

**MONTREAL PROTOCOL  
ON SUBSTANCES THAT DEplete  
THE OZONE LAYER**



**UNEP**

**REPORT OF THE  
TECHNOLOGY AND ECONOMIC ASSESSMENT PANEL**

**MAY 2005**

**VOLUME 2**

**ASSESSMENT OF THE FUNDING REQUIREMENT FOR THE  
REPLENISHMENT OF THE MULTILATERAL FUND FOR THE  
PERIOD 2006-2008**



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THE PERIOD 2006-2008**

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The opinions expressed are those of the Panel and its Task Force and do not necessarily reflect the reviews of any sponsoring or supporting organisation.

The TEAP and its Replenishment Task Force thank the *Axima* company, Lindau, Germany, for hosting the meeting, 25-29 April 2005, where this report was discussed and finalised for a last review.

## Foreword

### The May 2005 TEAP Report

The May 2005 TEAP Report consists of three volumes:

**Volume 1:** May 2005 TEAP Progress Report

**Volume 2:** May 2005 TEAP Replenishment Task Force Report

**Volume 3:** May 2005 TEAP Foams End-of-Life Task Force Report

#### Volume 1

Volume 1 contains an Executive Summary of all TEAP Progress Report topics, as well as the Executive Summary of Volume 2 and 3. Volume 1 contains the essential use report, progress reports, the MB CUN report, the CTOC report, and TEAP member biographies and membership lists.

#### Volume 2

Volume 2 is the Assessment Report of the TEAP Replenishment Task Force of the Funding Requirement for the Replenishment of the Multilateral Fund during 2006-2008, in response to Decision XVI/35.

#### Volume 3

Volume 3 is the Foams End-of- Life Task Force Report according to Decision XV/10.

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## EXECUTIVE SUMMARY

The Replenishment Task Force has estimated the total funding for the 2006-2008 replenishment to enable the Article 5(1) Parties to comply with all relevant control schedules under the Montreal Protocol control schedules under the Montreal Protocol to be ***US \$419.4 million***.

The larger part of this funding requirement is for forward commitments for already approved multi-year agreements in the consumption and production sectors (about US \$206 million), and for standard recurring costs such as Institutional Strengthening, UNEP's Compliance Assistance Programme, the budget of the MLF Secretariat and Executive Committee meetings, the Treasurer's fees and the Implementing Agencies core funding (US \$78 million). This implies that about US \$284 million of the US \$419.4 million (68%) can be considered as already committed.

### ES.1 MANDATE AND CONSULTATIONS

#### *Mandate from the Parties to TEAP; Decision XVI/35*

The Sixteenth Meeting of the Parties requested the TEAP to prepare a replenishment report and present it to the Open-ended Working Group at its 25th Meeting to enable the Parties to decide at their Seventeenth Meeting on the appropriate level of the 2006-2008 replenishment of the Multilateral Fund (Decision XVI/35).

#### *TEAP Response; Replenishment Task Force*

The TEAP constituted a Task Force of six TEAP/ TOC members from Belgium, China, Hungary, India, The Netherlands, and Venezuela, as well as an advisor from Egypt to prepare the report.

#### *Technical and Financial Consultations*

The Task Force carried out consultations with a wide range of financial and technical experts. Interviews were conducted during the 45th Meeting of the Executive Committee held in Montreal, April 2005. The Task Force extensively consulted the MLF Secretariat, The Regional Network Co-ordinators, the Ozone Secretariat and the Implementing Agencies.

A small group of experts, selected by the Task Force, in consultation with the TEAP, reviewed the drafts of this report. The final review was carried out by the TEAP at its April 2005 meeting.

## **ES.2 DATA AND METHODOLOGY**

The following reduction schedules apply:

- ❑ CFC: 85% reduction in 2007, and complete phase-out by 2010;
- ❑ Halons: phase-out by 2010;
- ❑ CTC: complete phase-out by 2010;
- ❑ TCA: 70% reduction step in 2010 and complete phase-out by 2015;
- ❑ MB: complete phase-out by 2015.

### ***Data***

The Replenishment Task Force used the MLF Secretariat data on the remaining eligible consumption for CFCs, particularly for countries with no fixed multi-year agreements, as well as data on forward financial commitments. It also used the data for the consumption and production of all ODS in all Article 5(1) countries (that will apply for funding) as reported to the Ozone Secretariat; it included the most recent reports for the year 2003 (some for 2004).

More data on CTC, TCA and methyl bromide were available for this study than for the previous replenishment study in 2002.

The Task Force sought and received data on technology from industry.

### ***Cost Elements and Methodology to Address the Costs***

This report provides estimates for all the cost elements of the funding requirement for the 2006-2008 replenishment of the Multilateral Fund. Seven cost elements have been addressed in this report, which includes the cost related to investment projects to completely phase out consumption and production (including bilateral programs), non-investment activities, administrative costs, project preparation costs, core units funding for Implementing Agencies, operating costs of the MLF Secretariat and for holding meetings of the Executive Committee, as well as Treasurer's fees.

Each category of the cost elements and the estimation are described below.

#### ***1. Investment Projects for the Consumption Sector***

This cost category refers to the funding requirements for the investment projects to completely phase out the consumption of CFCs, carbon tetrachloride (CTC) and halons by 1 January 2010, and 1,1,1 trichloroethane (TCA), and methyl bromide by 1 January 2015 or earlier, as pertinent.

For the CFC consumption sector, Article 5(1) countries were sub-divided into three groups. The first group consists of non-LVC countries (i.e., countries with a CFC consumption baseline above 360 ODP tonnes) with existing multi-year agreements where the funding during the triennium 2006-2008 has

already been determined in the agreements. The second group consists of a few countries that have so far no approved multi-year agreements. It is expected that most of these countries will submit National Phase-out Plans that are expected to be approved by the Executive Committee in 2005 or 2006, and funded during 2006-2008. The third group consists of LVC countries, for which an approach to deal with the total phase-out has been taken as given in the Executive Committee decision 45/54; this would imply funding additional to the funding already received for Refrigerant Management Plans (RMPs).

For the CFC consumption sector, a total funding requirement of US \$115 million was determined (excluding agency support costs, as in all the following cost statements).

In the case of CTC, in particular, the majority of the funding is in multi-year agreements. A lumped approach was used to determine the funding requirement for reductions necessary in the halon sector, and for addressing low consumption of CTC and TCA, larger than 2.0 ODP tonnes (for lower levels technical assistance would be appropriate, according to the relevant Executive Committee Decision 45/14). The total amount of funding involved in CTC agreements and projects amounts to US \$53 million, in the TCA sector it amounts to US \$0.4 million.

Small amounts are assumed to be needed for the halon consumption sector and for phasing out bromochloromethane in the process agent sector.

In the case of MB, two scenarios have been investigated. The first scenario consists of the existing agreements, the funding required for two Parties, which have so far been exempted (Decision XV/12), and for a few new multi-year projects which have been considered in business planning for the year 2005 and beyond (mainly for maintaining momentum and accelerated phase-out). The funding requirement for MB projects is then determined as US \$24 million.

A second scenario (submitted by the European Community) has been investigated (as it was included in the Terms of Reference, Decision XVI/35), which assumes reduction steps in MB consumption in 2008, 2010 and 2012, with a 60% reduction in the year 2010. This scenario would add US \$10.580 million to the above estimate.

## ***2. Investment Projects in the Production Sector***

This refers to the investment projects to phase out the production of controlled substances, particularly CFCs, halons and CTC by 1 January 2010, and 1,1,1 trichloroethane (TCA) and methyl bromide by 1 January 2015 or earlier.

Estimates were based on the costs for phase-out projects already agreed with virtually all ODS producing countries (this excludes one Party with a small CTC/ MB/ CFC production capacity, still to be addressed, i.e., Romania having CTC/ MB/ CFC production capacity and China having MB production (see paragraph below)).

The amount involved in the phase-out of production of CFC, halon, CTC and TCA producing plants equals US \$102 million. For the phase-out of MB capacity in one country US \$3.0 million is assumed in the next triennium.

### ***3. Non-investment Activities***

The non-investment activities refer to the activities related to UNEP's Compliance Assistance Programme (CAP), institutional strengthening, training, refrigerant management plans (RMPs), halon banking, technical assistance, country programme preparation and updating, and preparation of MDI transition strategies;

In many cases, cost information for these activities, which support investment projects in phasing out ODS consumption and production, were received by the Replenishment Task Force. They are based on the Business Plans of the Implementing Agencies, in particular UNEP, and on information from the MLF Secretariat. In other cases, estimates were made by the Task Force based on extrapolation from data in the existing databases towards the future replenishment 2006-2008.

For all Article 5(1) countries, institutional strengthening funding has been taken into account, with a funding pattern that yields similar amounts every two years.

The total for non-investment activities is estimated at US \$55.5 million.

### ***4. Administrative Costs of the Implementing Agencies***

Different charges in implementing agencies support costs were applied to all types of project approvals. These charges were individually agreed by the Executive Committee or according to guidelines decided by the Executive Committee. In the few cases where no direct support cost information was available, estimates of the agency support costs were made on the basis of experience with similar types of projects. By adding all cost components, the total funding for this element is estimated to be US \$28.67 million.

### ***5. Project Preparation***

Project preparation costs for the triennium 2006-2008 were estimated from the average of the project preparation costs per year during the period 2003-

2004, and from the project preparation requirements for new TPMP plans for LVC countries (Decision 45/54); it amounts to US \$3.02 million.

## **6. Core Unit Funding**

Costs for the Implementing Agencies Core Unit funding (which does not apply to UNEP) were determined on the basis of the relevant Executive Committee decision 38/68 (regarding the current administrative cost regime), and amount to US \$13.5 million for the triennium 2006-2008.

## **7. Operating Costs of the MLF Secretariat and the costs for holding meetings of the Executive Committee, and for the Treasurer**

These costs were determined on the basis of planned expenditure on current operations for the Executive Committee and the MLF Secretariat, including the monitoring and evaluation part, as well as for the Treasurer's fees. It amounts to a total of US \$14.325 million.

### **ES.3 FUNDING REQUIREMENT FOR THE 2006-2008 REPLENISHMENT OF THE MULTILATERAL FUND**

The RTF estimates and concludes that a total of US \$419.44 million will be needed for enabling the Article 5(1) Parties to comply with the control schedules under the Montreal Protocol, with the cost elements as set out in the summary table below.

<b>Funding Requirement Elements for the Replenishment:</b>	<b>US \$Million</b>
CFC Consumption Sector Projects non-LVCs	63.205
CFC Consumption LVC Activities – TPMPs, others	32.113
CFC MDI and pharmaceutical aerosols	19.786
MB Consumption Sector Projects	24.022
Halon Consumption Sector Projects	0.954
CTC Consumption Sector Projects	58.904
TCA Consumption Sector Projects	0.413
BCM Consumption Sector Projects	0.700
Investments: Production Sector	
1- CFC	83.345
2- Halon	0.800
3- CTC	17.188
4- TCA	0.700
5- MB	3.000
Non-investment Activities; Supporting Activities	55.524
Administrative Costs of Implementing Agencies	27.939
Project Preparation Cost	3.020
MLF Secretariat/ ExCom Operation/ Treasurer's fees	14.325
Core Unit Funding	13.500
<b>Total</b>	<b>419.44</b>

In the total estimate of the funding requirement, the already agreed commitments have become more important than the new projects, activities and new multi-year agreements proposed. For consumption and production an amount of about US \$206 million is already committed in multi-year agreements. For new projects and agreements, mainly in the consumption sector, about US \$127 million is proposed in this report. US \$78 million of the remainder of the funding requirement (about US \$87 million) has already been committed (US \$78 million) to agreed non investment activities and is for the budgeted costs of the Executive Committee, the MLF Secretariat, the Treasurer's fees and the Core Units costs for the Implementing Agencies.

This implies that a total of about US \$284 million of the total funding requirement (or 68% of the total recommended) can be considered as committed.

The scenario with gradual MB reduction steps in 2008/2010/2012, as mentioned in the Terms of Reference, would have the implication that an amount of **US \$10.580 million** (including agency support costs) would have to be added to the total amount given above.

# **1 Introduction**

## **1.1 Terms of Reference**

Decision XVI/35 of the Sixteenth Meeting of the Parties requests, in its paragraph 1, the Technology and Economic Assessment Panel (TEAP) to prepare a report for submission to the Seventeenth Meeting of the Parties (Dakar, December 2005), and present it through the Open-ended Working Group at its 25th meeting (Montreal, 27-30 June 2005), to enable the Seventeenth Meeting of the Parties to take a decision on the appropriate level of the 2006-2008 Replenishment of the Multilateral Fund.

## **1.2 Scope and Coverage**

Decision XVI/35 directs the Panel, in preparing its report, to take into account, *inter alia*:

- (a) all control measures, and relevant decisions agreed by the Parties to the Montreal Protocol and the Executive Committee, including decisions by the 16th Meeting of the Parties and the 45th Meeting of the Executive Committee, in so far as these will necessitate expenditure by the Multilateral Fund during the period 2006-2008; in addition, the Technology and Economic Assessment Panel Report should include a scenario which indicates costs associated with implementation by Parties operating under paragraph 1 of Article 5 of the adjustment relating to methyl bromide proposed by the European Community;
- (b) the need to allocate resources to enable all Article 5 Parties to maintain compliance with Article 2A-2I of the Montreal Protocol;
- (c) agreed rules and guidelines for determining eligibility for funding of investment projects (including those in the production sector), non-investment projects and sectoral or national phase-out programs;
- (d) approved country programmes;
- (e) financial commitments in 2006-2008 relating to national or sectoral phase-out plans agreed by the Executive Committee;
- (f) the provision of funds for accelerating phase-out and maintaining momentum, taking into account the time lag in project implementation;
- (g) experience to date, including limitations and successes of the phase-out of ozone-depleting substances achieved with resources already allocated, as well as the performance of the Multilateral Fund and its implementing agencies;

- (h) the current trend in the cost of ozone depleting substances and the resulting incremental costs of investment projects during the period under review; and
- (i) administrative costs of the implementing agencies and the cost of financing the secretariat services of the Multilateral Fund, including the holding of meetings.

Decision XVI/35 mentions that the Technology and Economic Assessment Panel should give due consideration to the evaluation and the review of the Financial Mechanism of the Montreal Protocol undertaken by the Parties in 2004, pursuant to Decision XIII/3.

It also directs the Technology and Economic Assessment Panel, in undertaking this task, to consult widely with relevant persons and institutions and other relevant sources of information deemed useful. The Decision also asks the Panel to strive to complete its work in time to enable its report to be distributed to all Parties two months before the 25th Meeting of the Open-ended Working Group (Montreal, 27 – 30 June 2005).

The report was prepared on the basis of the Terms of Reference cited above.

The first and the second draft of the report were discussed via e-mail contacts; a third draft report was subsequently composed for discussions before the TEAP meeting in Lindau, Germany. The final review and completion of the document was carried out by the TEAP at its meeting in Lindau, Germany, during 25-29 April 2005.

### **1.3 Composition of the Task Force**

Following the Sixteenth Meeting of the Parties, the TEAP set out to implement Decision XVI/35. For this purpose the TEAP established a Replenishment Task Force (RTF) consisting of:

- Lambert Kuijpers (The Netherlands, co-chair TEAP, co-chair RTOC);
- Tamás Lotz (Hungary, senior expert member TEAP);
- Melanie Miller (Belgium, member MBTOC);
- Jose Pons Pons (Venezuela, co-chair TEAP, co-chair MTOC);
- K. Madhava Sarma (India, senior expert member TEAP)
- Shiqiu Zhang (China, senior expert member TEAP).

