Ozone Secretariat, in cases where the OEWG and the ExCom meetings are held back-to-back, to consult with the MLF Secretariat, with a view to selecting the meeting location that is the most cost-effective, taking into account the budgets of both Secretariats.

ISSUES RELATED TO THE FINANCIAL MECHANISM UNDER ARTICLE 10 OF THE MONTREAL PROTOCOL:

On Monday, parties considered issues related to the financial mechanism and agreed to convene a contact group, co-chaired by Paul Krajnik (Austria) and David Bola Omotosho (Nigeria), to consider draft decisions on the ToR for an evaluation of the financial mechanism (UNEP/OzL.Pro.22/3, XXII[C]) and for a study on the 2012-2014 replenishment of the MLF (UNEP/OzL.Pro.22/3, XXII[D]). The contact group met every day throughout the week, with discussions on the replenishment

open to observers and discussions on the evaluation held in closed sessions. The group concluded its work on the ToR for the replenishment study on Thursday, and finalized the draft decision on the ToR for the evaluation on Friday. Both decisions were adopted without amendment on Friday.

ToR for an evaluation of the financial mechanism (decision XXI/28): On Tuesday, the contact group deliberated on the text of the draft decision on the ToR for the evaluation in an attempt to narrow the scope of the evaluation and clarify the tasks that would be required of the evaluation. The contact group considered the preamble and purpose of the evaluation, along with policy issues and the analysis of results. Delegates considered issues that should be addressed in the evaluation, including, diverse indicators for the evaluation, ODS phase-out, project timing, additional benefits, and climate effects.

On Wednesday, delegates continued consideration of the text, focusing their discussions on sections on the scope and on conclusions and recommendations of the study. Under the scope, delegates deliberated on, *inter alia*, the issue of technology transfer, and some parties agreed to work bilaterally on draft text on conclusions and recommendations.

On Thursday, delegates considered operative issues, including questions on the budgets and who should undertake the evaluation. They also discussed the annex, and agreed to consider compromise text drafted in informal consultations.

On Friday morning, the group addressed the budget and detailed schedule for the evaluation, as well as issues related to technology transfers, co-benefits and interlinkages between ozone and climate. On Friday afternoon, Co-Chair Krajnik reported that the contact group had successfully concluded its deliberations and introduced the draft decision on the evaluation of the financial mechanism (UNEP/OzL.Pro.22/CRP.18). He outlined the tentative timeframe for the study and said it would be finalized by September 2012. The decision was forwarded to the high-level segment, where it was adopted.

Final Decision: In the decision (UNEP/OzL.Pro.22/CRP.18), the MOP, *inter alia*:

- approves the ToRs for an evaluation of the financial mechanism, as contained in the annex to the decision;
- sets up a steering panel of four Article 5 and four non-Article 5 members, consisting of Austria, the US, Canada, Japan, Colombia, India, Nigeria and the Former Yugoslav Republic of Macedonia, to select an evaluator and supervise the evaluation process;
- requests the Ozone Secretariat to finalize the procedure for selecting the qualified external and independent evaluator;
- approves a total budget for the evaluation of up to US\$200,000, with the amount of US\$70,000 from the 2011 Trust Fund budget to start the application bidding process, with the understanding that parties will decide in 2011 on the funding source for the balance of the budget; and
- ensures that the final report and recommendations of the evaluator are made available to parties for consideration at MOP-24.

The annex to the decision contains the ToRs for the evaluation, with sections on the preamble, purpose, scope, form and presentation of the study, conclusions and recommendations,

sources of information and timeframe and milestones. These specify, among other things:

- that more than five years had passed since the previous evaluation had been conducted; and
- that the evaluator should, *inter alia*, consider the total reductions of ODS resulting from MLF activities; analyze other environmental and health co-benefits, including climate, as well as adverse effects resulting from MLF activities to phase out ODS; and review the extent to which programmes and projects approved under the financial mechanism have facilitated the implementation of the technology transfer provisions under Articles 10 and 10A of the Montreal Protocol and related decisions of the parties.

ToR for a study on the 2012-2014 replenishment of the MLF: On Wednesday, the contact group noted that the draft decision (UNEP/OzL.Pro.22/3, XXII/[D]) had been discussed in detail at OEWG-30, and decided to focus discussions on the text remaining in square brackets. Clearer wording was suggested for a paragraph asking the TEAP to provide updated figures needed to maintain stable and sufficient funding for the MLF. On potential compliance scenarios for HFCs, some preferred that any mention of additional compliance obligations be removed from the text completely. While some delegates stressed that there are no obligations on HFCs under the Protocol, others noted that the word “potential” recognized the current situation but allowed flexibility to accommodate future obligations and would not prejudice the outcome of discussions on whether to consider new obligations under the Montreal Protocol. One cautioned against including text that is too general, explaining that the TEAP, as a technical body, should not be asked to make political decisions about the scope of its work. Disagreements remained on whether to retain two paragraphs, one asking the TEAP to provide information on resources that would be needed to meet potential compliance obligations resulting from amendment proposals being considered by MOP-22, and another asking the TEAP to provide information on the additional resources that would be needed to promote low-GWP alternatives to HFCs. Delegates agreed to reconsider the bracketed text following the discussions of the informal group on low-GWP alternatives.

No consensus was found on Thursday on the text remaining in square brackets, but participants agreed to consider compromise text proposed by one party, and reached consensus on the draft decision by deleting the remaining bracketed text.

In plenary on Friday morning, Co-Chair Omotosho reported that the contact group had finalized its deliberations on the issue, and, on Friday afternoon, Co-Chair Krajnik introduced the draft decision on the TEAP study on the replenishment. Delegates forwarded the draft decision to the high-level segment, where it was adopted.

Final Decision: In the decision (UNEP/OzL.Pro.22/CRP.17), the MOP recalls decisions on previous ToRs for studies on the replenishment of the MLF and on previous replenishments of the MLF, and, *inter alia*, requests the TEAP to provide indicative figures for the periods 2015-2017 and 2018-2020 to support a stable and sufficient level of funding, on the understanding that these figures will be updated in subsequent replenishment studies. It also requests the TEAP to prepare a report, in consultation with all relevant persons, institutions and sources of

information deemed useful, to enable MOP-23 to take a decision on the appropriate level of the 2012-2014 replenishment of the MLF. The report should be prepared for submission to MOP-23 and presented through OEWG-31, and take into account, among other things:

- control measures and relevant decisions agreed upon by the parties, in particular those related to the special needs of low-volume- and very-low-volume-consuming countries, and decisions agreed upon by MOP-22 and the 61st and 62nd meetings of the ExCom insofar as those decisions will necessitate expenditure by the MLF during the period 2012-2014;
- the need to allocate resources to enable all Article 5 parties to maintain compliance with articles on control measures (Articles 2A-2E, 2G and 2I);
- the need to allocate resources to enable all Article 5 parties to meet 2013 and 2015 compliance obligations with respect to articles on control measures (Articles 2F and 2H);
- rules and guidelines agreed upon by the ExCom at all meetings, up to and including its 62nd meeting, for determining eligibility for the funding of investment projects, non-investment projects, including institutional strengthening, measures to combat illegal trade and sectoral or national phase-out plans, including HPMPs, measures to manage banks of ODS and ODS destruction projects; and
- the impact that the international market, ODS control measures and country phase-out activities are likely to have on the supply of, and demand for ODS, the corresponding effects on the price of ODS and the resulting incremental costs of investment projects during the period under review.