Advisor to the Task Force was

- Omar E. El-Arini (Egypt, honorary Chief Officer of the MLF).

The Replenishment Task Force was co-chaired by Shiqiu Zhang and Lambert Kuijpers.

An external review of the drafts, to ensure accuracy and consistency of data, was conducted by:

- Maria Nolan (Chief Officer of the MLF Secretariat) and
- Marco Gonzalez (Executive Secretary of the Ozone Secretariat).

#### **1.4 Consultation Process**

The consultation process indicated in the decision started in January with a meeting between representatives of the RTF and the Chief Officer and staff of the MLF Secretariat. During the meeting, the TEAP's model used for calculating previous replenishments, as well as the Secretariat's compliance oriented model were discussed. The meeting also discussed the validity of the assumptions used for the 2002 replenishment study, as well as other issues.

In February-March 2005, two meetings were held back to back, (1) with the UNEP Regional Network Co-ordinators and (2) with representatives of the implementing agencies. During these meetings, the relevant terms in the Replenishment study's TOR were discussed to ensure common understanding. The status of implementation of approved activities amounting to phasing out substantial quantities of ODS, and the capacity of the implementing agencies and Article 5(1) countries to do so in order to meet the applicable Protocol compliance targets, were also discussed. Impediments to implementation and their impact on compliance were considered, as well as activities envisioned in the agencies' business plans during 2005-2007. Summary reports of the two meetings can be found in Annex 1.

At the 45th meeting of the Executive Committee, 28 Parties, representing both Article 5(1) and Non-Article 5(1) countries, were interviewed by representatives of the RTF (out of 32 Parties attending). A summary report of the outcome of the interviews is given in Annex 2.

In addition to the consultations, the RTF reviewed the report on the "External Evaluation of the Financial Mechanism", as required by Decision XVI/35.

After having been reviewed by the outside reviewers (see above in section 1.3), this report was considered and subsequently adopted by consensus of the UNEP Technology and Economic Assessment Panel (TEAP) as established under the Montreal Protocol, at its meeting in Lindau, Germany, 25-29 April 2005.

#### **1.5 Purpose of this Report**

The purpose of this report is to assist the Parties in reaching a decision on the appropriate funding requirement for the 2006-2008 replenishment of the Multilateral Fund. The TEAP prepared this report at the request of the Parties, in accordance with the terms of reference as set out in Decision

XVI/35. The TEAP endeavoured to ensure transparency in consultations, methodology (including estimating procedures) and in reaching conclusions.

## **1.6 The Structure of the Report on the 2006-2008 Replenishment**

The structure of the 2005 TEAP Replenishment Task Force Report is as follows:

Chapter 1, “Introduction”, presents the Terms of Reference, the setting up of the Task Force and the consultative processes followed in preparing this report.

Chapter 2, “Overview”, describes the establishment of the Multilateral Fund, the previous replenishments of the Multilateral Fund, and a brief account of the contribution of the Multilateral Fund to the efforts of the Article 5(1) Parties to comply with the control schedules of the Montreal Protocol.

Chapter 3, “Validity of Assumptions”, looks back at the assumptions made in the 2003-2005 replenishment report, and compares these with the projects and phase-out plans that were approved or are planned to be approved during the same period. This also includes an elaboration of the values assumed for implementation lag, cost effectiveness etc.

Chapter 4, “Methodology”, presents the assumptions and method of calculation used, including the Compliance Oriented Model (COM), as developed by the MLF Secretariat and approved by the Executive Committee as a guide to be used by the Implementing Agencies (and bilateral agencies) in their business planning. It identifies the commitments that the Article 5(1) Parties will need to meet in order to achieve the 1 January 2010 compliance with the relevant control schedules of the Montreal Protocol during the 2006-2008 replenishment period and beyond.

Chapter 5, “The Funding Requirement for the 2006-2008 Replenishment; the Consumption Sector”, presents the estimates of the funding requirement for the 2006-2008 Replenishment of the Multilateral Fund for the consumption sector projects, including pre-commitments by the Executive Committee for sectoral and national phase-out plans.

Chapter 6, “The Funding Requirement for the 2006-2008 Replenishment; the Production Sector”, presents the estimate of the funding requirement for the 2006-2008 Replenishment of the Multilateral Fund concerning all agreed and future production sector phase-out plans. In fact, virtually all phase-out projects have been decided upon, although for some (related to methyl bromide) an approval in the course of 2005 is expected, for which the Task Force has consulted the 2005 business plans.

Chapter 7, “The Funding Requirement for the 2006-2008 Replenishment; Supporting Activities - Non-investment Projects”, presents the estimates of the funding requirement for all the different types of non-investment projects, as well as for the operating costs of the Multilateral Fund and its Executive Committee. Although they are normally not seen as non-investment activities, project preparation costs are also dealt with here.

Chapter 8, “Total Funding Requirement”, summarises the different amounts that have to be considered in determining the total funding requirement for the triennium 2006-2008 in a table.

Chapter 9, “Concluding Remarks”, presents comments and qualifications on the way the funding requirement has been determined for the 2006-2008 replenishment of the Multilateral Fund.



## **2 Overview**

### **2.1 Achievements to date**

The Multilateral Fund was replenished four times after its initial capitalisation of US \$200 million for the period 1991-1993. The replenishments were in the following amounts:

- 1994-1996 US \$455 million;
- 1997-1999 US \$466 million;
- 2000-2002 US \$440 million;
- 2003-2005 US \$474 million.

Since its inception, the Multilateral Fund has supported some 139 Article 5(1) countries by providing US \$1.825 billion in project funding and capacity building for the phase-out of 204,800 ODP tonnes in consumption and 119,650 ODP tonnes in production of ODSs. Additionally, the Executive Committee has committed US \$305.75 million in future funding (including the remaining of 2005) for the total phase-out of 158,260 ODP tonnes in consumption and production of ODSs. It should be noted that, of the US \$305.75 million, US \$69.205 million will be committed in 2005; of the 158,260 ODP tonnes, 46,282 tonnes will be phased out in the year 2005.

The Montreal Protocol has witnessed unparalleled participation as evidenced by the fact that almost all UN member states are parties to it, and to several of its amendments. The Multilateral Fund has played a major role in achieving this feat. Both industrialised and developing countries have participated forcefully and consistently to realise the Fund's objectives. The total income of the Fund stands at US\$1.91 billion as of April 2005.

The most salient achievements are:

- the contributions to the Multilateral Fund amount to about 95% of pledges, up to the pledged contributions for 2004;
- all decisions by the Executive Committee were taken by consensus;
- 139 Article 5(1) Parties have received financial assistance;
- 136 National Ozone Units have been established and are receiving funding;
- 10 Regional / Sub-regional Networks encompassing all Article 5(1) countries have been established;
- 99 Multi-year agreements covering the phase-out of production and consumption of ODSs in 43 Article 5(1) countries have been approved and are under implementation;
- 63 RMPs have been approved to enable 63 Article 5(1) countries to meet both the 50% and 85% reduction of CFC consumption;

- 25 TPMPs have been approved to enable 25 LVC Article 5(1) countries to meet the 50%, 85%, and 100% reduction of CFC consumption;
- many projects have been approved that deal with CTC (in particular process agents) and methyl bromide;
- Article 5(1) countries have agreed not to request funding for conversion of ODS-based capacity established after July 1995, nor to a second phase funding of projects approved for HCFC based technology;
- many of the Parties have been members or co-opted members of the Executive Committee;
- the four Implementing Agencies established their own Montreal Protocol Units that required changes in the operating environment of these agencies;
- in addition to the activities of the four Implementing Agencies, many projects have been carried out via bilateral co-operation between non-Article 5(1) and Article 5(1) Parties;
- the MLF Secretariat has shouldered increasing responsibilities without proportional increase in budget and/or staff.

The above achievements are manifest in the fact that the amount of controlled substances remaining to be funded for complete phase out, in consonance with the Montreal Protocol control schedules, amount to some 6390 ODP tonnes, of which some 2800 ODP tonnes are earmarked for funding during 2005, i.e. by funds from the current triennium. It should however, be noted that these figures are but a small fraction of the latest consumption reported by Article 5(1) countries under Article 7. This is due to the fact that over 243,500 ODP tonnes of controlled substances (both consumption and production) are being phased out through the ongoing implementation of approved projects and plans (as of December 2004).

## **2.2 ODS Consumption in Article 5(1) Countries**

Table 2-1 shows the ODS consumption levels for the years 1998-2003 for all Article 5(1) Parties that have received support from the Multilateral Fund. The total baseline has also been reported in Table 2-1. It consists of the average consumption for the years 1995, 1996 and 1997 for CFC and halons; of the average consumption for the years 1995, 1996, 1997 and 1998 for MB, and of the average consumption for the years 1998, 1999 and 2000 for CTC and TCA.

The 1998-2003 data are as reported to the Ozone Secretariat /UNEP05/. The few unreported data for the year 2003 /UNEP05/ have been estimated by applying extrapolation techniques to the consumption patterns of earlier years, particularly for Annex B, less for Annex A substances (where almost

every consumption had been reported). Consumption of MB (Annex E substance) is also as reported to the Ozone Secretariat /UNEP05/.

Table 2-1 shows that the consumption of CFCs decreased from slightly more than 132,000 ODP-tonnes in 1998, to about 68,185 ODP tonnes in 2003, a decrease by almost 50% (consumption data reported by countries that are not eligible to receive financial support from the Multilateral Fund have not been taken into account). The total consumption in the year 2003 for Annex A substances is much below 50% of the 1995-1997 baseline (151,415 ODP tonnes globally). There is also a striking decrease in the halon consumption between 2000 and 2003; in 2003 the consumption is about 20% of the total baseline. Total Article 5(1) methyl bromide consumption has two peaks, one in the year 1998 and one in the year 2001. After the year 2001 the total consumption seems to be decreasing. The total methyl bromide consumption in 2003 was 26% lower than the total baseline (8798 ODP tonnes). The total consumption of all substances shows a very irregular pattern, which is caused by the highly variable reporting of CTC data. Between 1999 and 2003, the total consumption level (excluding CTC) decreased substantially, by approximately 50%. This must be due to the implementation of Multilateral Fund projects and it also supported by the fact that, by 2003, Article 5(1) Parties had to do efforts to meet the control schedules for all substances in 2005. Of course, the total data do not imply that there may be very significant differences in the consumption patterns for the separate countries. A more detailed overview of consumption data per country is presented in Annex 4.

**Table 2-1 ODS consumption levels (ODP-tonnes) for the Article 5(1) countries considered for MLF funding for the years 1998-2003 for CFCs, halons, Annex B and E substances, as well as the baseline consumption /UNEP05/**

<b>Year</b>	<b>Baseline</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
CFC, Annex A	151,415	132,735	114,274	106,719	94,386	82,041	68,185
Halons, Annex A	41,602	30,575	24,678	20,561	16,138	11,175	6,967
CTC, Annex B	54,935	99,086	22,863	44,971	24,628	18,533	36,050
TCA, Annex B	1,319	1,444	1,289	1,252	740	903	861
MB, Annex E	8,798	10,256	7,750	9,313	10,004	7,018	6,487
<b>Total excl. CTC</b>	<b>203,134</b>	<b>175,010</b>	<b>147,991</b>	<b>137,845</b>	<b>121,268</b>	<b>101,137</b>	<b>82,500</b>
<i>Total incl. CTC</i>	<i>258,069</i>	<i>274,096</i>	<i>170,854</i>	<i>182,816</i>	<i>145,896</i>	<i>119,670</i>	<i>118,550</i>

**Note:** Consumption data reported by the Republic of Korea, Saudi Arabia, Singapore, South Africa, UAE, Malta and Cyprus (the latter two being EU member states) have not been taken into account, because these countries are not eligible to receive financial support from the Multilateral Fund. Fluctuations in CTC data reported are mainly caused by the Chinese data reporting.

## 2.3 ODS Production in Article 5(1) Countries

Table 2-2 shows that the production of CFCs decreased from slightly more than 95,000 ODP-tonnes in 1998, to about 59,000 ODP tonnes in 2003, a decrease by 40% (this is less than the decrease of the CFC consumption in the same time period; production data reported by countries that are not eligible to receive financial support from the Multilateral Fund have not been taken into account). The total Article 5(1) production in the year 2003 for Annex A (i.e., including halons) substances is much below 50% of the 1995-1997 baseline (about 140,000 ODP tonnes globally). In 2003 the production of halons is about 15% of the global baseline. Total methyl bromide production has two peaks, one in the year 1998 and one in the period 2000- 2001, comparable to methyl bromide consumption. The total methyl bromide production in 2003 was about 20% lower than the total baseline, which was low (825 ODP tonnes). The total production of all substances shows a very irregular pattern, which is caused by the highly variable reporting of CTC data. Between 1998 and 2003, the total ODS production level (excluding CTC) decreased substantially, by almost 50%. However, if one looks at total production including CTC, conclusions are difficult to draw. The reduction of the CFC and halon production must be due to the implementation of Multilateral Fund projects. As for consumption, total Article 5(1) production data do not imply that there may be very significant differences if one would look at production patterns for the separate countries.

*Table 2-2 ODS production levels (ODP-tonnes) for the Article 5(1) countries considered for MLF funding for the years 1998-2003 for CFCs, halons, Annex B and E substances, as well as the baseline production /UNEP05/.*

Year	Baseline	1998	1999	2000	2001	2002	2003
CFC, Annex A	98,806	95,371	90,120	73,298	67,904	59,757	58,944
Halons, Annex A	41,282	28,020	22,732	16,214	11,484	7,408	5,653
CTC, Annex B	54,975	62,403	28,747	73,776	31,793	15,958	36,208
TCA, Annex B	153	144	229	86	46	121	87
MB, Annex E	825	1429	889	1438	1410	765	576
<b>Total excl. CTC</b>	<b>141,066</b>	<b>124,964</b>	<b>113,970</b>	<b>91,036</b>	<b>80,343</b>	<b>68,051</b>	<b>65,260</b>
<i>Total incl. CTC</i>	<i>196,041</i>	<i>187,366</i>	<i>142,717</i>	<i>164,812</i>	<i>112,136</i>	<i>84,010</i>	<i>101,469</i>

**Note:** Production data reported by the Republic of Korea (South Africa) have not been taken into account, because the country is not eligible to receive support from the Multilateral Fund.

## 2.4 Situation since the previous replenishment

During 1991-2002, inclusive of the 38th Executive Committee meeting held in Rome, December 2002, a very large number of projects were approved. The ODP-tonnes to be phased out by approved projects were used in the model for the consumption sector by the Replenishment Task Force in 2002 /RTF02/.

The study conducted in 2002 for the 2003-2005 replenishment of the Multilateral Fund used CFC consumption data submitted by the Article 5(1) Parties to the Ozone Secretariat for the years 1997-2000. The data were used in a spreadsheet model together with certain assumptions regarding the decrease in consumption for the period after 2000, through 2002. Consequently, the 2002 estimates used to determine the funding requirement for the 2003-2005 replenishment period were subject to a certain degree of uncertainty given the need to use extrapolated data where data had not been reported, and the errors in reported data. A detailed description and analysis of the validity of the assumptions used in the 2003-2005 replenishment report can be found in Chapter 3.

As of year 2001, the approach became different for the non-LVC countries where under Decision 35/57, the amount of eligible consumption was determined. As of year 2001, fewer CFC-based projects were submitted on a project by project basis and the consumption in the countries was more addressed via sectoral or national phase-out plans.

The multi-year approach made it rather difficult for the Task Force in 2002 to come up with a good estimate for the CFC consumption sector. It had to study the consequences of the historic approach and compare this to the few National Phase-out Plans (NPPs) that were approved until the middle of 2002. In its 2002 report, the Replenishment Task Force gave an elaborate description of CFC project approvals during certain years, analysed the tendencies between large volume consuming, two types of middle volume consuming, low volume and very low volume consuming countries. It also analysed the project approvals versus the consumption level of all Article 5(1) countries and concluded that the implementation of projects with assistance of the Multilateral Fund was the main driver for the reduction in CFC consumption, and certainly also for the reduction in the CFC and halon production sectors.

As of the year 2003, multi-year NPPs have become the most important approach. Next to this, the countries' consumption levels of different substances have also been addressed via a number of sectoral approaches, often with several sectoral plans in one country. This has now led to the situation that most non-LVC countries have CFC and CTC phase-out plans, with agreed funding during the period 2005-2010, where for this report the

period 2006-2008 is of importance. Many Article 5(1) countries also have multi-year agreements for phasing out methyl bromide, mostly earlier than the required phase-out date of 2015.

The above leads to the conclusion that approaches have changed significantly. It does not make much sense to analyse project approvals because if they are of the multi-year type and address the full phase-out, it is the responsibility of the country, assisted by implementing agencies, to comply with a phase-out. There is no need for further spreadsheet analysis as performed by the Replenishment Task Force in 2002.

For the few countries that so far have no NPPs or sectoral phase-out plans, a straightforward approach can be applied, based upon the experience obtained during the last three years.

The Task Force is of the opinion that it is good to check the validity of the approach and the assumptions made in the 2002 report /RTF02/, and check this against the reality, i.e., against the (multi-year and other) projects approved and under implementation. This can be found in chapter 3.

The previous approaches for the calculation of the funding requirement for CFCs were based upon (1) the historic consumption, (2) an estimation of the future trend, (3) together with estimates for project implementation, and (4) a comparison whether this would lead to compliance with the control schedule. This approach was appropriate in the 1996-2002 period, but since then the Montreal Protocol has entered a different regime. The 2005 control schedules must have been met if countries need to stay in compliance, the 2007 reductions for CFCs (assuming a two year implementation period or more) must have been decided and approved by 2005 if compliance is to be maintained.

This implies that the projects and multi-year plans to be approved as of 2006, have to study which funding would be needed in this triennium for a complete phase-out of CFCs, CTC and halons by 2010, and for TCA and MB by 2015. This implies that the implementation lag is less important and can be assumed to be about two years. It is mainly for this reason and the reason of consistency that the Task Force has decided to follow the approach from the Compliance Oriented Model as developed at the MLF Secretariat /COM04, COM05/, as explained in chapter 4.

### **3 Validity of Assumptions Used in the 2003-2005 Replenishment Report**

#### **3.1 Introduction**

This chapter presents the estimates given for the funding requirement in the 2002 Replenishment Task Force report /RTF02/ and compares them with the actual funding of projects and phase-out plans during 2003-2004 (and 2005). This will clearly show why differences were caused and how the approach for the present report, which calculates the funding requirement for the period 2006- 2008, should be looked at.

#### **3.2 Estimating Procedures in the 2002 Report**

The estimating procedures in the 2002 report /RTF02/ were built on those used in the preparation of previous replenishment reports, particularly the 1999 Task Force Report /RTF99/. For determining the funding requirement for CFC projects, a spreadsheet model was used with a forward extrapolation, a determination of the project needs for complying, and when these projects for compliance needed to be approved. The model worked with an implementation lag function, with an average approval period between 2 and 3 years. Cost effectiveness was determined on the basis of projects approved in a specific group of countries during a number of years before the replenishment study was done. This yielded cost effectiveness factors for each sector and for each type of country.

For determining the funding requirement for MB, a country-by-country spreadsheet analysis was applied, as already explained in the 1999 Task Force Report /RTF99/. In the case of CTC and TCA, different, lumped estimating procedures were applied, since not enough data were available to construct a full scale spreadsheet model for these substances as was done for CFCs.

#### **3.3 Funding during 2003-2005 for the different ODSs**

##### **Consumption Sector**

###### ***CFCs***

In the 2002 RTF report, the funding requirement for CFCs (consumption sector) was calculated at about US \$240 million (which did not include agency support costs and did not include funding for LVC countries). This was based on an estimate for a certain number of multi-year NPPs and on a number of “historic” project approvals. Cost effectiveness was based on historic approaches and “new” values provided by the multi-year approach.

According to information gleaned from 2003-2004 Executive Committee reports and the 2005 Business Plans of the Implementing Agencies, the

amount to be approved for the CFC consumption sector in the period 2003-2005 will reach about US\$230 million. The cost effectiveness was better than predicted and the amount of ODP tonnes was higher, but the differences were not substantial.

LVC countries were not considered in the above mentioned approach, except that for these countries (and for some non-LVC countries) RMP and RMP update funding for the 2003-2005 period was calculated as US \$9.1 million.

### ***CTC***

In the CTC consumption sector, the data available in 2002 to the Task Force indicated that about 8,000 ODP tonnes were used in the process agent sector, and about 1,800 tonnes were used in the solvent sector in all Article 5(1) countries. Using cost effectiveness factors of US \$5.7 for process agents and US \$9.5 for solvents, a total funding requirement of US \$49.7 million was calculated in order to comply with the 2005 control schedule. In estimating the amount of CTC to be phased out during the 2003-2005 triennium the TEAP Replenishment Task Force experienced difficulties due to major annual variations in reported consumption and production of CTC by Parties; this has been the most important reason for uncertainties in the estimate given.

The approvals (and expected approvals) amount to US \$94 million. This is significantly more than was predicted, because the Executive Committee approved three major sectoral plans for China and India, which cover CTC consumption and production.

### ***TCA***

Since the schedule for TCA is less stringent than for most other ODS, it was calculated that, from the aggregated baseline of 583 ODP tonnes (consumption excluding China) about 160 ODP tonnes would have to be addressed in the 2003-2005 period, with a funding requirement of US \$3.08 million.

The approvals (and expected approvals) amount to US \$4-5 million, US \$3.7 million for pure TCA projects, the remainder for TCA in mixed CFC/ CTC/ TCA projects. There is not that much difference between what was predicted in 2002 and the 2003-2005 (expected) approvals.

### ***MB***

The analysis made for methyl bromide assumed reductions due to projects already approved, from proposed new projects, reductions to achieve the freeze (after 2002), reductions to meet the 20% consumption reduction, and reductions due to the time lag between approval and implementation of actual reductions. The amount of MB was calculated at 4,304 ODP tonnes, i.e. at a

value of about US \$65 million, using a cost effectiveness value of US \$18 per ODP kg, based upon experience up to 2002.

The approvals (and expected approvals) amount to US \$31 million. Cost effectiveness was much better (40%) than assumed in 2002. This yields a difference of US \$34 million.

It is also important to note that, during the current triennium, the Executive Committee decided to give priority for funding projects that would enable Article 5(1) countries to achieve compliance with the imminent control targets for all controlled substances (2005 and 2007) and not for an accelerated phase-out. As a result, several investment projects that were submitted for complete phase-out of methyl bromide were partially approved only to enable compliance with the 20% reduction in baseline consumption by 2005 (i.e., Egypt, Guatemala, Honduras). Also, methyl bromide projects were deferred in countries which had already an approved methyl bromide phase-out project that would enable the country concerned to achieve the 20% reduction in 2005 (i.e., Chile). These partial approvals and deferrals of projects resulted in reduced funding of methyl bromide projects.

### **Production Sector**

The total funds estimated in 2002 for the CFC production sector were US \$66.7 million, based upon a number of existing agreements and estimates for the costs of the phase-out of production in Argentina, Mexico and Venezuela (estimated in 2002 at US \$9 million for these countries for the period 2003-2005).

Approvals for the CFC production sector (and existing agreements) amount to US \$98 million in the period 2003-2005, a difference of US \$30 million. This is a substantial difference, but could not be expected on the basis of normal estimates. It is also related to the agreed accelerated phase-out in Mexico and Venezuela; in 2004 there was also a decision taken on an accelerated phase-out of CFC (and CTC) in China.

The 2002 replenishment report did not take into consideration the phase-out of CTC and TCA production (for which a certain amount of funding was approved). It should be noted that, additionally, multi-year projects for closure of CFC, CTC and methyl bromide facilities (in Romania) and methyl bromide facilities (in China) are being proposed for funding in 2005, which were not included in the 2002-2005 Replenishment Report.

### *Non-investment Activities*

For the CFC consumption sector, agency support costs were US \$6 million lower than estimated, due to the fact that the Executive Committee took a decision on lower agency support costs.

In the case of methyl bromide, the assumed agency support costs (in the 2002 report) also show considerable differences with the real costs (estimated to be US \$4.5 million lower).

Where it concerns the non-investment activities, some amounts taken into account were based upon agreed disbursement schedules (the CAP etc.). In the 2002 report other non-investment activities (excluding institutional strengthening) were estimated at US \$53 million, but a much lower amount was approved, more than US \$20 million lower. The difference can mainly be found in the US \$16.5 million “other activities” which were not precisely defined in the 2002 report.

In summary, the list contains many positive and negative differences between the estimates in the 2002 report and the “reality”(including the 2005 approvals). The differences between the totals forecast in the 2002 report and the amounts in the approvals seem to be more or less the same (US \$574 million in the 2002 report and US \$573 million in approvals during 2003-2005), taking into consideration the activities in the 2005 business plans.

However, one should clearly mention that it is no coincidence that the two amounts from the 2002 RTF report and the real (anticipated) expenditures match that well. The decision has determined the amount of US \$574 million and the agencies try to completely use the money, so that there will be no carry-over to a future replenishment period. Nevertheless, one can say that, overall, the 2002 report gave a reasonable estimate of the total funding required for the 2003-2005 triennium.

## **4 Methodology**

### **4.1 Introduction**

This chapter presents the methodology used to estimate the funding requirement for the 2006-2008 replenishment of the Multilateral Fund, taking into consideration the fact that the phase out of the remaining consumption of CFC, halon and CTC will need to be addressed during the triennium in order to achieve compliance on 1 January 2010. The estimate also considered funding during the triennium of the total phase out of TCA and MB, where the consumption is very low, and the accelerated phase-out of methyl bromide as proposed by the European Community.

### **4.2 Estimation Procedure**

The estimation procedure used in the current study is based primarily on the amount of ODSs needed to achieve the required compliance and, where relevant, on cost effectiveness values, taking the following into consideration:

- All relevant decisions of the Executive Committee, inclusive of those taken at the 45th meeting (e.g. decisions relating to remaining eligible CFC consumption of non-LVCs, Institutional Strengthening, post-2007 RMPs, halon banking, chillers, HCFCs etc.), as well as decisions of the Parties to the Montreal Protocol inclusive of those taken at the 16th Meeting.
- Decisions of the Meetings of the Parties relating to non-compliance by some Article 5(1) countries with specific control measures, and those relating to methyl bromide, process agents, etc.
- Control Schedules for all ODSs for Article 5(1) countries (a consolidated list of the Montreal Protocol control schedules, as they apply to the Article 5(1) countries, is provided in Table A3.1 (Annex 3)).
- Decision 38/66, whereby the Executive Committee adopted, for the first time ever, a model three year phase-out plan for the Multilateral Fund for the 2003-2005 triennium. The Committee requested, in the same decision, the implementing and bilateral agencies to use the model as a guide in preparing their respective business plans. It should be noted that the plan was based on a compliance oriented model developed by the MLF Secretariat as the culmination of the Executive Committee discussions on the strategic planning for the Multilateral Fund, that had begun early in 2000. A similar decision (44/5) adopted the phase-out plan for 2005-2010.
- Decision 38/68, whereby the Executive Committee adopted a new administrative cost regime for the 2003-2005 triennium that included US \$1.5 million for a core unit funding budget per year for UNDP, UNIDO and the World Bank and a revised fee for the agency support

costs of projects ranging from 7.5 per cent for projects with an incremental cost at or above \$250,000, as well as institutional strengthening projects and project preparation to 9 per cent for projects with a project cost below \$250,000 and country programme preparation. The Executive Committee also decided to review the new regime at its 47th Meeting.

- Funds approved in principle by the Executive Committee for disbursement during the triennium, for the implementation of multi-year sectoral and national phase-out plans.
- The most recent data reported by Article 5(1) countries under Article 7.
- The 2005-2007 Business Plans of the Implementing Agencies and of the Bilateral Agencies, and the Fund's Consolidated 2005-2007 Business Plan.
- The MLF Secretariat's document (the 2005-2010 Phase-out Plan for the Multilateral Fund as of the 45th Executive Committee Meeting).
- Discussions with the staff of the Multilateral Fund and Ozone Secretariats, Implementing Agencies, Regional Network Co-ordinators, and interviews with members of the Executive Committee, conducted at the 45th Executive Committee meeting.

### **4.3 Assumptions**

The estimation procedure has been applied assuming that:

- no changes to the applicable Montreal Protocol baselines would be sanctioned;
- data reported under Article 7 are accurate, and would not show increase in ODS production and consumption in the periods between control schedules;
- for non-LVCs, only the remaining aggregate CFC consumption, calculated according to Decision 35/57, will be funded;
- all low level consumption of CTC, TCA and MB would be funded in the 2006-2008 time frame (in most cases lower than 20 tonnes);
- amounts of ODSs included in the 2005 business plans of the Implementing Agencies would be realised in project submissions and subsequently funded during the course of 2005 in phase-out projects and plans;
- funding for subsequent phases of Institutional Strengthening projects would remain at the current levels;
- all the current RMPs for LVC countries will be converted to TPMPs, in accordance with Decision 45/54;

- few additional countries will become new Parties to the Protocol;
- the frequency of Executive Committee meetings would be maintained at three meetings per year.

#### **4.4 Profile of the Remaining ODS Consumption According to the MLF Secretariat's Compliance Oriented Model**

The concept of a Compliance Oriented Model arose from the need to maximise the use of the limited resources of the Multilateral Fund to assist Article 5(1) countries to comply with the control measures for CFCs, halons, CTC, TCA and methyl bromide.

The model took into consideration (1) ODS reduction targets according to the phase-out schedule of the Montreal Protocol and the current level of ODS consumption in Article 5(1) countries taking into consideration phase-out investment projects that have been approved by the Executive Committee, (2) the remaining CFC consumption eligible for funding in non-LVC countries as it was previously decided by the Committee through its decision 35/57, and (3) the average timeframe for project implementation.

Since the 38th Meeting of the Executive Committee in November 2002, the model has been updated several times taking into account the amounts of ODS to be phased out from projects and phase-out plans that are approved by the Executive Committee.

##### ***CFC for non-LVC countries***

- The total eligible amount of CFCs needed to enable compliance with the 85 per cent and 100 per cent CFC phase-out reduction targets in 2007 and 2010, respectively, will be funded between 2006 and 2008;
- The additional CFC consumption for MDIs and pharmaceutical aerosols that has been foreshadowed in relevant agreements amount to 1100 ODP tonnes and is expected to be funded between 2006 and 2008.

##### ***CFC for LVC countries***

- 99 Article 5(1) countries are classified as low ODS consuming countries (based on a CFC consumption baseline of 360 ODP tonnes or less). The latest reported consumption of these countries amounts to 4,357 ODP tonnes, compared with an aggregated baseline consumption of 7,486 ODP tonnes.
- 63 LVC countries have received RMP funding, in accordance with Decision 31/48 to meet the 2005 and 2007 compliance targets and 25 countries have received TPMP funding to meet the 2005, 2007 and 2010 compliance targets of the remaining 11 countries, 9 received RMP

funding prior to the 31st meeting (i.e. no commitment to meet any control targets) and two are new Parties.