Assessment of the HCFC guidelines approved by the ExCom: This agenda item was taken up by the informal group on low-GWP alternatives, co-chaired by Blaise Horisberger (Switzerland) and Leslie Smith (Grenada), which convened on Wednesday afternoon and briefly on Thursday.

In Wednesday’s discussion, Brazil introduced its proposal, (UNEP/OzL.Pro.22/CRP.13), highlighting that it requests the TEAP to assess the quantities and types of high-GWP substances that are likely to be phased in as alternatives to HCFCs, as well as to identify the affected sectors and the extent to which the funding guidelines on HCFCs would allow for the selection and financing of low-GWP alternatives to HCFCs by Article 5 parties. He said that once the TEAP has fully assessed the situation regarding low-GWP alternatives, parties could consider how to address the problem by the rules of the Montreal Protocol.

In the ensuing discussion, some developing country parties noted their reservations about introducing discussions on HFCs into the Montreal Protocol, and stressed that if discussions proceeded, any assessment should be comprehensive and exhaustive, ensuring that technologies with low-GWP do not possess other hazardous properties. Another party preferred referring to “environmentally friendly” or “environmentally benign” alternatives and avoiding reference to low- or high-GWP alternatives.

Other parties lauded the Brazilian proposal as an “excellent” basis from which to initiate discussion, and highlighted the need to broaden the focus to also consider the issue of growing

demand for HCFC alternatives, the cost implications of the path forward, and the environmental, health and safety aspects of alternatives.

Delegates then made specific suggestions on the draft decision and subsequently considered amendments to the text proposed by several parties. One developed country party explained that collecting data on the quantities and types of high-GWP alternatives that have been phased in under the Montreal Protocol would not pre-judge policy responses to address these substances, but emphasized that parties should acquire data as they have a responsibility to be aware of the impacts of the Protocol on other environmental issues. Another elaborated that the information would be relevant for following through on commitments to support the introduction of low-GWP alternatives to HCFCs and CFCs.

Some developing countries questioned the need for such information under the Montreal Protocol, noting that data on greenhouse gases should already be available in parties' national inventories under the UNFCCC and the Kyoto Protocol, and are relevant to work in the climate, not the ozone, regime.

No consensus was reached on the proposed text and, citing the need to dedicate time and energy to other contact groups and agenda items of the meeting, Brazil suggested asking the MOP to "take note" of the work done in the informal contact group and to continue discussions at OEWG-31. Some other developing country parties supported this, noting the issue was "not a priority" for them; others disagreed, asking for the issue to be given further attention at this meeting.

On Thursday afternoon, the group met briefly. Explaining that he had consulted with several parties, Co-Chair Horisberger introduced a draft decision requesting the TEAP to "review and update the report pursuant to decision XXI/9 and to provide a draft report to OEWG-31 and final report at MOP-23," and the informal group agreed. The decision was not considered by the preparatory segment nor transferred to the high-level segment of MOP-22. The group also agreed to a draft factual report on its work, which stated the group's decision to continue discussions at OEWG-31, to be included in the report of MOP-22.

STATUS OF HCFCs BLENDED IN POLYOLS: On Monday, Co-Chair Díaz introduced a draft decision, proposed by India, on the status of HCFCs preblended in polyols as controlled substances (UNEP/OzL.Pro.22/3, XXII/[F]). He explained that the ExCom had agreed on funding for phasing out these HCFCs. Denmark and Brazil, as co-chairs of the OEWG-30 contact group on the issue, clarified that while the ExCom had resolved questions of funding, definitional issues still remained. The US proposed meeting with India and interested parties to resolve outstanding issues. Informal consultations took place throughout the week and on Friday the revised draft decision was forwarded to the high-level segment, where it was adopted.

Final Decision: In the decision (UNEP/OzL.Pro.22/CRP.15), the MOP:

- takes into account the importance of the phase-out of HCFCs in the polyurethane foams sector for compliance with the adjusted phase-out schedule for HCFCs in accordance with decision XIX/6;

- acknowledges with appreciation efforts by India to bring the issue of HCFCs in preblended polyols to the attention of the parties;
- recognizes fruitful discussions by the parties on the issue at OEWG-30;
- notes with appreciation the cooperative manner in which the members of the ExCom addressed the issue through decision 61/47, by agreeing on a framework on eligible incremental costs for Article 5 parties in their transition from the use of HCFCs in preblended polyols; and
- affirms that the issue of the use of HCFCs in preblended polyols has been addressed to the satisfaction of the parties.

ENVIRONMENTALLY SOUND MANAGEMENT

(ESM) OF BANKS OF ODS: This issue was discussed in the preparatory segment on Monday, and in a contact group from Monday to Thursday. The contact group considered both technologies and related facilities for the destruction of ODS, along with ESM of ODS banks.

Technologies and related facilities for the destruction of ODS: On Monday, Australia reported on the OEWG-30 consolidation of proposals by Australia and Nigeria, contained in draft decision UNEP/OzL.Pro.22/3, XXII[I], and a contact group was established for further discussion.

During its first session on Monday, delegates in the contact group co-chaired by Annie Gabriel (Australia) and Javier Ernesto Camargo Cubillos (Colombia) highlighted, *inter alia*, the need to define criteria to quantify ODS to be destroyed.

On Tuesday, they discussed a verbal proposal from one party calling on the TEAP to develop criteria for verification of ODS destruction, which was welcomed by the TEAP. Delegates also debated including these criteria, when available, in the Montreal Protocol Handbook, eventually agreeing to request the TEAP to, *inter alia*, "develop criteria that should be used to verify the destruction of ODS in facilities that use appropriate ODS destruction technologies, taking into account the recommended destruction and removal efficiencies for the relevant substance." The reference to the inclusion of the verification criteria in the Handbook was retained in the chapeau of the paragraph. On a preambular reference to the Handbook's code of housekeeping regarding ODS in destruction facilities, delegates agreed to note that the code does not provide a framework that can be used for verification.

On Wednesday morning, delegates finalized their consideration of this issue, agreeing to reference "comprehensive verification criteria." The document was forwarded to the plenary. On Friday, the draft decision on destruction technologies with regard to ODS was forwarded to the high-level segment and adopted.