- The remaining unfunded eligible amount of CFCs (15% of the baseline), will be funded between 2006 and 2008 (average of 5% in each year).

### ***CFC production sector***

In addition to the reduction in production as stipulated in the agreements with CFC-producing countries, one country mentioned in the model is slated in the 2005 business plan of UNIDO to submit a project to the Executive Committee for closure of its plant that also has MB and CTC production capacity.

### ***Methyl Bromide (consumption and production)***

- Except for small MB consumption in two countries that have temporarily been exempted from achieving the 2005 MB phase-out limit (Decision XV/12), no additional phase-out over the 2006-2010 period is proposed in the Model since the complete phase-out of MB does not come until 2015. It is, however, to be noted that several MB investment projects are included in the business plans of the Implementing Agencies for the purpose of accelerated phase-out with funding implication for the 2006-2008 triennium.
- Only one major producer country (China) produces MB (the other country, Romania, only has a small production capacity). The MB production baseline is 776.3 ODP tonnes and the 2003 reported consumption is 558 ODP tonnes. The maximum allowable MB production in 2005 would be 620.8 ODP tonnes (e.g., reduction of 155.3 ODP tonnes from the baseline level).

### ***CTC (consumption and production)***

- The model provides information on 55 Article 5(1) countries, which have an established baseline and/or have reported consumption for recent years; 29 of them have received assistance to completely phase out their production/ consumption. The analysis therefore focused on the other 25 Article 5(1) countries, in addition to China, which the model lists as not needing any further assistance, but it is included in the World Bank business plan for 2005 and 2006.
- The analysis revealed that data reported by two Article 5(1) countries shows marked anomalies. One of these countries has reported a level of consumption in 2002 and 2003 amounting to 30-fold increase compared to its Montreal Protocol baseline. Anecdotal reports suggest that this high consumption could be due to the inadvertent inclusion of unspecified amounts of non-controlled substances. The other country has a very large

consumption baseline but reported no CTC consumption since 2001, and therefore has been excluded;

- Excluding these two countries, the total amount of CTC required to enable compliance with the 100% CTC phase-out target in 2010 is based on the total calculated CTC baseline (667.6 ODP tonnes) and not on the 2002/2003 consumption reported under Article 7 (22,505 ODP tonnes);
- The model has not taken into account the phase-out of the CTC production facilities for two other countries (Brazil with a baseline of 11,629.6 ODP tonnes and Romania with a baseline of 371.5 ODP tonnes) because no information is available on the level of controlled uses of CTC (e.g., feedstock) and the eligibility of the production (e.g., foreign ownership of the production facilities);
- China's CTC consumption in newly approved process agent applications, identified in the CTC phase-out agreement, is considered in this report (China has a 1999 CTC baseline consumption of 5,224 ODP tonnes for these applications, according to the agreement).

### *TCA*

- The analysis only includes countries with an established TCA baseline. 41 such countries have reported consumption, of which 24 have received assistance to completely phase out TCA consumption. The remaining 17 countries are yet to receive assistance. Their aggregate baseline amounts to a consumption of 257.4 ODP tonnes with latest reported consumption of about 10 ODP tonnes (however, it should be taken into account that this consumption is reported by only four countries for the year 2003, it also excludes one country with a latest consumption of about 44 times more than its current baseline consumption);
- The total amount of TCA required to enable compliance with the 70% TCA phase out reduction target in 2010 by the 17 countries that could be funded in 2006 and 2007 is approximately 30 ODP tonnes. Due to the incompleteness of the data reported, funding is established on the basis of baseline consumption (257.4 ODP tonnes) and not on the latest reported data;
- Two countries have produced TCA (Brazil and Romania with a TCA production baseline of 32.4 and 0 ODP tonnes, respectively). Since 2000, the TCA production reported by each country has been zero. On this basis, the model has not taken into account the phase-out of TCA production facilities for these countries.

## *Halon*

- Excluding China's multi-year agreement funding in 2006-2008, there are 11 countries with a total halon baseline of 749.9 ODP tonnes, some of which might need assistance to achieve the 2005 Montreal Protocol limit since the latest reported consumption (2002 or 2003) is 830.8 ODP tonnes. Libya's halon baseline is 633.1 ODP tonnes and its latest reported consumption is 714.5 ODP tonnes. Phase-out projects for these countries can be considered on a case-by-case basis;
- Halon investment projects, halon banking and technical assistance programmes have been funded in 53 countries (at the national or regional levels). Funding for projects for halon production closure has been committed to in the case of two countries (China and India).

## **4.5 Data Anomalies and Limitations**

Consideration by the Replenishment Task Force of the MLF Secretariat's 2005-2010 phase-out model and the 2005-2007 business plans of the Implementing and Bilateral agencies indicated the following:

- *CFCs*: There is slight discrepancy between the amount of CFCs calculated by the Model as being the remaining consumption of non-LVC countries that is eligible for funding, and the amounts reported in the business plans. However, in few cases there are marked differences between them. The Task Force has always used the amounts provided in the model, since this is in line with the relevant decisions of the Executive Committee (e.g. Decision 35/57);
- *Halons*: The model does not provide any exhaustive analysis, however, one business plan includes a very large consumption for a country that has a calculated base line of 3 ODP tonnes and consistently reported zero consumption in recent years;
- *CTC*: Although the Executive Committee has directed the Implementing and Bilateral Agencies to use the Secretariat's model as a "flexible guide" when preparing their business plans, there are disproportionate differences between the amount of CTC consumption that is needed to be phased out to achieve the 2010 compliance target emanating from the fact that the COM model is premised on baseline consumption while the business plans include consumption that relates to new process agent applications or extremely high consumption compared to the baseline. This anomaly is further compounded by uncertainties surmounting the technology to be used to phase-out the process agent consumption (e.g. whether it is conversion or emission abatement), and by inadvertent inclusion of non ODSs when reporting CTC consumption. The Task Force has requested the relevant Implementing Agencies to pursue this matter with the view to clarify the amount of consumption and the nature

of its use. Pending that response from the agencies the Task Force has included provisional estimates for the funding needed for CTC phase-out;

- *TCA*: The COM model used base line date to calculate the amount needed to achieve compliance, while the business plans used latest consumption. The inordinately high consumption of one country compared to its base line consumption was clarified by the concerned Implementing Agency to be a case of wrong reporting;
- *MB*: The COM model indicated 2.6 ODP tonnes as the amount of consumption needed to maintain compliance with the 20% reduction target. However, the business plans include much higher amounts, which have been characterised as maintaining the momentum and accelerating the phase-out. The Task Force has used the amounts in the business plans.

#### **4.6 Calculation of the amount of funding needed for the 2006-2008 Replenishment**

The calculation follows a simple approach, taking into account the following factors:

- The already approved multi-year agreements (consumption and production) are all taken into account, with the financial obligations for the period 2006-2008.
- The non-LVC countries, which do not have CFC phase-out multi-year agreements yet, are mostly assumed to get these in the year 2005 as indicated in the Consolidated Business Plan. Funding has been calculated on the basis of remaining eligible CFC consumption and cost effectiveness of US\$6 per ODP-kg.
- For countries that need assistance to comply with the 2007 and 2010 reduction targets, an allowance for a two-year implementation period of approved projects has been taken into account.
- LVCs with approved RMPs are assumed to receive funding for total CFC phase-out in accordance with the Executive Committee Decision 45/54.
- Funding for approved multi-year phase-out agreements for CTC and TCA has been taken into account, as well as the funding for additional multi-year agreements as indicated in the 2005 Consolidated Business Plan. Funding for small consumers of CTC and TCA has been determined based on the assumption that they will completely phase out in the triennium 2006-2008.
- Funding for approved multi-year phase-out agreements for methyl bromide has been taken into account, as well as the funding for additional multi-year agreements as indicated in the 2005 Consolidated Business Plan.
- Funding of activities that are characterised as non-investment activities pertain to all countries and include institutional strengthening projects,

MDI transitional strategies, UNEP's CAP, country programme preparation, etc.

- Costs of administrative nature that relate to the budget for the MLF Secretariat and the Executive Committee, the core units of the Implementing Agencies and Treasurer fees are determined as agreed by the Executive Committee.
- The constraints imposed by the above mentioned data anomalies.

The results are provided in the chapters 5 and 6.

## **5 The Funding Requirement for the 2006-2008 Replenishment; the Consumption Sector**

### **5.1 Introduction the Consumption Sector**

This sector consists of residual consumption of CFC, Halons, TCA, CTC and MB that is needed to be funded during 2006-2008 in order to meet the reduction targets mandated for 2007, 2010 and 2015.

It should be noted that in the case of MB, there is no mandated reduction under the Montreal Protocol until 2015 (phase-out). However, in this study, all projects indicated in the Implementing Agencies' business plans as well as scenarios referred to in Decision XVI/35 will be addressed for the reduction of the MB consumption.

### **5.2 CFCs**

Due to the fact that most of the Article 5(1) countries that received assistance from the Multilateral Fund opted for RMPs, NPPs, TPMPs, or sectoral phase-out plans, countries are classified accordingly for the purpose of this replenishment study, as follows:

1. **Group A:** countries that have NPP, with agreed funding in annual tranches, as well as countries for which NPP will be submitted in 2005.
2. **Group B:** countries that have no phase-out plans, where the eligible remaining consumption is yet to be addressed or has only been partially addressed.
3. **Group C:** LVC countries
  - LVC countries (63 countries) that have received funds for a RMP or an RMP update, which should be sufficient to comply with the 50% reduction in 2005 and the 85% reduction in 2007;
  - LVC countries that have no RMPs or that are new Parties (11 countries);
  - LVC countries (25 countries) that have TPMPs, have a commitment to phase-out by 2010 (or earlier).

#### **5.2.1 Group A**

Since the adoption by the Executive Committee of the strategic planning for the Multilateral Fund during the compliance period, a surge in numbers of sectoral and NPPs has occurred, and such plans became the preferred modality for requesting funding by Article 5(1) countries. Thus, NPPs or multi-year agreements for the CFC phase-out have increased since 2002 to 99 Plans, which were approved for 43 countries.

Annex 5 lists the funding approved for the countries with NPPs; it also gives the ODP tonnes to be phased out. A number of countries have had agreements that implied a one time only funding for phase-out; these countries are not included in Annex 5, since their funding has no bearing on the 2006-2008 replenishment.

The funding requirement for the ongoing implementation of these plans for the triennium 2006-2008 has been agreed by the Executive Committee and amounts to **US \$51.203 million** excluding US \$4.199 million for agency support costs.

### **5.2.2 Group B**

Group B consists of 9 countries that had no approved plans at the time of preparation of this document. However, most of them are expected to submit NPPs during 2005 as confirmed in the 2005 business plans of the Implementing Agencies (it concerns Algeria, Egypt, DPR Korea, Syria, Tunisia, Yemen and Zimbabwe). Approval of such plans by the Executive Committee may entail funding allocations in the 2006-2008 period. The amount of funding indicated in the business plans for those countries is assumed to be the maximum amount to be approved for them, and is considered to be the required funding in this replenishment report.

Annex 6 lists the funding requirements, which are expected to be approved for these phase-out plans for the years 2005, 2006, 2007 and beyond; it also gives the ODP tonnes to be addressed in the respective years.

The funding requirement for the triennium 2006-2008, for CFCs in these non-LVCs, amounts to **US \$12.002 million**, and US \$0.900 million for agency support costs.

In determining this amount, the funding for institutional strengthening that countries will receive in the 2006-2008 triennium has been taken into account in deriving the amount of ODP tonnes that countries with no planned multi-year agreements have to phase out.

### **5.2.3 Group C**

The total baseline for the LVC countries amounts to 7485.9 ODP tonnes. The total consumption reported for the year 2003 for these countries amounts to 4357.1 ODP tonnes.

Group C consists of 99 LVC countries that may be further categorised as follows:

Group C	Number of countries	Feature of the sub-group	ODP tonnes addressed
Group C. 1	9 + 63 = 72	RMP approved	5836.3
Group C. 2	2	No RMP	241.4
Group C. 3	25	TPMP approved	1408.2

*In group C. 1*, 9 countries have an approved RMP prior to Decision 31/48, i.e., without a commitment to achieve the 2005 and 2007 CFC limits. A further 63 countries have an approved RMP in accordance with Decision 31/48, i.e., with a commitment to achieve the 50 and 85 per cent reduction targets without further assistance from the Multilateral Fund. These 72 countries have a total CFC baseline of 5836.3 ODP tonnes.

*In group C. 2*, 2 countries, which have just become Parties to the Protocol, do not (yet) have an approved RMP project.

*In group C. 3*, 25 countries have an approved TPMP, i.e., the countries will not seek further assistance from the Fund to achieve the total CFC phase-out. Their total baseline consumption is 1408.2 ODP tonnes.

The Executive Committee approved at its 45th Meeting the results reached by the MLF Secretariat in document UNEP/OzL.Pro/Ex.Com 45/46 for calculating the funding requirement for the implementation of total CFC phase-out by 2010 (Decision 45/54). The MLF Secretariat used a graduated funding scale for the 74 LVCs that are eligible for assistance.

Additionally, the Executive Committee decided (Decision 45/54) that US \$30,000 may be considered for approval per country for the preparation of TPMPs, and a similar amount would be considered for funding for the preparation of a transitional strategy for CFC-MDIs in those LVC countries where the need for a strategy has been fully demonstrated and documented.

Based on the above, the funding requirement for the triennium 2006-2008 would amount to:

- US \$21.475 million (57 countries with RMP)
- US \$9.42 million (17 countries with no RMP or early RMP)

The US \$2.2 million project preparation for 74 countries is addressed below, under project preparation in section 7.9.4.

The above yields a total amount of **US \$30.895 million**. Agency support costs are assumed at 9%, which would represent a value of US \$2.78 million.

For comparison, the Task Force has investigated a second way of calculating the remaining funding of the subcategories of LVCs considered above. The remaining consumption in the year 2007 should equal 15% of the aggregate baseline, which amounts to 912 ODP-tonnes of CFCs. One could assume that

all remaining equipment would be converted to HCFC or HFC based blends, and that blends would be selected in such a manner that conversion is always relatively easy. One could further assume that funding would be eligible for incremental operational costs for four years, in addition to project preparation and technical assistance costs (assuming the latter two at US \$50,000). With a difference of about US \$8 per kg between CFC-12 and the average blend, taking into account the total amount in tonnes concerned, one would calculate a funding requirement of US \$29.2 million plus US \$3.7 million for project preparation and technical assistance, which amounts to US \$32.9 million. This is very similar to the amount calculated above, although one should mention that certain LVC countries with an RMP approved before the 31st Meeting may need slightly higher amounts if they do not achieve the 85% reduction by 1/1/2007. The Task Force will not use the “blend-approach” amount but will use the amount derived above following the guidance from the ExCom Decision 45/54.

In the third group, the group of 25 LVC countries with approved TPMPs, the funding requirements approved by the Executive Committee in annual tranches for the triennium 2006-2008 is provided in Annex 5. Funding for 2006-2008 amounts to **US \$1,218 million**; extra agency support costs are US \$114,702.

For the period 2006-2008 some activities are proposed via bilateral activities (see Annex 6), which concern two LVC countries (this is actually also seen as TPMP activity; the funding involved is indicated as US \$0.886 million). However, the Task Force is of the opinion that these activities can be considered as part of the total TPMP activity described above and would not need to be taken into account.

The total funding calculated for LVCs amounts to **US \$32.113 million**, with agency support costs at US \$2.895 million.

## **5.3 Investment Projects in the MB Consumption Sector**

### **5.3.1 Trends in cost-effectiveness**

The trend in cost-effectiveness (CE) of MB projects has been analysed. The projects were grouped according to date of approval. The early period comprised about 30 projects approved in the period November 1998-July 2002; the later period comprised almost 20 projects approved in the period from November 2002 to April 2005. The analysis covered investment projects and other types of MB projects that are due to eliminate a specified quantity of MB (project impact) including multi-year agreements, as reported in decisions of Executive Committee meetings. A few demonstration projects are scheduled to eliminate a specified quantity of MB, but these were not included in the analysis.

Table 5-1 below indicates that the cost-effectiveness of projects was substantially improved in the later period (November 2002-April 2005) compared to projects approved in the first 4 years (November 1998-July 2002). The average per project has been reduced from 22.5 to 17.3 US \$/ODP-kg. The average calculated by dividing total funds by combined project impact of all projects was reduced from 14.0 to 12.1 US \$/ODP-kg. However, the CE of projects approved in the most recent years, from March 2004-April 2005, has increased to 13.0 US\$/ODP-kg (range: 6.5 to 39.4 US\$/ODP-kg).

**Table 5-1 Cost effectiveness analysed by date of project approval based on analysis of approved projects for which details were available (to April 2005)**

<b>Date of project approval</b>	<b>Number of projects analysed</b>	<b>CE range</b>	<b>Average per project (US \$ / ODP-kg)</b>	<b>Total US \$ of all projects divided by total ODP-kg</b>
Early period (Nov 98- Jul 02)	30	6.7 – 89.9	22.5	14.0
Later period (Nov 02- Apr 05)	18	6.5 – 39.4 (a)	17.3	12.1
Total	48	6.5 – 89.9	21.1	13.0

(a) The CE value of one project was 366 \$/ODP-kg. This project was omitted from the analysis because it was a regional project that included MB reductions in 5 countries as well as policy development in other countries. The analysis also excluded demonstration projects that are scheduled to eliminate a specified amount of MB.

The common method of calculating CEs, i.e. dividing total funds by combined impact (ODP) of all projects, tends to under estimate the cost of smaller projects. Table 5-2 therefore provides an analysis of small, medium and large projects, approved in the later period (since November 2002). This indicated average CEs of 19.2, 11.5 and 11.7 US\$/ODP-kg, respectively (Table 5-2 below). However, a medium-sized MB phase-out project approved recently at the 45th Executive Committee meeting, had a CE of 18.6 US\$/ODP-kg, indicating that significant fluctuations continue to occur.

In general, the analysis below uses the average CE value of 12.1 US\$/ODP-kg based on projects approved from November 2004 to April 2005. This may be a conservative figure, because the average CE of projects approved in the most recent year (March 2004 to April 2005) was 13.3 US\$/ODP-kg. The remaining MB projects that are due to be funded in future are primarily in countries that consume small quantities of MB, although there are a few remaining countries where medium-sized and large projects are envisaged.

*Table 5-2 Cost effectiveness of projects approved in the later period (Nov 02 – Apr 05), grouped by size of project*

Size of project (ODP tonnes to be phased out)	Number of projects analysed	CE range	Average per project (US \$ / ODP-kg)	Total US \$ all projects divided by total ODP-kg
Small projects < 50 ODP-t	10	9.3 – 39.4 (a)	24.1	19.2
Medium size projects 50 - 200 ODP-t	4	6.5 – 18.7	12.1	11.5
Large projects > 200 ODP-t	4	8.3 – 13.6 (b)	11.8	11.7 (b)
Total	8	6.5 – 39.4 (a)	18.7	12.1 (a)

a. The CE value of one project was 366.7 US \$/ODP-kg. This project was omitted from the analysis because it was a regional project that included MB reductions in 5 countries as well as policy development activities in other countries. Unexpectedly, the lowest CE value occurred among the medium-sized projects rather than the large project group.

Therefore, in scenarios where the number of small projects is significant, the analysis below took account of the average CEs for small, medium or large projects (range 11.5 to 19.2 US \$/ODP-kg) to illustrate the range of estimates.

### **5.3.2 Scenarios for the MB consumption sector**

The following section examines two scenarios, according to the guidelines provided by Decision XVI/35.

#### ***Scenario 1: MLF COM Model plus projects from the 2005-2007 business plans***

Scenario 1 is calculated on (a) the existing MLF financial commitments due to multi-year agreements; (b) the projects listed in the 2005-2007 business plans; and (c) project funding for two countries that have been allowed to delay the 20% reduction step (Decision XV/12).

##### ***(a) Existing commitments due to multi-year agreements***

In multi-year agreements approved up to 2005 the MLF database indicates project funds of **US \$10.276 million** (plus agency support costs at US \$808,582). This cost is pre-existing commitment and is relevant to all scenarios for the MB sector.

##### ***(b) Projects from the 2005-2007 Business Plans***

Several ExCom Decisions have agreed specific funding levels for later portions of projects, in order to achieve total MB Phase-out. The later portions are contingent on the initial project achieving the agreed MB reduction steps and approval of the second portion period. The second

portions are due to be implemented in the 2006-2008 replenishment period in accordance with Executive Committee. Countries for which this applies are contained in the 2005 Consolidated Business Plan (i.e. for Egypt and Guatemala a one time funding in 2008 at a total of US \$5.524 million, for Honduras a multi-year project, which is supposed to start in 2005).

The COM Model proposes no additional project activity for MB phase-out over the period 2006-2010. The stated reason is that the phase-out of MB will not occur until the year 2015. However, the Implementing Agencies plan a number of MB projects for the period 2005 and beyond which have been taken in to account by the Task Force (see Annex 6). Since they are not directly related to phase-out needs, they can be considered as projects that *maintain momentum and accelerate phase-out*.

For the first three projects (see above), as well as for the additional multi-year projects proposed, the funding in the business plans amounts to **US \$13,446 million** (plus agency support costs at US \$1,176 million).

***(c) Other funding for countries exempted from the 20% reduction***

The MLF COM model makes an exception for two countries that have very small MB consumption and have been temporarily exempted from achieving the 2005 MB reduction step (under Decision XV/12) due to a specific problem in identifying effective alternatives for high-moisture fresh dates. The MLF model therefore indicates that funds for the phase-out of 2.6 ODP tonnes MB might be required in the period 2006-2008. Based on recent average CE values of 11.1 and 18.3, this would amount to US \$28,860 to US \$47,580. Given that the MB consumption in these projects will be very small, it is not realistic to use the CE value of medium-sized projects. It is also feasible that the additional technical work required to test suitable alternatives for high-moisture fresh dates. The Task Force estimates that it would involve funding at a level of **US \$300,000**; agency support costs would be US \$25,000. Depending on the technical complexities of this unusual post-harvest specific use of MB, the amount might be greater.

The total estimated funding for MB projects under this scenario is **US \$24.022 million** with agency support costs at US \$2.010 million.

***Scenario 2: EC proposal on additional MB reduction steps***

Decision XVI/35 requests the RTF report to “include a scenario which indicates costs associated with implementation by Parties operating under paragraph 1 of Article 5 of the adjustment relating to methyl bromide proposed by the European Community” (paragraph 1(a)). Several proposals have been tabled as a result of Decision IX/5 which stated that “the Meeting of the Parties shall decide in 2003 on further specific interim reductions on

methyl bromide for the period beyond 2005 applicable to Parties operating under paragraph 1 of Article 5". The proposed schedule, as tabled at the 16th Meeting of the Parties (in UNEP/OzL.Pro.16/15), is as follows:

<b>Year</b>	<b>Proposed reduction steps</b>
2008	40% reduction on baseline
2010	60% reduction on baseline
2012	70% reduction on baseline

A two-year time lag between funding and implementation is being used in current RTF and Multilateral Fund COM calculations. The proposed reduction steps for 2008 and 2010 are therefore relevant to the funding triennium of 2006-08. This scenario calculates the quantity of MB that would need to be eliminated to move from 20% of the baseline to 60% of the baseline, taking full account of reductions that have already been funded or achieved beyond the 20% step. An analysis was made for each individual country, because the situation varies greatly from one to another. The analysis assumes that countries that are implementing total MB phase-out projects do not need additional assistance.

For countries that were addressed in scenario 1 above, no funding will be required in this scenario. For all other countries that consume MB, the amount of MB has been determined to reduce overall consumption to 40% of the baseline from 2005 methyl bromide remaining consumption or from the latest (2003) reported consumption.

It concerns 711.1 ODP-tonnes for countries with the consumption larger than 50 ODP-tonnes; the larger part of this consumption can be found in two Article 5(1) countries, i.e., 566.3 ODP tonnes. 81.8 ODP-tonnes can be ascribed to countries with a consumption level lower than 50 ODP-tonnes.

Using the CE values given in Table 5-2 (US \$19.2 and 11.6 per ODP-kg, respectively), the funding determined for the two groups of countries is US \$8.249 million and US\$1.571 million, respectively.

The extra funding needed for this scenario therefore amounts to **US \$9.820 million**, with agency support costs amounting to US \$0.760 million (i.e., a total funding of **US \$10.580 million**).

#### **5.4 Investment projects in the Halon consumption sector**

Most countries have a very low halon consumption according to the most recent data reported under Article 7 for 2003; this includes the countries that had a considerably higher consumption in the past. It can be assumed that such countries would be in compliance with the 50% reduction (and in many cases even more) in 2005. For a small number of countries the consumption is not very different from the baseline and they have been addressed in

technical assistance projects (e.g. Iran, Mexico, Syria). Only in the case of Libya the 2003 consumption is larger than the baseline of 633 ODP tonnes, i.e., 714.5 tonnes. According to the UNIDO business plan, this consumption will be addressed in a project during 2005 (at a cost of US \$454,000). UNIDO also presents a halon phase-out project for 2006 for Kuwait at a cost of US \$454,000, to phase out a consumption of 150 ODP tonnes, while Kuwait has consistently reported zero consumption over the past few years, and its compliance baseline amounts to only 3 ODP tonnes. The Task Force has not taken the consumption into consideration and follows the proposal by the Implementing Agency.

However, the Task Force would also like to make a contingency for countries where the halon consumption has not been addressed so far, mainly because of the fact that countries are not yet Parties to the Montreal Protocol. This contingency would be US \$0.5 million. It implies a total funding for the halon consumption sector of **US \$0.954 million**, excluding agency support costs at US \$69,100. Both projects could also have been considered under non-investment activities, but the Task Force has not done so because the first project is referred to as a phase-out project.

## **5.5 Investment Projects in the CTC Consumption Sector**

Given a project implementation timeframe of 2 years, all eligible CTC consumption in Article 5(1) countries should be funded during the 2006-2008 triennium. Some 55 countries have reported consumption during 2002-2003, 29 of which have received funding for total phase-out, the remaining 25, mostly with very low consumption, would receive funding during the 2006-2008 triennium. In addition to China's process agents project (phase II), the agencies' business plans include a few investment projects involving low CTC consumption.

All approved multi-year CTC phase-out plans will receive funding tranches in the 2006-2008 triennium in accordance with agreements with the Parties concerned. In the two CTC multi-year agreements, mainly consumption but also some CTC production was addressed.

### ***1. Approved Multi-year CTC phase-out:***

US \$2.685 million – US \$366,531 (agency support costs)

This funding is required for approved bilateral activities (France, Germany) in 2006-2007 in India (concerning both consumption and production of CTC) and for an approved multi-year project in the DPR Korea for the phase-out of CTC (see Annex 5).

### ***2. Expected Multi-year CTC phase-out plans (for Romania, DPR Korea and DR Congo, as provided in the agencies' business plans):***

US \$2.214 million – US \$175,867 (agency support costs)

This funding is supposed to be approved in 2004 and is for CTC phase-out plans in the DPR Korea and the DR Congo, for the year 2006 only, and for a multi-year project in Romania during 2006-2007 (see Annex 6). Where it concerns the plan for the DPR Korea, this is based on the understanding by the Executive Committee that the Government will not submit any project in the CTC consumption sector except for process agent applications currently ineligible for funding, and that in such a case the amount of CTC eligible for funding under the Multilateral Fund will not exceed 146 ODP tonnes and the funding level will not exceed US\$6.07/kg.

**3. *Approved China Process Agent project:***

US \$24.000 million – US \$1.800 million (agency support costs)

This multi-year project has been approved at a total value of US \$65 million (for the period 2005-2009 the total cost is calculated at US \$29.025 million). The net funding during the triennium 2006-2008 is calculated at US \$24.0 million, with agency support costs at US \$1.8 million (see annex 5 for funding including agency support costs).

**4. *Expected China Process Agent project (phase II):***

US \$22.275 million – US \$1.671 million (agency support costs)

This multi-year project is part of the 2005-2007 Consolidated Business Plan and is part of the work programme of the World Bank. It includes 5,500 ODP of CTC consumption in Process Agents applications, with funding indicated in 2005 and 2006.

According to World Bank information, some of the applications in this project can be dealt with through simple conversions, but two applications accounting for 50% of the consumption apparently need to be dealt with through CTC emission reduction and control measures. Final negotiations on technical implications were still ongoing at the time of completion of this report.

Pending their outcome, emission reduction would mean less consumption of CTC used in the relevant applications. Since the World Bank is earmarking 4500 ODP tonnes to be funded in 2006, 2000 ODP tonnes of which could be considered as relating to emissions reduction applications, which leaves 2500 ODP tonnes for conversion. Using a cost effectiveness of US \$4.11 per ODP-kg (this being the average cost effectiveness of all approved process agents conversion projects, including the one for China given under (3) above), the funding estimated for the phase-out of 2500 ODP tonnes amounts to US \$10.275 million, plus US \$770,625 for agency support costs.

However, emission reduction measures would also contribute to phase-out, although there is so far no experience where it concerns cost effectiveness.

The Executive Committee, following its discussion on a process agent paper at its 45th meeting decided, *inter alia*, to “request the World Bank to consult with UNIDO to ascertain whether the technology proposed for use in the CTC phase-out plan for the D.P.R. Korea is applicable to the similar use in China for which emissions controls are currently proposed” (decision 45/61). On this basis, a technology might already be available for the major process agent application for which emission controls are proposed in China. There is, therefore, a possibility that emission controls may not need to be considered by the Executive Committee in this instance.

The Task Force assumes that the cost effectiveness of this part of the project will not exceed US \$6 per ODP kg. It therefore proposes a funding contingency of US \$12 million for funding emission control measures for the phase II of the China Process Agent Project. This would bring the total funding for this project to US \$22.275, excluding the agency support costs at US \$1.671 million.

The total funding requirement for the triennium 2006-2008 for multi-year CTC projects would therefore amount to **US \$51.174 million**, with agency support costs at US \$4.013 million

The business plans mention a number of small CTC investment projects for the years 2006 and 2007. The COM model also mentions amounts that are small for a number of countries, which, in the Task Force’s opinion, all have to be addressed in the triennium 2006-2008. The Task Force assumes that it will concern 173 ODP tonnes in the triennium 2006-2008, at a cost effectiveness of US \$10 per ODP-kg. It would amount to **US \$1.73 million**, and agency support costs at US \$156,000.

The CTC consumption in one country has risen by several thousands of tonnes as of the year 2002; exactly the same consumption value as for 2002 was reported for 2003. This amount represents about 30 times the baseline consumption of the country. The Task Force was informed by the Implementing Agency concerned that verification of the consumption in this country is being pursued.