Final Decision: In the final decision (UNEP/OzL.Pro.22/CRP.8), the MOP requests the TEAP to:

- evaluate and recommend the appropriate destruction and removal efficiency for methyl bromide and to update the destruction and removal efficiency for any other substance already listed in Annex II to the report of MOP-15;
- review the list of destruction technologies adopted by parties, taking into account emerging technologies identified in its 2010 progress report and any other developments in this

sector, and to provide an evaluation of their performance and commercial and technical availability; and

- develop criteria to verify the destruction of ODS at facilities that use approved ODS destruction technologies, taking into account the recommended destruction and removal efficiencies for the relevant substance.

Environmentally sound management of banks of ODS:

On Monday, Australia introduced a consolidated draft decision (UNEP/OzL.Pro.22/3, XXII/[L]) proposed by the EU and Mauritius, which was considered by the contact group on ODS destruction.

Discussion focused on a request to the ExCom, *inter alia*, to continue its efforts to further develop cost-effective projects for the destruction of ODS banks during the next replenishment period and to provide Article 5 parties with the funding necessary to manage ODS banks. Some parties called for the definition of the term “cost-effective,” with others noting that such a definition would be difficult to formulate given the time constraints. Parties discussed the MLF guidelines and, noting that the term “cost-effective” was dealt with in the guidelines, agreed to delete this reference. Delegates also agreed to delete a similar paragraph calling on the ExCom to consider the funding of cost-effective destruction projects during the next replenishment period.

Delegates went on to discuss the MLF-funded demonstration projects in relation to the aforementioned request to the ExCom. Some developed country delegates were concerned that the request to the ExCom to further its efforts on ODS bank destruction projects at this point may be preemptive, as the “learn by doing” demonstration projects have not yet been executed. One developing country party stressed that as the projects were still pending, and therefore no feedback had been received, there was a need to maintain the request to the MLF for assistance to Article 5 parties to fully manage ODS banks, through activities including national inventories of banks, the development of legislative frameworks and strategies for sound waste management. One developed country delegate called for a reference to “further assistance” as opposed to “funding” for Article 5 parties for the management of ODS banks, and delegates agreed.

Delegates then discussed additional funding sources beyond the MLF for the management of ODS banks. Many developed country parties recalled the seminar on the sound management of ODS banks held in July 2010, which identified the Global Environment Facility (GEF) as a funding source, and noted the opportunities for partnership and co-financing that the GEF presents. Disagreeing and calling for removal of all references to the GEF, one developing country party expressed concern that the GEF may give higher priority to other multilateral environment agreements in their current and future replenishments, and had not provided adequate financing for destruction of ODS banks in the past. He stressed that all funding for the destruction of ODS banks should come from the MLF. The Secretariat briefed parties that, although the GEF replenishment is not as “robust as hoped for,” there may still be a small amount of funding available for possible investment in ODS destruction projects if, *inter alia*, persistent organic pollutants (POPs) destruction could be carried out

simultaneously. Trying to break the deadlock, one developed country party suggested inviting parties to explore the many possible opportunities for financial resources and synergies described in the document and in presentations from the seminar for the sound management of ODS banks, but this was not agreed.

On Thursday afternoon, lamenting that no consensus could be reached on the decision, the contact group suspended discussion. On Friday, contact group Co-Chair Daniels reported this to delegates during the plenary of the preparatory segment and no decision was adopted on this issue.

PROPOSED AMENDMENTS TO THE MONTREAL PROTOCOL AND PHASE-OUT OF HFC-23 AS A BY-PRODUCT EMISSION OF THE PRODUCTION OF HCFC-22:

On Monday in plenary, two draft decisions on amendments to the Montreal Protocol to address HFCs were presented by the US, on behalf of Canada and Mexico (UNEP/OzL.Pro.22/5), and the FSM (UNEP/OzL.Pro.22/6).

Emphasizing that HFCs are potent greenhouse gases, the US stressed that including HFCs in the Montreal Protocol would build on efforts of the UNFCCC to address climate change and of the ExCom to provide incentives for low-GWP alternatives to ODS. Mexico added that the amendment aims to assist parties with the requisite technical, financial and institutional support for developing alternatives to HFCs. The FSM underscored that parties have a moral and legal responsibility to address HFCs.

On behalf of Canada and Mexico, the US also introduced a draft decision on the phase-out of HFC-23 as a by-product of HCFC-22 (UNEP/OzL.Pro.22/3, XXII/[M]). He explained the draft decision requests the ExCom to update information on HCFC-22 production facilities and further efforts to implement projects to mitigate HFC-23 emissions, and asks the TEAP and the SAP to study the costs and benefits of HCFC-22 by-product control.

In response, Cuba noted that HFCs are under the mandate of the UNFCCC, and called on delegates not to prejudge decisions on this issue that may be taken at UNFCCC COP 16 in Cancun later this year. India said that discussion of this issue was an attempt to deviate from the Montreal Protocol’s mandate, noting its view that the proposals were recommending “an amalgamation of the Vienna Convention and the UNFCCC.” Stating that the resources for the Montreal Protocol are limited, Argentina objected to the proposed amendment.

General support for the proposals was expressed by the Former Yugoslav Republic of Macedonia, the Philippines, Kenya, and Tuvalu, on behalf of Pacific island countries.

Switzerland, Japan, Australia, Gabon, Armenia, Indonesia, Cameroon and the EU supported discussions on the proposals in a contact group and Venezuela objected to the initiation of a contact group. Brazil, with China, called on parties to consider the proposals submitted in informal consultations only, as HFCs are already covered under the UNFCCC.

Canada recalled the Montreal Protocol’s history of addressing HFCs, and suggested discussing the proposal by Brazil and other Latin American countries on the ExCom’s HCFC guidelines in conjunction with the amendment proposals. These agenda items

were referred to the informal group on low-GWP alternatives, co-chaired by Blaise Horisberger (Switzerland) and Leslie Smith (Grenada).

The informal group convened on Wednesday afternoon and briefly on Thursday. On Wednesday, the group focused its discussion on the proposal by Brazil requesting the TEAP to assess the quantities and types of high-GWP substances that are likely to be phased in as alternatives to HCFCs, as well as to identify the affected sectors and the extent to which the funding guidelines on HCFCs would allow for the selection and financing of low-GWP alternatives to HCFCs by Article 5 parties (UNEP/OzL.Pro.22/CRP.13). Aside from a brief US introduction of its amendment proposal, the group did not initiate specific discussion on this matter, as several parties objected to discussing this, and no decision was adopted by the MOP.

ISSUES RELATED TO EXEMPTIONS FROM ARTICLE 2 OF THE PROTOCOL: Nominations for critical use exemptions for 2011 and 2012: This issue was discussed on Monday in the preparatory segment.