Given the uncertainties associated with the CTC consumption relating to emissions from process agent applications in one country and the amount and nature of consumption in another country, the Task Force is unable to estimate a funding amount pending further clarification by the Implementing Agencies concerned.

For the time being, the Task Force is proposing to apply a US\$ 6 million contingency on the amounts estimated above to address the potential needs of countries for which data verification is not completed, and where possible

consumption reduction may also imply the introduction of measures to reduce emissions. Once more data will be available, the Task Force could look at this matter again via a Supplement to this Replenishment Report, if Parties would request the Task Force to do so.

The total funding requirement for the CTC consumption sector would therefore be **US \$52.904 million**, at agency support costs of US \$4.169 million. The contingency amounts to **US \$6.0 million** with agency support costs of US \$0.450 million.

## **5.6 Investment Projects in the TCA Consumption Sector**

Where it concerns the application of TCA as a solvent, reasonable quality data exist, which have so far been reported to UNEP.

There is one approved multi-year project which includes funding tranches during the 2006-2008 triennium (China's solvent sector strategy). The funding tranches for this project for 2006-2008 are included in the total funding determined for the Group A non-LVC countries. .

One Implementing Agency's business plan mentions TCA activities in one country with a total ODP value of 358 tonnes for the triennium 2006-2008. Subsequently the Task Force investigated whether it would concern real TCA consumption; the agency confirmed that the consumption has to be attributed to non-ODSs and this consumption is therefore not taken into consideration.

There are a number of small TCA users (however, with baseline consumption larger than 2.0 ODP tonnes, therefore decision 45/14 would not apply), which have so far not been addressed in approved plans. Although the TCA control schedule does not require a phase-out by the year 2010 (a 70% reduction only) the Task Force proposes to phase-out all small uses in the next triennium. According to the COM model, the baseline consumption (including Iran) was 257.4 ODP tonnes, the most recent amount reported by only 4 countries was 9.5 ODP tonnes (excluding Iran). The amount of TCA to be addressed during the triennium 2006-2008 is difficult to determine and is estimated at 17.2 ODP tonnes if the baseline for Iran is included (consumption level larger than 2.0 ODP tonnes). With a cost effectiveness of US \$24/ODP-kg for small uses, the funding requirement would be **US \$0.413 million**, with agency support costs at US \$37,150.

## **5.7 Investment Projects in the Bromochloromethane Consumption Sector**

In one agency's Business Plan, there is an activity included to phase out 20 ODP-tonnes of bromochloromethane in the triennium 2006-2008 at a value of **US \$754,000** (with an agency fee of US \$56,550).

Project preparation costs for this project at US \$20,000 has been addressed in chapter 7.

Although this process agent use has not yet been approved by the Parties, the Task Force proposes to add this funding to the total funding requirement.

## **5.8 Consumption of CFC MDIs and pharmaceutical aerosols not covered by NPPs in non-LVCs.**

In this group there are a number of countries with MDI and pharmaceutical aerosol manufacturing, which has not been taken into account in the NPPs or in the combination of sectoral plans. In its Business Plan, UNIDO mentions a phase-out of 369 ODP tonnes in China during 2005-2008. The funding requirement for the triennium 2006-2008 would be US \$11,435,775, which implies a cost effectiveness of US \$ 31/ODS-kg, with agency support costs at US \$927,225.

When studying the figures in the COM model, there would then be remaining in China 539.3 ODP tonnes, which is assumed to be pharmaceutical aerosols, where the phase-out cost effectiveness is US \$6/ODP kg, which implies a cost of US \$3,235,800, with agency support costs at US \$242,685.

It is reported that in Argentina there are 160 ODP tonnes involved in the medical sector, in Indonesia it applies to 30.1 ODP tonnes. According to information in the Consolidated Business Plan, there is also 130 tonnes CFC consumption in the medical sector in Egypt.

Further information from industry sources indicates that this consumption amounts to 30 ODP-tonnes related to MDIs in Egypt, 50 ODP tonnes in Argentina and 30.1 ODP tonnes in Indonesia, which yields a total of 110.1 ODP tonnes of CFCs in the MDI sector, which have to be addressed. The Task Force proposes to take all this remaining (MDI-related) consumption in these three countries into account in the next triennium at a cost effectiveness of US \$35/ODP-kg (this value is based upon historic experience and values used the Consolidated Business Plan for 2005).

This would imply a total funding requirement for MDIs of US \$3.854 million. The agency support costs would be US \$0.289 million.

Where it concerns pharmaceutical aerosols, there would be a not addressed consumption in Argentina and Egypt of 210 ODP tonnes. For a cost effectiveness of US \$6 per ODP-kg, it would amount to funding at the level of US\$1.260 million with agency support costs at US \$95,000.

The total costs in this sub-sector (by adding the amounts for the MDI and the pharmaceutical aerosol sector) amount to **US \$19.786 million**, with agency support costs at US \$1.554 million.

## 5.9 Chiller Projects

For the business plan 2005, 13 chiller projects were planned, either global or for specific countries. Virtually none of them (except the plan for Macedonia) were assumed to phase out ODS, and were classified as pure demonstration projects. However, the Executive Committee, at its 45th Meeting (Decision 45/4), decided to request the MLF Secretariat to prepare a study, with input from the implementing agencies, on criteria and modalities for chiller demonstration projects, including how different regional funds for the chiller sector might come into operation, taking into account proposals submitted and comments made during the 45th Meeting, for consideration at the 46th Meeting, examining issues such as fairness of funding and any limits on the number or cost of projects to be funded, etc.

Furthermore, the Executive Committee decided to remove the chiller projects and activities from the 2005-2007 business plans and to invite demonstration projects and project preparation for chiller projects to be presented at the 47th meeting of the Executive Committee within the funding window of US \$15.2 million for a global chiller programme, based on the criteria to be agreed at the 46th meeting of the Executive Committee.

This may imply that not the entire amount of US \$15.2 million will be funded in 2005. The Task Force has no indications whether one will look at certain ways of innovative funding in 2006 (such as revolving funds). The Task Force assumes that there are no potential compliance issues related with chillers, certainly not in the next triennium, and therefore assumes that there will be no further funding requests for this sector in the next triennium.

## 5.10 Total Funding Requirement for the ODS Consumption Sector

From the amounts given in the paragraphs above for the triennium 2006-2008 for the multi-year sectoral phase-out plans, the NPPs, for the TPMPs for LVCs, the plans to assist LVCs with RMPs after 1/1/2007, and with funding for the CTC and TCA sectors, the total funding requirement for the triennium for the consumption sector can be determined. This is summarised in Table 5-3 below where the amounts for existing multi-year agreements and for new projects and new multi-year agreements have been separated.

The total estimated funding requirement for all controlled substances for the triennium 2006-2008 amounts to **US \$200.097 million**. The agency support costs to be added to the total amount are US \$16.339 million.

The MB scenario 2, with gradual MB reduction steps in 2008/2010/2012, as mentioned in the Terms of Reference, would have the implication that an amount of US \$10.580 million (including agency support costs) would have to be added to the total amount given above.

**Table 5-3 Total funding requirement for all ODS consumption sectors in the 2006-2008 replenishment period (in US \$ million) in order to meet the different control schedules.**

<b>Countries/ Substance</b>	<b>Existing agreements</b>	<b>New projects and agreements</b>	<b>Agency support</b>	<b>Total</b>
Non-LVCs With agreements	51.203		4.199	55.402
Non-LVCs with no agreements		12.002	0.900	12.902
LVCs – funding after 1/1/2007 via TPMPs (Dec. 45/54)		30.895	2.780	33.675
LVCs- TPMPs	1.218		0.115	1.333
MDI / pharmaceutical aerosols projects in all non-LVCs		19.786	1.554	21.340
MB, existing agreements	10.276		0.809	11.085
MB, other, new		13.746	1.201	14.947
Halon		0.954	0.069	1.023
CTC- existing	26.685		2.167	28.852
CTC- new projects/ agreements		26.219	2.003	28.222
CTC contingency		6.000	0.450	6.450
TCA		0.413	0.038	0.451
BCM		0.700	0.054	0.754
<b>Total</b>	<b>89.382</b>	<b>110.715</b>	<b>16.339</b>	<b>216.436</b>

## **5.10 New Activities in the 2005 Business Plans**

### **5.10.1 HCFCs**

UNDP has included HCFC survey projects in its 2005 business plan /UNDP05/. UNDP believes that its surveys would enable governments to consider the feasibility of starting the HCFC conversion sooner rather than later, at least for those enterprises ready to do so (furthermore, UNDP included eight multi-year HCFC projects and four HCFC investment projects in the plans for after 2005, amounting to US \$16.5 million). In the 45th

Executive Committee meeting, a discussion took place regarding HCFC investment projects; agreement could not be reached to include them in the business plan. The Executive Committee decided (Decision 45/6) to maintain the HCFC surveys, on the understanding that their goal was to enable the Executive Committee to establish an eligible national aggregate level of HCFC consumption in the future against which proposals would be funded. However, it is not clear when decisions regarding the funding of HCFC investment proposals could possibly be taken.

#### ***5.10.2 Waste Management and Destruction***

UNDP included two ODS destruction projects in its business plan for after 2005 amounting to US \$ 7.5 million (being of the view that the time has come to seriously consider the possibility of ODS destruction, possibly together with chemical waste management of other chemicals). The Executive Committee, at its 45th Meeting, decided to defer consideration of ODS destruction projects until the 46th Meeting. Since it is also outside the compliance issue, the Task Force has therefore decided to not further consider these activities.

## **6 The Funding Requirement for the 2006-2008 Replenishment; the Production Sector**

### **6.1 Introduction to the Production Sector**

Similar to the consumption sector, this Replenishment Study considers the funding requirement for all ODS production sectors, With the exception of MB production in one Article 5 country, and multifarious ODS production in another, all ODS production in Article 5 countries have been agreed to be phased out over a period of time with annual funding tranches to be disbursed by the Fund in specific years. The approved tranches, as well as those proposed for the remaining unfunded production phase-out will constitute the funding needs for the production sector. The following paragraphs provide amounts of funding on a substance by substance basis.

### **6.2 Investment Projects in the Halon Production Sector**

The Executive Committee Decision 23/11, which refers to the halon sector phase-out strategy in China, determines the funding requirement for the strategy on an annual basis. For the period 2006-2008, **US \$0.8 million** is required, with an agency fee in this case of US \$ 60,000.

### **6.3 Investment Projects in the CFC Production Sector**

CFC production phase-out agreements have been concluded for virtually all countries; for Romania an agreement is being prepared. The funding for phase-out in the DPR of Korea has already been disbursed. The funding for an accelerated production phase-out for CFC (halon, and CTC) in China has all been agreed in the year 2004 (and a second and last allocation will be paid in 2005).

In the triennium 2006-2008, funding tranches for the CFC production phase-out have been agreed for Argentina, China, India, Mexico and Venezuela, and amount to US \$82.450 million, with agency support cost of US \$ 6,298,750.

In the case of Romania, funding for closure of CFC (and CTC and MB) production plants is expected to be approved by the Executive Committee in 2005. The approval would be for two funding tranches in 2005-2006, The latter amounts to US \$895,400, with an agency support cost of US \$72,600, according to UNIDO's 2005 Business Plan .

The total funding requirement will therefore be **US \$83.345 million**, with agency support costs of US \$6,371,350.

### **6.4 Investment Projects in the CTC Production Sector**

Negotiations have resulted in the funding of the closure of those facilities that produce CTC as process agents and as cleaning agents in China and India.

There will be funding tranches through the year 2009. Funding for the projects that consider both production and consumption (with no breakdown of costs) have been considered in the consumption sector, chapter 5.

For the triennium 2006-2008 it concerns an amount of **US \$17.188 million**, for the phase-out of production in India, with an agency fee of US \$1.290 million applies.

#### **6.5 Investment Projects in the TCA Production Sector**

Negotiations have resulted in the funding of the closure of those facilities that produce TCA in China. There will be one more funding tranche in the year 2008. It concerns **US \$700,000** with an agency fee of US \$52,500.

#### **6.6 Investment Projects in the MB Production Sector**

Only two Article 5(1) countries produce MB for non-QPS purposes. One reported production of 17.2 ODP tonnes in 2003, while the other reported 558.4 ODP tonnes. The latter country has reduced its production very substantially in recent years. If MB production is maintained around current levels, total MB production is expected to be about 570-580 ODP tonnes in the year 2005 (excluding the use for QPS and feedstock).

The Business Plan of one Implementing Agency mentions that a production phase-out plan has been developed which phases out 777 ODP tonnes of MB production (it mentioned US \$1 million for each of the three years in the next triennium, cost effectiveness US \$9 per ODP kg.). It can reasonably be assumed that this plan takes into account the foreign ownership of the production facilities. The Task Force has used the above approach, since it would be the first MB production phase-out project to be approved. It would imply a net funding requirement of **US \$3.00 million**, plus an agency fee of US \$225,000.

#### **6.7 Funding for the Production Sector**

Virtually all funding for the production sector comes from existing multi-year agreements (US \$102.033 million, with agency support costs at US \$7.775 million). Only US \$3.0 million, with agency support costs at US \$225,000 is for a new (MB) closure project.

## **7 The Funding Requirement for the 2006-2008 Replenishment; Supporting Activities – Non-investment Projects**

This chapter presents the funding requirements for all activities other than investment projects in the ODS consumption and production sectors, i.e., non-investment projects. For the purposes of this report, the components of these non-investment activities are classified as follows:

- (1) UNEP's Compliance Assistance Programme (CAP);
- (2) awareness raising programmes;
- (3) institutional strengthening projects;
- (4) halon banking;
- (5) methyl bromide related activities;
- (6) MDI transition strategies; and
- (7) other technical assistance projects.

Nominal reductions in ODS consumption through the use of non-investment activities are assumed, according to ExCom Decision 35/37, which allocated a threshold of 1 ODP-kg for each US \$12.1 approved for non-investment projects.

### **7.1 The CAP; Personnel Costs, Clearing-house and Information Exchange Activities (UNEP)**

As an Implementing Agency of the Multilateral Fund, UNEP implements clearing-house and information exchange activities such as global information exchange, and the regional networking of National Ozone Officers. At the 35th meeting of the Executive Committee a new approach for a large portion of UNEP's activities was discussed. It was decided that UNEP would bring its information dissemination, personnel, subcontract, training, equipment and premises components together in a "Compliance Assistance Programme", the so-called CAP. In principle all personnel in Paris and the regions, i.e. the Regional Network Co-ordinators and their associated staff, fall under the CAP. UNEP promoted this program by mentioning that country assistance can be given much faster in the period of compliance with the Montreal Protocol reduction steps. UNEP's CAP has been functioning since the beginning of 2003.

For the year 2006 costs are budgeted at US \$7,894,092, for 2007 at US \$8,209,856 and for 2008 at US \$8,538,250 which amounts to a total of **US \$24,642,198**. Agency support costs for the CAP are at a level of about 8%, i.e. US \$1,971,376.

### **7.2 Awareness Raising Programmes**

The Task Force assumes that US \$ 200,000 is made available to UNEP per year for awareness raising programmes. This amounts to a total of **US \$0.60**

**million** for the triennium 2006-2008. To these programmes an agency support cost of 13% applies, i.e. US \$78,000.

### 7.3 Institutional Strengthening (IS)

Consultations with the MLF Secretariat resulted in a list with amounts for Institutional Strengthening for all countries. The amounts per country are disbursed every two years, i.e. the amount for IS for 2005 is equal to the amount for 2007, and the amount for 2006 is equal to the amount for 2008.

The amount for the year 2006 equals US \$7,125,686 according to the Business Plans of the Implementing Agencies and the COM model. From the information of the MLF Secretariat one can derive that Institutional Strengthening projects will cost US \$8,486,697 in the year 2007. The amount for the year 2008 is equal to the amount for 2006. The Task Force proposes to include a proviso for additional funding for new Parties at a level of US \$0.400 million.

The total amount for Institutional Strengthening projects during the triennium 2006-2008 will therefore be **US \$22.862 million**. Agency support costs for these projects amount to about 4% of the project value (the average of the UNEP support costs (0%), the support costs of the other agencies and the bilaterals for the institutional strengthening projects, as taken from information for the studied for the years 2003 and 2004) i.e., US \$0.9 million.

### 7.5 Halon Banking Analysis

Funds approved for halon banking depended on the amount of halon stored in existing systems and extinguishers. For determining the total funds needed for halon banking activities in the triennium 2006-2008, one has to take into account all those countries that have not (yet) received funds, and apply the amounts US \$500,000, US \$250,000 and US \$30,000 for high, medium and low halon-bank capacities. In the triennium 2003-2005 the total funding requests approved for halon banking totalled about US \$1.5 million. The Task Force assumes a similar amount to be considered for the triennium 2006-2008, i.e., **US \$1.5 million**. Agency support costs would be US \$120,000. This is not related to the funding calculated under halon consumption in section 5.4.

### 7.6 Methyl Bromide: Non-Investment Projects

The Task Force cannot exclude that certain non-investment activities will be needed in the triennium 2006-2008 (workshops, training, technical assistance, etc.). The Task Force assumes that, in the triennium 2006-2008, an amount of **US \$1.00 million** would be needed, mainly in LVC countries. An agency support cost of 9% would apply to these activities, i.e., US \$90,000.

## 7.7 MDI Transition Strategies

There are concerns about the cost and /or availability of healthcare in Article 5(1) and CEIT countries. Notably, inhaled therapies are usually more expensive than commonly available oral medications that are less effective and maybe more hazardous. Funding should be limited to the incremental costs of CFC MDI transition.

Branded HFC based MDIs from multinationals are of comparable price to the CFC MDIs they replace, but are more expensive than locally manufactured CFC MDIs. For the purposes of considering funding, Article 5(1) countries can be divided into two categories, those with local manufacture of CFC MDIs, and those without:

The large majority of Article 5(1) countries have no local manufacture and rely entirely on the import of CFC MDIs. Transition in those countries may be less interventional according to a common template strategy and based on local availability of CFC-free alternatives.

Experience in developed countries has been that education has largely been provided by MDI manufacturers, supplemented by information from health authorities and patient support groups. Support for educational efforts in developing countries may be needed to facilitate transition, dependent on local circumstances. The development of transition policies could be facilitated by a series of regional workshops (costs involved would be six times US \$80,000 for six workshops). Additionally, 20 MDI transitional strategies may be proposed during the 2006-2008 timeframe at a cost of US\$30,000 each, as per ExCom Decision 45/54, totalling US \$600,000.

The total funding requirement for MDI transition strategies and workshops in Article 5(1) countries would therefore be **US\$1,080,000** with an agency support costs of 9%, i.e. US \$97,200.

## 7.8 Technical Assistance Activities of the Implementing Agencies

In their business plans, the Implementing Agencies mention funds at a level of US \$1.2 million per year for the triennium 2006-2008 for general technical assistance programs (not directly related to LVC countries). The Task Force supports these programs, which would imply a funding component of US \$3.6 million for the triennium (with an agency fee of US \$324,000).

Within the framework of Decision 45/54, it should also be considered to reserve funding for approvals of amounts of US \$30,000 in technical assistance for the complete phase-out of halons, CTC and or TCA for those LVC countries with established baselines and/or recent consumption of any of these substances.

The Task Force has determined the amount of US \$0.180 million for technical assistance with CTC (6 countries considered with a baseline/consumption level lower than 2.0 ODP tonnes, as per decision 45/14) and an amount of US \$0.060 million for technical assistance with TCA (2 countries with a baseline/consumption level lower than 2.0 ODP tonnes, as per decision 45/14). To the above amounts, agency support costs at the level of US \$21,600 apply.

The total amount of technical assistance is therefore **US \$3.84 million** for the triennium (with agency support costs of US \$345,600).

## **7.9 Other Costs Related to Non-investment Activities**

### ***7.9.1 Core Unit Funding for the Implementing Agencies***

The concept of Core Unit funding has been approved by the Executive Committee at its 38th Meeting (Decision 38/68), at US \$1.5 million per agency (except UNEP) per year. The Task Force therefore estimates an amount of **US \$13.5 million** for Core Unit funding for the triennium 2006-2008, notwithstanding UNDP's request to raise its core unit funding to US\$1.85 million a year, which has not been approved by the Executive Committee.

### ***7.9.2 Operating Costs of the Executive Committee and the MLF Secretariat***

The funding required for the operating costs of the MLF Secretariat and the Executive Committee was determined through consultations with the MLF Secretariat regarding past operating budgets and the anticipated future workload. In principle, no major change is expected to the level of the operating budget except inflation. In total, a funding requirement for the operating costs of the Executive Committee and the MLF Secretariat for the 2006-2008 replenishment period is estimated to be **US \$12.825 million**.

### ***7.9.3 Costs of the Treasurer***

Costs of the Treasurer are budgeted US \$500,000 per year. This implies a funding requirement of **US \$1.5 million** for the triennium 2006-2008.

### ***7.9.4 Project Preparation Costs***

The Implementing Agencies budget their project preparation costs as part of the investment project funding; these costs should not be considered as non-investment activities. The percentage that applies is in the order of 3% of the project value, but this can vary between roughly 2 and 4% dependent on the size and the type of the project. It is difficult to estimate what will happen after 2005/2006. Whereas in the past the project preparation has been in the order of US \$3 million, this amount has sharply decreased. Current estimates

are project preparation costs for 2006 at US \$413,370. No project preparation costs have been mentioned for 2007 and 2008 and it can be expected that this component will further decrease. Dependent on new MB projects during the period 2006-2008 and possible projects for other activities, the Task Force best estimates are that project preparation cost for the triennium 2006-2008 should be estimated at US \$800,000.

However, the preparation of TPMPs for those LVC countries that have (or have no) RMPs, as proposed in section 5.2.4, under the group C - LVC countries, will ask for US \$2.2 million project preparation funds.

For one project, related to the phase-out of BCM in one country, project preparation costs at US \$20,000 should be taken into account.

The total amount for project preparation therefore equals **US \$3.02 million.**



## 8 Total Funding Requirement

The estimates for the individual expenditure categories discussed in previous chapters are combined into the total estimated funding requirement for the 2006-2008 replenishment.

These estimates are based on the assumptions of a zero time discount rate and a zero inflation rate; therefore all monetary estimates can be regarded as being presented in US dollars at 2005 prices.

*Table 8-1 Summary of all elements that determine the 2006-2008 funding requirement*

Type of projects	Investment (US \$ million)	Agency support cost (US \$ million)	Subtotal (US \$ million)
<b>a. Investment projects consumption sector</b>			
• Multi-year CFC, existing	51.203	4.199	<b>55.402</b>
• Non-LVCs with no plans (yet)	12.002	0.900	<b>12.902</b>
• LVC - TPMPs	1.218	0.115	<b>1.333</b>
• LVCs funding after 2007 (TPMP conversion) (Dec. 45/54)	30.895	2.780	<b>33.675</b>
• MDI and pharmaceutical aerosols in non-LVCs	19.786	1.554	<b>21.340</b>
• MB (existing)	10.276	0.809	<b>11.085</b>
• MB (new)	13.746	1.201	<b>14.947</b>
• Halon	0.954	0.069	<b>1.023</b>
• CTC phase-out, existing	26.685	2.167	<b>28.852</b>
• CTC, new	26.219	2.003	<b>28.222</b>
• CTC contingency	6.000	0.450	<b>6.450</b>
• TCA phase-out	0.413	0.038	<b>0.451</b>
• BCM phase-out	0.700	0.054	<b>0.754</b>
<b>Subtotal</b>	<b>200.097</b>	<b>16.339</b>	<b>216.436</b>
<b>b. Investment projects Production sector</b>			
• Closure CFC production plants	83.345	6.371	<b>89.716</b>
• Closure Halon production plants (China)	0.800	0.060	<b>0.860</b>
• Closure CTC production plants	17.188	1.290	<b>18.478</b>
• Closure TCA production plants	0.700	0.0525	<b>0.7525</b>
• Closure MB production plants	3.00	0.225	<b>3.225</b>
<b>Subtotal</b>	<b>105.033</b>	<b>7.998</b>	<b>113.031</b>

<b>Type of projects</b>	<b>Investment (US \$ million)</b>	<b>Agency support cost (US \$ million)</b>	<b>Subtotal (US \$ million)</b>
<b>c. Non-investment projects, supporting activities</b>			
• CAP (Personnel, Clearinghouse and Information Exchange)	24.642	1.971	<b>26.614</b>
• Awareness raising	0.600	0.078	<b>0.678</b>
• Institutional Strengthening (IS)	22.862	0.900	<b>23.762</b>
• Halon banking	1.500	0.120	<b>1.620</b>
• MB non-investment act.	1.000	0.090	<b>1.090</b>
• MDI transition strategies	1.080	0.097	<b>1.177</b>
• Technical Assistance	3.840	0.346	<b>4.186</b>
<b>Subtotal</b>	55.524	3.602	<b>59.127</b>
<b>d. Other funding requirements</b>			
□ Multilateral Fund Executive Committee and Services of the MLF Secretariat	12.825		<b>12.825</b>
□ Treasurer's Fees	1.500		<b>1.500</b>
□ Agencies Core Unit Funding	13.500		<b>13.500</b>
<b>e. Other funding requirements</b>			
▪ Project Preparation costs	3.020		<b>3.020</b>
<b>Totals</b>	391.499	27.939	<b>419.438</b>
<b><i>Total Funding Requirement for the 2006-2008 Replenishment of the Multilateral Fund</i></b>			

The scenario for MB, with gradual MB reduction steps in 2008/2010/2012, as mentioned in the Terms of Reference, would have the implication that an amount of **US \$10.580 million** (including agency support costs) would have to be added to the total amount given above.

## **9 Concluding Remarks**

### **9.1 Funding Estimates**

The TEAP Replenishment Task Force prepared this report on the funding requirement for the 2006-2008 replenishment in accordance with Decision XVI/35 of the Sixteenth Meeting of the Parties. It provides for the funding required to enable the Article 5(1) Parties to comply with control measures for all Annex A, B and E substances. The total funding requirement was determined by the sum of the estimates for the following seven cost elements: (1) investment project approvals in the consumption sector, including the development of TPMP plans for the LVC countries; (2) investment project approvals in the production sector; (3) supporting activities, i.e., non-investment projects for the phase-out process; (4) the administrative costs and core unit costs of the Implementing Agencies; (5) project preparation costs; (6) core funding for the Implementing Agencies; and (7) the operating costs of the MLF Secretariat and Executive Committee and the costs for the Treasurer. The analytical methods used to estimate the respective cost components for investment projects were different from those used in earlier studies and were based on the information provided in the COM model /COM04/. The study had to take into account a large number of cost elements for activities in countries that were already agreed upon by the Executive Committee in multi-year agreements for phase-out or for non-investment activities.

The study is based on all relevant decisions of the Executive Committee and the Meeting of the Parties, and on consultations with the MLF Secretariat, the Regional Network Co-ordinators, the Ozone Secretariat, the Implementing Agencies, and members of the 2005 Executive Committee.

### **9.2 Present Trends**

In the present study for the 2006-2008 replenishment, not only multi-year agreements and investment projects for CFC substances are important, but particularly the agreements for CTC. Multi-year funding agreed for production closure also remains an important component of the total funding requirement.

However, the strategy of the Multilateral Fund has changed from a project focus to country specific and country driven approaches. Furthermore, the Multilateral Fund has entered a phase in which the compliance enabling function has become of utmost importance; this was already the case after the freeze year, but it has become more important as of 2005, where the reduction in consumption of many chemicals has become the major issue. This is demonstrated by the required 85% reduction in the CTC consumption and the 50% reduction in the consumption of CFCs, halons and TCA by January 2005, with further reductions ahead, by January 2007 and January 2010

(phase-out of most ODS in Article 5(1) countries). It should be noted that after 2005, about 3500 ODP-tonnes remain to be funded for complete phase-out for substances with a 2010 phase-out date, while over 200,000 tonnes of ODSs still have to be phased out through the ongoing implementation of improved projects and plans.

Ongoing Multilateral Fund commitments will phase out about 95,000 ODP tonnes in production and consumption in the triennium 2006-2008. The proposals by the Task Force for the triennium 2006-2008 relate to an additional 10,300 ODP tonnes. This is larger than the figure mentioned above, mainly due to extra activities in the CTC sector not envisaged in the COM model by the MLF Secretariat and MB activities in certain countries.

### **9.3 Agency Support Costs**

With the increasing number of multi-year projects, both in LVCs and in non-LVCs, agencies are concerned that they cannot assist all countries in an appropriate manner. The introduction of the Core Unit funding concept has proven to be very useful, however, the UNDP business plan indicates different, new concepts for more support. This is an issue the Executive Committee may want to further consider. In the estimation of the funding requirement, the Task Force has taken the estimates for the Core Unit funding as henceforth approved by the Executive Committee.

As for the 2003-2005 replenishment period, the non-investment activity component remains very important. One only needs to mention the funding required for Institutional Strengthening Projects and for the Compliance Assistance Programme. However, a number of activities do not have the same importance as in previous studies, because they have either not been very successful, or they have become part of a multi-year agreement where it is the responsibility of the country to implement them, since it has committed itself to phase-out.

### **9.4 New Activities under the Multilateral Fund**

The Replenishment Task Force would like to draw attention to the recommendations contained in the recently completed IPCC/ TEAP study (which will be presented at the 25th OEWG) regarding the reduction of emissions from reduced consumption and production of HCFC-22 and from destruction of ODSs included in banks. Where it concerns destruction of chemicals, the Task Force would like to note that this would not only apply to the Montreal Protocol, but also to possible decisions under the Stockholm Convention on POPs.

In this context, the Task Force observes that activities are proposed in business plans related to HCFC investment proposals (although removed for funding in the near future by an Executive Committee Decision) and to the

establishment of destruction facilities in Article 5(1) countries (deferred for a decision by the Executive Committee to its 46th meeting in July 2005). As taken from the IPCC / TEAP study, it should be mentioned that these activities will contribute to a reduction of ozone layer depletion, and to a reduction in radiative forcing, i.e., global warming. However, within the Terms of Reference as given in Decision XVI/35, the Task Force did not consider these activities as they do not address compliance, and control schedules regulated by the Montreal Protocol do not address these. However, it may well be the case that collection and destruction may be highly effective compared to other Multilateral Fund investment projects in relation to emission reductions.

If Parties wish to consider these issues at the 25th OEWG or thereafter, including at the 46th Executive Committee meeting, and would consider to request the Task Force to deal with them, the Task Force will address all relevant aspects accordingly in a Supplement to this Replenishment Report.