The TEAP presented its final recommendations on critical use exemptions (CUEs), proposed in the Methyl Bromide Technical Options Committee (MBTOC) work plan for 2011, and QPS. They discussed an overview of the final recommendations of the methyl bromide pre-plant soil use and structural and commodity critical use nominations (CUNs) in 2010.

The US outlined its efforts to reduce methyl bromide use, questioned the process by which the MBTOC evaluated the requests for CUEs, and called for increased transparency in MBTOC's review process.

In response to queries from Cuba and the EU on how methyl bromide stockpiles are considered in evaluations of CUE requests from parties, the TEAP clarified that it does not consider stockpiles in its assessments and Executive Secretary González emphasized that parties are responsible for determining how stockpiles are managed.

The NRDC noted that CUEs are sometimes reduced when countries have large stockpiles, and encouraged the reduction of the US's exemption accordingly. He also suggested the US establish a date by which it would end its requests for exemptions.

Co-Chair Díaz then introduced the nominations for CUEs for methyl bromide use, as proposed by the TEAP MBTOC and Canada, and introduced a draft decision on CUEs for methyl bromide for 2011-2012 (UNEP/OzL.Pro.22/CRP.1).

During Friday's plenary, Canada presented a revised draft decision. Cuba requested that the practice of stockpiling of methyl bromide be reviewed and, supported by Venezuela, asked for this to be recorded in the report of the meeting. The draft decision was forwarded from the preparatory segment to the high-level segment, where it was adopted.

Final Decision: In the decision on CUEs (UNEP/OzL.Pro.22/CRP.1/Rev.2), the MOP, *inter alia*, permits production and consumption levels for the agreed critical use categories for 2011, set forth in Table A, and for 2012, set forth in Table D of the annex.

QPS uses of methyl bromide: On Monday, New Zealand reported that OEWG-30 had developed a draft decision on QPS uses of methyl bromide (UNEP/OzL.Pro.22/3, XXII/[N]) and noted that a proposal submitted by the EU had been bracketed.

In a contact group, co-chaired by Robyn Washbourne (New Zealand) and Tri Widayati (Indonesia), delegates discussed a revised draft decision on QPS uses of methyl bromide, proposed by the EU (UNEP/OzL.Pro.22/CRP.3). Several parties expressed concern about a provision in the proposal that requests all parties to implement monitoring procedures to gather available data about the sectors that use methyl bromide for QPS purposes, and to provide those data to the Ozone Secretariat by 31 January 2011. Some questioned the purpose of such a request, as well as the precise data requested. Several parties also disagreed with the proposal for the TEAP to assess the data on methyl bromide use for QPS purposes on a party-by-party basis, noting that this is not the TEAP's mandate. The EU explained that it intended to establish a process in which the TEAP could enter into a dialogue with parties to acquire available data for the assessment. A pre-drafting group was established to conduct informal consultations.

The contact group met again on Wednesday and Thursday. The EU presented a revised draft decision on the subject. Some parties did not agree to references to developing a strategic view on methyl bromide use for QPS, or to encouraging parties to report the main categories of use for methyl bromide. No consensus was reached in the group on these issues, and no decision on QPS uses of methyl bromide was adopted by MOP-22.

Nominations for essential use exemptions for 2011-12: On Monday, delegates considered Bangladesh's nomination of CFCs for MDIs. The TEAP reported its recommendation of 37 tonnes of CFCs for MDIs, requesting that Bangladesh consider the use of alternatives in the manufacture of some pharmaceutical products. Bangladesh requested that the TEAP reconsider its nomination.

Executive Secretary González reported an emergency use exemption of CFC-113 called for by the Dominican Republic. On Tuesday, the Russian Federation presented a draft decision for an exemption for CFC-113 for aerospace applications (UNEP/OzL.Pro.22/CRP.6).

On Wednesday evening during plenary, parties agreed to forward the draft decision on essential uses of CFCs submitted by the Russian Federation to the high-level segment. The draft decision on essential-use nominations for controlled substances for 2011 was also forwarded to the high-level segment. Both decisions were adopted on Friday.

Final Decisions: In the decision on essential use exemptions for the Russian Federation (UNEP/OzL.Pro.22/L.1), the MOP agreed to:

- authorize the production and consumption in 2011 of 100 metric tonnes of CFC-113 in the Russian Federation for essential use exemptions for CFCs in its aerospace industry;
- request the Russian Federation to continue to explore further the possibility of importing CFC-113 for its aerospace industry needs from available global stocks; and
- urge the Russian Federation to continue its efforts on the introduction of alternative solvents and the adoption of newly

designed equipment to complete the phase-out of CFC-113 according to an accelerated time schedule.

In the decision on essential use nominations for controlled substances for 2011 (UNEP/OzL.Pro.22/CRP.14), the MOP decides to, *inter alia*:

- authorize the levels of production and consumption for 2011 necessary to satisfy essential uses of CFCs for MDI for asthma and chronic obstructive pulmonary disease;
- request nominating parties to supply to the MTOC information to enable assessment of essential-use nominations; and
- encourage parties with essential use exemptions in 2011 to consider sourcing required pharmaceutical-grade chlorofluorocarbons initially from stockpiles where they are available and accessible.

Laboratory and analytical use exemptions: On Monday, Co-Chair Sirois outlined that the TEAP had recommended that global exemptions be eliminated for 15 laboratory and analytical uses with alternatives, and three uses be exempted. China noted that since no alternative technologies were available in developing countries, exemptions should be considered and a grace period required. China met informally throughout the week to draft a decision on this issue.

On Friday in the preparatory segment, China introduced a draft decision on global laboratory and analytical use exemption, noting the successful consultations that led to the draft. Delegates forwarded it to the high-level segment, where it was adopted.

Final Decision: In the decision (UNEP/OzL.Pro.22/CRP.9/Rev.1), the MOP:

- allows Article 5 parties until 31 December 2011 to deviate from the existing laboratory and analytical use bans in individual cases, where a party considers that this is justified, and to ask parties to revisit this issue at MOP-23; and
- requests parties to continue to investigate domestically the possibility of replacing ODS for laboratory and analytical uses.

Issues relating to the use of ODS as process agents: On Monday, Co-Chair Sirois noted that OEWSG-30 considered the TEAP's recommendation on possible deletions of some uses from tables of approved process agent uses. Canada introduced a draft decision on the use of controlled substances as process agents (UNEP/OzL.Pro.22/L.2).

On Wednesday evening, parties agreed to forward the draft decision on process agents to the high-level segment, which adopted the draft decision.

Final Decision: In the decision (UNEP/OzL.Pro.22/L.2), the MOP agrees, *inter alia*:

- that quantities of controlled substances produced or imported by Article 5 parties for use as process agents in plants and installations in operation before 1 January 1999 should not be taken into account in the calculation of production and consumption from 1 January 2011 onwards, provided that emissions of these substances are within the levels defined in the updated Table B of decision X/14; and
- to request each party to report to the Ozone Secretariat, by 15 March 2011, if possible, or 1 July 2011 at the latest, the specific applications for which it uses controlled substances as process agents, and to continue to report such information in the context of the annual reports required by decision X/14.

SPECIAL STATUS OF HAITI: On Tuesday, preparatory segment Co-Chair Díaz recalled that at OEWSG-30 Grenada and Saint Lucia had proposed a draft decision calling all parties to assist Haiti in its control of ODS (UNEP/OzL.Pro.22/3, XXII[O]). The US supported the intent of the proposal, but said it would consult with concerned parties on some issues. During the evening plenary on Tuesday, the US and Grenada reported a successful conclusion of these discussions. A draft decision on the situation of Haiti was forwarded to the high-level segment on Wednesday, and adopted without amendment on Friday.

Final Decision: In the final decision (UNEP/OzL.Pro.22/CRP.12), the MOP decides to, *inter alia*:

- encourage all parties to assist Haiti by controlling the export of ODS and ODS-dependent technologies to Haiti through the control of trade;
- request the ExCom, when considering project proposals for Haiti, to take into account the special situation of Haiti and the special difficulties that it may pose in respect of the phase-out of ODS, including in particular the accelerated phase-out of HCFCs;
- request the implementing agencies to consider providing appropriate assistance to Haiti in the areas of institutional strengthening, capacity building, data collection and monitoring and control of trade in ODS; and
- request implementing agencies to consider providing appropriate assistance for the development of a strategy to achieve the reorganization of Haiti's national ozone unit and in the continuation of its efforts to report to the Ozone Secretariat data on consumption of ODS.

COMPLIANCE AND DATA-REPORTING ISSUES:

Issues under this agenda item were considered by the preparatory segment on Tuesday and a draft decision on the work of the ImpCom was forwarded to the high-level segment. After discussions of the treatment of ODS stockpiles relative to compliance, a draft decision was forwarded to the high-level segment on Wednesday.

Treatment of stockpiled ODS relative to compliance:

On Tuesday, Co-Chair Sirois recalled that OEWSG-30 decided to forward to MOP-22 a draft decision on the treatment of stockpiled ODS relative to compliance (UNEP/OzL.Pro.22/3, XXII[P]).

The EU reported on consultations held with concerned parties on the draft decision and presented a revised draft. The US said the revised draft was closer to something they could support.

Jordan said that the draft decision should include the provision of finance and technologies to Article 5 countries for addressing the issue of ODS stockpiles. Parties consulted informally on the draft decision. On Wednesday, delegates forwarded the draft decision to the high-level segment, and it was adopted without amendment on Friday.

Final Decision: In the final decision (UNEP/OzL.Pro.22/CRP.10), the MOP, *inter alia*:

- reminds all parties to report all production of ODS, whether intended or unintended, to enable the calculation of their production and consumption;
- requests parties, when reporting data, to identify any excess production and consumption that is a consequence of ODS production in the reporting year for: domestic destruction or

export for destruction in a future year, domestic feedstock use or export for that use in a future year, and export to meet basic domestic needs of developing countries in a future year; and

- requests the Secretariat to continue to maintain a consolidated record of the above cases to incorporate that record in the documentation prepared for each meeting of the ImpCom.

Presentation and consideration of the work and

recommended decisions of the ImpCom: During the evening plenary on Tuesday, Elizabeth Munzert (Germany), on behalf of ImpCom President Ezzat Lewis (Egypt), presented the report and the decisions of the 45th meeting of the ImpCom under the Non-Compliance Procedure (UNEP/OzL.Pro/ImpCom/45/4). The report (UNEP/OzL.Pro.22/CRP.4), contains, *inter alia*: a presentation by the Secretariat of the MLF on relevant decisions of the ExCom, and on activities carried out by implementing agencies, namely UNDP, UNEP and UNIDO, to facilitate parties' compliance; follow-up on previous decisions of the parties and recommendations of the ImpCom on issues related to non-compliance; draft plans of action to return to compliance from parties including Bangladesh, Chile, Kenya, and Nepal; and consideration of other non-compliance issues arising out of the data report.

The report details, *inter alia*: possible non-compliance in trade with non-parties (Article 4 of the Montreal Protocol); consideration of the report of the Secretariat on parties that have established licensing systems; and information on compliance provided by parties present at the invitation of the ImpCom.

The report also contains draft decisions on, among others, non-compliance by Saudi Arabia, Vanuatu, Republic of Korea and Singapore forwarded to the MOP by the 44th meeting of the ImpCom.

Final Decision: MOP-22 adopted the ImpCom report (UNEP/OzL.Pro.22/CRP.4), including its decisions.

STATUS OF RATIFICATIONS: On Friday, MOP-22 President Reeves introduced the status of ratifications of the Protocol and its amendments. He urged all the parties that have not ratified the amendments to the Montreal Protocol to do so as soon as possible.

Final Decision: In the decision on ratification of the Montreal Protocol and Vienna Convention (UNEP/OzL.Pro.22/L.2), the MOP urges all states that have not yet done so to ratify, approve or accede to the amendments to the Montreal Protocol, taking into account that universal participation is necessary to ensure the protection of the ozone layer.

DATES AND VENUE FOR MOP-22: In Friday's closing plenary, MOP-22 President Reeves announced that MOP-23 would be held in Bali, Indonesia, from 14-18 November 2011.

CLOSING PLENARY

The closing plenary was held on Friday evening. Immediately prior to this, the preparatory segment reconvened and agreed to forward several outstanding decisions to the high-level segment. Co-Chair Sirois thanked delegates for their dedicated work in the preparatory segment.

In the opening of the closing plenary, MOP-22 President Reeves introduced the draft MOP-22 report (UNEP/OzL.Pro.22/L.1 and Add.1). China, supported by India and Brazil, objected that in reflecting the work of the informal group on low-GWP alternatives, the draft report deviated significantly

from the text agreed to by the informal group. Parties agreed to revise the report to state "an informal group was established by the co-chairs of the preparatory segment for discussing items 8, 9 and 5c of the agenda of the preparatory segment of MOP-22. The group organized its discussions by starting to consider the draft decision under 5c about an assessment of the HCFCs guidelines approved by the ExCom. As the discussions could not be completed during time available, the group decided to continue to discuss at OEWG-31."

Robyn Washbourne, co-chair of the contact group on QPS uses of methyl bromide, added text to the report on QPS indicating the group ran out of time to consider the new text of the draft decision, and was not able to reach consensus on the way forward. With the aforementioned amendments and some other, factual amendments, MOP-22 adopted the report.

Prior to the close of plenary, Mexico introduced a declaration on the global transition away from HCFCs and CFCs to environmentally-sound alternatives, and declares the signatories intent to pursue further action under the Montreal Protocol aimed at transitioning the world to environmentally sound alternatives to HCFCs and CFCs. He highlighted the "open declaration" had been signed by 91 parties.

MOP-22 President Reeves thanked the Government of Thailand for hosting MOP-22, and the Secretariat and delegates for their hard work. He highlighted that the Montreal Protocol is the most successful multilateral environmental agreement in history, and gavelled the meeting to a close at 8:11 pm.

A BRIEF ANALYSIS OF MOP-22

OZONE IN THE BALANCE: SEARCHING FOR CLEAR SKIES

Against a backdrop of Buddhist temples and hazy skies, MOP-22 of the Montreal Protocol convened in Bangkok poised to determine the future direction of the "most successful" of the multilateral environmental agreements (MEAs). With an agenda laden with heavy questions of hydrofluorocarbons (HFCs) and how to manage banks of collected ozone-depleting substances (ODS), delegates understood that these questions would influence not only the decisions taken at the MOP, but also the continued relevance of the Protocol in addressing critical environmental threats. The debates at MOP-22 revealed the major challenge currently facing the Montreal Protocol: determining its future direction and scope.

With discussions stalling on HFCs, reluctance to commit additional funds to activities outside the direct realm of compliance and unresolved debates on overlapping mandates across MEAs, participants described the meeting as "slow-paced" compared with past MOPs. With work on the accelerated HCFC phase-out underway, and some parties unwilling to move further on the central ODS phase-out activities of the Protocol, such as QPS uses of methyl bromide, parties wrestled with the question of whether to focus on existing commitments (and let the Protocol phase itself out) or to increase its scope by taking on new obligations by addressing additional and interrelated issues like HFCs.

The continued success of the Protocol hinges on whether it can avoid highly political debates and secure adequate financing for its activities. This analysis considers MOP-22 in light of these central issues, and looks ahead to how the outcomes of the meeting will influence the Protocol in the years to come.

CLOUDED DEBATES: SIDE-LINED BY CLIMATE POLITICS?

Much of the success of the ozone regime has been its ability to side-step political deadlock and respond to science in its search for alternatives to ODS. This technical dimension of the Protocol has been exemplified by its strong support for and attention to the work of the Technical and Economic Assessment Panel (TEAP), and the commitment parties have had to protecting the TEAP's apolitical character. As parties consider the inclusion of HFCs (climate-impacting gases) in the ozone regime, though, this approach is challenged as parties have become swept into the political debates of the climate regime. The proposals considered at MOP-22 on HFCs brought this challenge to the fore.

Owing in part to HFC-alternatives replacing HCFCs, as countries strive to meet the targets of the accelerated HCFC phase-out, a 2009 prediction by the Institute for Governance and Sustainable Development suggests that (without counterbalancing policies), HFC emissions are likely to rise by roughly 300%, to 1.2-1.4 Giga-tonnes (Gt) of CO₂-equivalent (CO₂-eq), by 2015, and to 5.5-8.8 Gt CO₂-eq by 2050. The climate implications of these high-global warming potential (GWP) substances led the US, Canada, Mexico and the Federated States of Micronesia (FSM) to advocate for a phase-down of HFCs under the Protocol. The proponents suggest that the current trend of replacing HCFCs with HFCs risks repeating past mistakes, such as when HCFC-substitutes for CFCs had to be phased out, at great cost to parties, when their negative effects were discovered. They suggest a move to regulate HFCs would prevent a similar situation from occurring again, avoid further exacerbating climate change, and could propel countries forward in the search for more climate- and ozone-friendly alternatives.

Efforts to introduce amendments to the Protocol to include HFCs were first tabled at MOP-21, but were withdrawn due to strong opposition. At MOP-22, India, China and Brazil remained united in their resistance to including HFC-controls under the Protocol, underlining that HFCs are not ODS and thus remain outside the scope of this regime, preferring to address this under the UNFCCC, and claiming parties had other priorities that were more central to the mandate of the Protocol.

In what some saw as a political bid to leverage discussions on HFCs, parties agreed to convene an informal group to discuss a draft decision from Brazil and other Latin American countries requesting a TEAP study on support for low-GWP alternatives under the MLF's HCFC guidelines along with the amendment proposals. However, the informal group spent most of its time considering the HCFC guidelines decision. Any potential momentum this could have provided for discussion on low-GWP alternatives was lost when Brazil suggested postponing discussions on its draft decision to OEWG-31, and further discussions of the informal group were curtailed.

Four issues prevented progress on HFCs: the availability of low-GWP ODS alternatives, financial concerns over HCFC phase-out commitments, perverse incentives under the Clean Development Mechanism (CDM), and upcoming climate change talks in Cancun. While the former two are within the purview of the Montreal Protocol, and could be addressed through additional work on technology and commitment to "sufficient" financing, the latter two fall directly under the climate regime. The timing of Montreal Protocol meetings, just before climate change conferences, once again stalled negotiations on HFCs, and may continue to do so in the future if delegates insist on waiting for the UNFCCC to make progress on regulating these substances.

By the end of MOP-22, it was clear that the HFC agenda had stalled once again. As previously acceptable language referring to low-GWP alternatives to HFCs was removed from the decision on the terms of reference for a study of the replenishment of the MLF, some ventured that perhaps the agenda may even have moved backwards. Others suggested the situation may be more nuanced, citing the growing number of countries supporting discussion of low-GWP alternatives under the Protocol, with 91 countries signing on to a US-led declaration (presented by Mexico in the closing plenary, and noted in the report of the meeting) indicating their intent to pursue further action under the Montreal Protocol aimed at transitioning the world to environmentally-sound alternatives to HCFCs and CFCs. This groundswell of support indicates that discussions phrased more generally on environmentally-sound alternatives, rather than HFCs, might gain more traction at future MOPs, although opposition from India, China and Brazil is likely to continue to block formal discussions on amending the Protocol.

Nuances aside, concerns that the ozone regime has become "infected" by the climate regime were widespread. Unless parties are given a clear mandate under the climate regime to address these cross-cutting issues, or take a decision to do so based on the scientific advice of the TEAP regarding ozone-impacts of climate change, the Montreal Protocol risks mimicking the politics of the climate change negotiations.

FINANCIAL HOLES AND AN ATMOSPHERE OF RELUCTANCE

Beyond the politics over the scope of the Protocol, financing proved an underlying and cross-cutting source of tension at MOP-22. This was particularly central to debates on ODS bank destruction and management.

With pilot projects underway for the destruction of ODS banks, parties considered multiple draft decisions on destruction facilities and technologies, and environmentally-sound management of these banks. They reached an impasse as parties disagreed on funding ODS bank activities through the MLF versus external sources like the GEF, or voluntary carbon markets (by earning carbon credits through the destruction of easily-accessible ODS). While some stressed that ODS destruction is not a compliance requirement under the Protocol, and thus outside the ambit of the MLF, others cautioned that the successes realized by the Protocol would be undermined by the ongoing release of ODS from these banks unless measures were taken to address their destruction. Reports from the IPCC and TEAP indicate that ODS banks hold 16-17 Gts CO₂-eq in

2010, representing a loss of 4-5 Gts CO₂-eq since 2002, and reflecting the ongoing leakage of these ODS into the atmosphere. While many delegates recognized that progress in international environmental regimes can take time, others suggested that time "is not on our side," citing TEAP predictions that easily accessible banks will have released most of the gases into the atmosphere by 2020, effectively precluding the opportunity for destruction.

In several delegates' views, the Protocol's continued success will hinge in part on how it manages to address funding for existing commitments as well as associated issues that are not mandated in compliance obligations but nonetheless have practical implications for ozone depletion and the environment.

HAZY SKIES AHEAD

Many walked away from MOP-22 disappointed by halting progress, and concerned about the implications for the ozone layer due to failures to make any progress on ODS bank destruction. By refusing to formally discuss HFCs, or consider language in decisions on information-gathering on HFCs and low-GWP alternatives, others suggested the Protocol had fallen victim to politics and stepped backwards.

Others, though, were optimistic that the Protocol was still on the right track. Noting that the meeting's agenda and HFC proposals may have been "too ambitious," and acknowledging that "progress takes time," they pointed to support for the US' declaration on HFCs from even previously-hesitant countries, such as Kuwait and Egypt, as an indication of the shifting positions on the need to include climate change-related issues under the Montreal Protocol.

With the futures of ODS banks and HFCs uncertain at the close of the meeting, and adequate financing for activities under the Protocol continuing to be a stumbling block, MOP-22 highlighted the challenges facing the international community in dealing with the fragmentation of global environmental governance. With the proliferation of MEAs in recent years, parties are under increasing pressure to allocate and prioritize finite funds, while determining how to address overlapping issues. The future of the Montreal Protocol will be determined, in part, by how the parties resolve this competition among MEAs and agree to work together to replicate past successes to address new challenges.

UPCOMING MEETINGS

62nd Meeting of the Executive Committee of the Multilateral Fund for the Montreal Protocol: The Executive Committee is expected to continue consideration of matters related to the phase-out of HCFCs and other remaining ODS, as well as financial planning and consideration of the three-year business plans of the bilateral and implementing agencies, and agencies' work programmes. **dates:** 29 November - 3 December 2010 **location:** Montreal, Canada **contact:** Multilateral Fund Secretariat **phone:** +1-514-282-1122 **fax:** +1-514-282-0068 **email:** secretariat@unmfs.org **www:** <http://www.multilateralfund.org/>

UNFCCC COP 16 and COP/MOP 6: The 16th session of the Conference of the Parties (COP) to the UNFCCC and the sixth session of the Conference of the Parties serving as the

Meeting of the Parties to the Kyoto Protocol (COP/MOP) will be held together with the 33rd meetings of the SBI and SBSTA. **dates:** 29 November - 10 December 2010 **location:** Cancun, Mexico **contact:** UNFCCC Secretariat **phone:** +49-228-815-1000 **fax:** +49-228-815-1999 **email:** secretariat@unfccc.int **www:** http://unfccc.int/meetings/cop_16/items/5571.php

41st International Conference on Heating, Air Conditioning and Refrigeration: Key themes for this meeting on heating, air conditioning and refrigeration include zero energy buildings, building energy efficiency and renewable energy sources. **dates:** 1-3 December 2010 **location:** Belgrade, Serbia **contact:** Society for Heating, Refrigerating and Air-Conditioning **phone:** +318-11-3230-041 **fax:** +381-11-3231-372 **email:** office@kgh-hvac.rs **www:** <http://www.kgh-kongres.org>

Montreal Protocol Refrigeration Technical Options Committee: The Refrigeration TOC will meet to consider technical and scientific issues related to refrigeration under the Montreal Protocol. **dates:** 13-14 December 2010 **location:** Prague, Czech Republic **phone:** +254-20-762-3851 **fax:** +254-20-762-4691 **email:** ozoneinfo@unep.org **www:** http://ozone.unep.org/Events/Indicative_List_TEAP_TOCs_Meetings-2010.shtml

Second Session of the INC to Prepare a Global Legally Binding Instrument on Mercury: This meeting is scheduled to be the second of five Intergovernmental Negotiating Committee (INC) meetings to negotiate a legally binding instrument on mercury. **dates:** 24-28 January 2011 **location:** Chiba, Japan **contact:** UNEP Mercury Programme **phone:** +41-22-917-8183 **fax:** +41-22-797-3460 **email:** mercury@unep.org **www:** <http://www.unep.org/hazardoussubstances/Mercury/Negotiations/INC2/tabid/3468/language/en-US/Default.aspx>

Twenty-sixth session of the UNEP Governing Council/Global Ministerial Environment Forum: The 26th session of the Governing Council/Global Ministerial Environment Forum (GC/GMEF) of the UN Environment Programme (UNEP) is scheduled to convene from 21-25 February 2011, at the UN Office in Nairobi, Kenya. In pursuance of General Assembly resolution 53/242 (Report of the Secretary-General on environment and human settlements) of 28 July 1999, the Governing Council constitutes the annual ministerial-level global environmental forum in which participants gather to review important and emerging policy issues in the field of the environment. **dates:** 21-25 February 2011 **location:** Nairobi, Kenya **contact:** Secretary, Governing Bodies, UNEP **phone:** +254-20-762-3431 **fax:** +254-20-762-3929 **email:** sgc.sgb@unep.org **www:** <http://www.unep.org/resources/gov/overview.asp>

CSD Intergovernmental Preparatory Meeting: The Intergovernmental Preparatory Meeting for the 19th session of the Commission on Sustainable Development (CSD) will negotiate policy options related to the thematic cluster for the CSD 18-19 cycle: transport, chemicals, waste management, mining and the Ten-Year Framework of Programmes on Sustainable Consumption and Production Patterns. **dates:** 28 February - 4 March 2011 **location:** United Nations Headquarters, New York **contact:** UN Division for Sustainable Development **phone:** +1-212-963-8102 **fax:** +1-212-963-4260 **email:** dsd@un.org **www:** http://www.un.org/esa/dsd/csd/csd_csd19.shtml

Rotterdam Convention Chemical Review Committee:

The seventh meeting of the Chemical Review Committee (CRC 7) will discuss candidate chemicals to be included under the Rotterdam Convention. **dates:** 28 March - 1 April 2011 **location:** Rome, Italy **contact:** Rotterdam Convention Secretariat **phone:** +41-22-917-8296 **fax:** +41-22-917-8082 **email:** pic@pic.int **www:** <http://www.pic.int/>

Sources/Sinks Alternative to Outside Air for Heat Pump & AC Techniques and International Sorption Heat Pump Conference:

These meetings will be held back-to-back, bringing together heat sink and heat source research, development, and experience with heat pumping and refrigeration technologies. **dates:** 5-8 April 2011 **location:** Padua, Italy **contact:** Conference Secretariat **phone:** +39-02-6747-9270 **fax:** +39-02-6747-9262 **email:** info@aicarr.org **www:** <http://www.aicarr.org/Pages/PadovaIIR2011/home.aspx>

4th Event on Ammonia Refrigeration Technology: This meeting will discuss ammonia technology for the refrigeration sector. **dates:** 14-16 April 2011 **location:** Ohrid, Macedonia **contact:** Risto Ciconkov **phone:** +389-23-064-762 **fax:** +389-23-099-298 **email:** ristoci@ukim.edu.mk **www:** http://www.mf.edu.mk/web_ohrid2011/ohrid-2011.html

Fifth Meeting of the Conference of the Parties to the Stockholm Convention: The fifth meeting of the Conference of the Parties to the Stockholm Convention will consider the POPRC's recommendation to list endosulfan in Annex A, with exemptions. **dates:** 25-29 April 2011 **location:** Geneva, Switzerland **contact:** Stockholm Convention Secretariat **phone:** +41-22-917-8729 **fax:** +41-22-917-8098 **email:** ssc@unep.ch **www:** <http://www.pops.int>

CSD 19: This policy-year session of the Commission on Sustainable Development (CSD) will negotiate policy options related to the thematic cluster for the CSD 18-19 cycle: transport, chemicals, waste management, mining and the Ten-Year Framework of Programmes on Sustainable Consumption and Production Patterns. **dates:** 2-13 May 2011 **location:** United Nations Headquarters, New York **contact:** UN Division for Sustainable Development **phone:** +1-212-963-8102 **fax:** +1-212-963-4260 **email:** dsd@un.org **www:** http://www.un.org/esa/dsd/csd/csd_csd19.shtml

Fifth Meeting of the Conference of the Parties to the Rotterdam Convention: The fifth meeting of the Conference of the Parties to the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade will meet in June. **dates:** 20-24 June 2011 **location:** Geneva, Switzerland **contact:** Rotterdam Convention Secretariat **phone:** +41-22-917-8296 **fax:** +41-22-917-8082 **email:** pic@pic.int **www:** <http://www.pic.int/>

OEWG-31: The thirty-first meeting of the Open-Ended Working Group (OEWG-31) of the parties to the Montreal Protocol on Substances that Deplete the Ozone Layer is tentatively scheduled to take place in Geneva, Switzerland, in mid-2011. **dates:** to be confirmed **location:** Geneva, Switzerland **phone:** +254-20-762-3851 **fax:** +254-20-762-4691 **email:** ozoneinfo@unep.org **www:** <http://ozone.unep.org>

23rd International Congress of Refrigeration (ICR2011):

This meeting, with the theme "Refrigeration for Sustainable Development," will bring together experts in the field of

refrigeration and refrigeration technology on issues including cryophysics, thermodynamics, energy recovery, and safety. **dates:** 21-26 August 2011 **location:** Prague, Czech Republic **contact:** Ladislav Cervinka **email:** icaris@icaris.cz **www:** <http://www.icr2011.org>

Tenth meeting of the Conference of the Parties to the Basel Convention: The tenth meeting of the Conference of the Parties to the Basel Convention is tentatively scheduled to take place in Colombia. **dates:** 17-21 October 2011 **location:** Cartagena, Colombia **contact:** Basel Convention Secretariat **phone:** +41-22-917-8212 **fax:** +41-22-797-3454 **email:** sbc@unep.org **www:** <http://www.basel.int/meetings/meetings.html>

MOP-23: The twenty-third Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer (MOP-23) and ninth Meeting of the Conference of the Parties to the Vienna Convention for the Protection of the Ozone Layer is tentatively scheduled to take place in Bali, Indonesia, from 14-18 November 2011. **dates:** 14-18 November 2011 **location:** Bali, Indonesia **phone:** +254-20-762-3851 **fax:** +254-20-762-4691 **email:** ozoneinfo@unep.org **www:** <http://ozone.unep.org>

GLOSSARY

ASG	Assistant Secretary-General
CFC	Chlorofluorocarbon
CUE	Critical-use exemption
CUN	Critical-use nomination
EEAP	Environmental Effects Assessment Panel
ESM	Environmentally-sound management
ExCom	Executive Committee
FSM	Federated States of Micronesia
GEF	Global Environment Facility
GWP	Global warming potential
HCFC	Hydrochlorofluorocarbon
HFC	Hydrofluorocarbon
HPMP	HCFC Phase-out Management Plan
ImpCom	Implementation Committee
MBTOC	Methyl Bromide Technical Options Committee
MDI	Metered dose inhaler
MEA	Multilateral environmental agreements
MLF	Multilateral Fund
MOP	Meeting of the Parties
ODS	Ozone depleting substance
OEWG	Open-ended Working Group
QPS	Quarantine and preshipment
SAP	Scientific Assessment Panel
TEAP	Technology and Economic Assessment Panel
TOC	Technical Options Committee
ToR	Terms of Reference
UNFCCC	UN Framework Convention on Climate Change



Biodiversity Policy & Practice

A Knowledgebase of UN and Intergovernmental Activities Addressing International Biodiversity Policy



The International Institute for Sustainable Development (IISD) is pleased to announce the launch of

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Biodiversity Policy & Practice is a knowledge management project that will track UN and intergovernmental activities related to international biodiversity policy. It is managed by the [International Institute for Sustainable Development \(IISD\) Reporting Services](http://www.iisd.org).

The launch of **Biodiversity Policy & Practice** coincides with the 10th meeting of the Conference of the Parties (COP 10) to the Convention on Biological Diversity (CBD), which is convening in Nagoya, Japan, on 18-29 October 2010.

Information on United Nations activities is provided in cooperation with the UN system agencies, funds and programmes through the [United Nations System Chief Executives Board for Coordination](http://www.un.org/News/Press/docs/2009/09-04.html) (CEB) Secretariat.

All news articles on **Biodiversity Policy & Practice** are researched and produced by our [team of thematic experts](#), resulting in all original content.

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- A link to our Biodiversity iCalendar, which automatically updates your own calendar program with upcoming biodiversity events; and
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For further information on this initiative or to provide us with information about your biodiversity-related activity, please contact Faye Leone, Content Editor, at faye@iisd.org.



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