## 9.5 The Funding Requirement for the 2006-2008 Replenishment

<b>Funding Requirement Elements for the Replenishment:</b>	<b>US \$Million</b>
CFC Consumption Sector Projects non-LVCs	63.205
CFC Consumption LVC Activities – TPMPs, others	32.113
CFC MDI and pharmaceutical aerosols	19.786
MB Consumption Sector Projects	24.022
Halon Consumption Sector Projects	0.954
CTC Consumption Sector Projects	58.904
TCA Consumption Sector Projects	0.413
BCM Consumption Sector Projects	0.700
Investments: Production Sector	
1- CFC	83.345
2- Halon	0.800
3- CTC	17.188
4- TCA	0.700
5- MB	3.000
Non-investment Activities; Supporting Activities	55.524
Administrative Costs of Implementing Agencies	27.939
Project Preparation Cost	3.020
MLF Secretariat/ ExCom Operation/ Treasurer's fees	14.325
Core Unit Funding	13.500
<b>Total</b>	<b>419.44</b>

The 2006-2008 Replenishment represents the Task Force's best estimate of the funding requirement for the 2006-2008 replenishment of the Multilateral Fund. The uncertainty in the estimations is believed to be considerably smaller than in 2002. This is due to the fact that many multi-year projects and virtually all ODS production closure projects have been agreed upon,

where it concerns the disbursement of funding and the amount of ODS to be phased out. Indications for future multi-year projects are already relatively precisely described in the business plans. The 45th Executive Committee meeting has taken decisions that influence the planning of the conversion of RMP to TPMP projects in Decision 45/54 and they have been considered in this report following the decision.

The funding requirement for the 2006-2008 replenishment to enable the Article 5(1) Parties to maintain compliance with the control schedules under the Montreal Protocol is estimated at **US \$419.4 million**. A sub-division is given in the table above.

The scenario with gradual MB reduction steps in 2008/2010/2012, as mentioned in the Terms of Reference, would have the implication that an amount of **US \$10.850 million** (including agency support costs) would have to be added to the total amount given above.

In the total estimate of the funding requirement, the already agreed commitments have become more important than the new projects, activities and new multi-year agreements proposed. For consumption and production an amount of about US \$206 million is already committed in multi-year agreements. For new projects and agreements, mainly in the consumption sector, about US \$127 million is proposed in this report. The remainder of the funding requirement of the total of US \$87 million (about US \$78 million) has largely been committed to agreed non-investment activities and budgeted costs for the Executive Committee, the MLF Secretariat, the Treasurer's fees and the Core Unit costs for the Implementing Agencies.

This implies that a total of about US \$284 million of the total funding requirement (68% of the total recommended) has already been committed, or constitutes standard commitments.

## 10      **References**

- /CBP05/      Consolidated 2005-2007 Business Plan of the Multilateral Fund, given in ExCom Document 45/5, March 2005
- /COM04/      Compliance Oriented Model, as described in ExCom Document 44/7, December 2004
- /COM05/      Compliance Oriented Model, as described in ExCom Document 45. Inf.3, March 2005
- /IAP05/      Inventory of Approved Projects (as at December 2004), Multilateral Fund for the Implementation of the Montreal Protocol (As at December 2004), published January 2005
- /LVC05/      Further Assistance for the Post-2007 Period for Low Volume Consuming Countries: a Review of Decision 31/48, in ExCom Document 45/46, March 2005
- /PPG04/      Policies, Procedures, Guidelines and Criteria of the Multilateral Fund (As at July 2004) (see [www.unmfs.org](http://www.unmfs.org))
- /RTF99/      Report of the UNEP Technology and Economic Assessment Panel April 1999, Assessment of the Funding Requirement for the Replenishment of the Multilateral Fund 2000-2002
- /RTF02/      Report of the UNEP Technology and Economic Assessment Panel April 2002, Volume 2, Assessment of the Funding Requirement for the Replenishment of the Multilateral Fund 2003-2005
- /UNDP05/      Business Plan for the Years 2005-2007 of UNDP, given in ExCom Document 45/7, March 2005
- /UNEP05/      Data submitted to UNEP on Production and Consumption of all ODS, per country, Personal Communications (Mr. Gerald Mutisya, Mrs. Martha Mulumba), January/March 2005

## **Annex 1: Summary Report of interviews conducted by the RTF during the 45th Executive Committee Meeting, Montreal, April 3-6, 2005**

### **1. Purpose and background of the interviews**

This interview is a part of the efforts that the RTF conducted in the context of Decision XVI/35, which establishes the TOR for the study on the 2006-2008 replenishment of the Multilateral Fund. The interviews have the objective of getting a better understanding and a comprehensive compilation of ideas about the issues more relevant to Parties in different country groups (non A5(1), non-LVC Article 5(1), and LVC Article 5(1)) and from different geographical regions.

The interviews were organised by the RTF with the support of the MLF Secretariat for the arrangements and they were conducted by Mr. K. Madhava Sarma, member of the RTF, and prof. Shiqiu Zhang, co-chair of the RTF.

A total of 32 Parties attended the 45th Excom Meeting, 11 from Non-Article 5(1) Parties and 21 from the Article 5(1) Parties. The RTF members interviewed 28 of these Parties (11 Non-Article 5(1) countries, 12 Non-LVC countries, and 5 LVC countries).

The interviews were informal and the persons interviewed were assured that their replies would not be treated as the official views of their governments, and that they would not be quoted individually.

### **2. Summary of the Key Feedback of the LVC Article 5(1) countries**

- **Compliance status and concerns for CFCs, CTC, and MB by the Parties**

The Parties interviewed showed confidence about the future compliance with the control measures for CFCs, although one party is currently in non-compliance. None of these Parties currently consumes CTC. Some concerns were raised regarding compliance with the Methyl Bromide controls. Three Parties indicated consumption of MB and all of them have MB projects approved. One Party stated that the MB projects are working well and they can comply with control schedules. However, two Parties indicated that they are having difficulties to implement the MB projects due to the limited capacity of the local UNDP office (which is in charge of the implementation) and the difficulties in dealing with individual farmers. If the farmers could get further financial support and the capacity of the local implementing agency could be improved, compliance should not be a problem and even MB phase-

out could be achieved. None of the Parties that were interviewed intends to delay the phase-out of MB until 2015.

- **Halon Banking**

There is no halon banking for any of the Article 5(1) countries interviewed. Only one country is a member of a regional halon bank being established. No extra funding is needed.

- **The role of Refrigerant Management Plans (RMP)**

All Parties have a very positive impression of the role played by RMP in assisting compliance, especially to provide assistance for the development of legislation, policy training and awareness raising activities, which are a necessary support to achieve compliance.

- **Compliance Assistance Programme (CAP)**

All Parties positively assess the CAP. They consider CAP especially important for the regional networks that serve as a platform for information exchange, experience sharing, training and capacity building and for getting advice from the CAP professionals. Some Parties mentioned that the information and materials provided should be available in local languages.

- **Institutional Strengthening**

All Parties consider IS very important and mention that it should be continued. Two Parties considered the current funding level for IS adequate and feel that it should be maintained until and beyond 2010, until the phase out of all ODS is completed. Three Parties expressed that more funding is needed for IS to support the ozone units (both hiring staff and improving the capacity), to enforce regulations and to maintain other activities.

- **Monitoring, Reporting and Licensing System**

All Parties submit progress reports regularly as required to the MLF Secretariat. They all have a licensing system that also serves as a tool for monitoring the ODS phase-out progress.

- **Implications for the Replenishment Report of the Study on Financial Mechanism, 2004**

All Parties expressed that this study is not relevant to the RTF report.

- **Challenges**

The Article 5(1) Parties main concerns are (1) whether the donor countries will continue their efforts and contributions for ODS phase-out in Article 5(1) countries, (2) the effective implementation of licensing systems and, (3) the

dumping of used CFC equipment by non-Article 5(1) Parties in their countries.

- **Views regarding the MLF (Implementing Agencies and MLF Secretariat)**

All the Parties expressed their satisfaction with the MLF Secretariat and the Implementing Agencies and believed that they should continue their efforts until the phase-out of all ODS. Some Parties expected more co-operation with the countries from the MLF, which should get a better understanding of their specific situation. They also expected more financial support for approved projects and for institutional strengthening.

### 3. **Summary of the Key Feedback of Non-LVC Article 5(1) countries**

- **Compliance status and concerns for CFCs, CTC, and MB by the Parties**

All Parties generally expressed their confidence in meeting the control steps for CFCs. However, some countries are concerned about the availability of alternative technologies for the phase-out of CFCs in MDIs. The servicing sector and the operation of CFC based chillers also posed uncertainties for some countries. Most of the countries believe that CFC consumption ineligible for funding, as per the Decision 35/57 of the Executive Committee, is not a big problem as the units with ineligible consumption can phase-out the consumption with their own resources. Only one country is concerned about the ineligible consumption by SMEs. Given the projects approved, Parties can meet the control steps for MB, although one country stated some difficulties regarding limitation of funding and availability of good alternatives. All Parties want to phase out MB soon rather than waiting until 2015. Most Parties have identified their uses of CTC and have no problem in phasing it out. One (large) Party stated that there was considerable delay in identifying the CTC use as a Process Agent and in approving the projects for phase-out; furthermore, that this will result in its non-compliance for CTC. It also stated that the identification of such CTC use is still going on. Only one country is in non-compliance for TCA, while others show no problems for compliance. For the ODS producers, all the production (except MB) has been addressed by production phase out agreements with the Executive Committee. The only Party interviewed that produces MB will submit the phase-out project shortly.

- **The role of National Phase-out Plans (NPPs) and extra funding needed**

All Parties stated that the NPPs are helpful for compliance. Some do not need any extra funding. Some countries stated that they need extra actions or

funding in the compressor industry, chillers, servicing sector, destruction of ODS, reclamation and recycling and supporting activities

- **Halon Banking**

Halon Banking is currently working well. Only experience will show whether additional funding is needed.

- **CAP**

Although the non-LVC countries may not need advice by CAP, they consider that the CAP is useful for networking and awareness, information sharing, especially for the LVC countries. One country stated that they are co-operating with their neighbour countries through CAP to curb illegal trade.

- **Institutional Strengthening**

Parties give importance to the institutional strengthening program. It should be continued without any reduction until 2010. The funding level should be increased by 30% during 2005-2010. Almost all the Parties felt that IS should be continued beyond 2010 to deal with HCFCs, MB, illegal production (one Party felt that it will be very difficult to detect illegal CFC production unless continuously monitored) and to serve as a focal point. One Party stated that the ozone office could be integrated with the offices in the country, which look after other Multilateral Environmental Agreements (MEAs). One country felt that, beyond 2010, countries could share the cost of the ozone units, depending on their financial position.

- **Monitoring, Reporting and Licensing System**

All countries have a licensing system, which has also been used as a monitoring tool. They report the progress regularly to the MLF Secretariat.

- **Implication of the Study of the Financial Mechanism, 2004 on the Replenishment Report.**

Parties see no relevance of the Financial Mechanism study. One Party stated that the replenishment report should address HCFC and CFC phase-out in the chillers sector.

- **Challenges**

The challenges are: (1) the remaining CFC phase-out in the servicing sector, and training of technicians, (2) consumption of CTC in Process Agents applications and SMEs, (3) curbing illegal trade to fulfil the demand created by dumping of CFC equipment, (4) illegal production, high prices of ODS alternatives (particularly of MDIs), (5) the phase-out of Methyl Bromide, (6) political commitment at high levels in Article 5(1) countries for phase-out

and non-Article 5(1) Parties for funding, chillers, essential use exemptions and destruction.

- **Views regarding the MLF (Implementing Agencies, and MLF Secretariat)**

All countries express that the Multilateral Fund should be continued until the completion of the phase-out of all ODS. One Party stated that the size of the agencies could depend on the workload.

#### 4. **Summary of the Key Feedback of the Non-A5 (1) countries**

- **Satisfaction regarding the progress, and view regarding the non-compliance**

All Parties showed their satisfaction with the progress made so far; they believe that the implementation is going well. All Parties, except two, think that the non-compliance is not an issue of concern since it is due to internal problems (being rectified) in the countries, uncertainties in data or mis-reporting. Since non-compliance is an embarrassment, non-complying Parties are returning to compliance. The non-compliance may be due to the way assistance has been delivered and the country driven approach now practised will rectify the situation. Two countries stated that the non-compliance may not be an important issue from the point of view of environment (since the size of excess consumption is small), but it is of importance from the political and legal angle. All the countries feel that no extra funding is needed to address non-compliance. More training and awareness activities may be necessary. The agencies may need strengthening to deal with non-compliance issues.

- **Value added by Bilateral Activities**

The bilateral programs add value to the activities of the Implementing Agencies and contribute to the real phase-out, especially for providing assistance and supporting activities to ensure the successful implementation process and better understanding of the needs of the countries

- **Regarding Recovery and Recycling (R&R)**

Recovery of ODS and recycling or destruction is mandated in the non-Article 5(1) Parties. Recycling has not been very successful. It will succeed only if the prices of CFCs increase as the phase-out comes to an end. R&R should be continued even though it has not succeeded so far. Well-designed and enforced legislation and policy, as well as training and good practice are also important factors for success.

- **Regarding the LVC countries, the RMP and maintenance of refrigeration and AC equipment after 2010**

National capacity and retrofitting are considered the only solution. Essential use exemption for Article 5(1) countries cannot include servicing. Article 5(1) Parties should have regulations for retrofitting old equipment. Continued running of the equipment is a practical problem. The RMP updates and RMPs will help. The recycled ODS could be more costly and will be used only when the phase-out comes to an end. The RMP will succeed due to the training given. People will learn new technologies easily. Policy support, institutional strengthening, information and experience sharing are all important to support the LVCs. The existing refrigeration and AC equipment would continue to function through recycling and retrofitting. The type of projects approved now is adequate for this purpose and no additional funds beyond the cost of projects are necessary.

- **Relevance of the Study on the Financial Mechanism for the Replenishment Report**

All Parties agree that the study is not relevant.

- **About the regulations for banning the export of the second hand equipment**

Most of the countries (the EU countries) have such bans. One country has a licensing system for such exports (and no applications had been received for such exports so far), and one country does not have any regulation. Both these Parties stated that such a ban might be against WTO regulations. They all feel that importing countries should have bans also, which they believe would be more effective.

- **Future efforts for the funding requirements for the replenishment for the MLF**

No Party believes that the ozone issue is “over” and they consider that more funding is necessary. The next 5-10 years could be crucial and very important for the phase-out efforts. They hold the opinion that all should do more to ensure the continuation of the efforts and making sure that everyone is committed. There will be lots of challenges ahead, particularly the HCFC and MB issues. All are prepared to continue the necessary funding to the Multilateral Fund. One Party may even increase the funding level. The utilisation of the funds should be more effective. While the Climate Change issue has occupied the centre-stage in the public mind, the ozone issue is not forgotten, as there are periodical alarms about the levels of UV-B radiation. The non-Article 5(1) Parties, too, are implementing regulations on recovery and destruction of ODS, which keep the ozone issue in their mind. They do not think that non-compliance by some Parties is due to lack of funds but rather due to the procedures followed.

- **About Institutional Strengthening**

All Parties believe that IS is important, and should continue until 2010 at the same level. They also believe that an ozone focal point is necessary after 2010 to look after the phase-out of other ODS and to curb illegal trade. Some Parties feel that the Article 5(1) Parties should also share the costs beyond 2010. Others feel that the Ozone Units in governments must be integrated with the units looking after other MEAs and, in this way, other MEAs can benefit from the experience of the Ozone Units.

- **Challenges**

They include:

- (1) phase-out of the servicing sector to ensure that the Article 5(1) Parties do not ask for essential uses;
- (2) developing strategies for the future;
- (3) phase-out of MB and HCFCs;
- (4) HCFC management for the year 2015 (HCFC consumption is growing fast; unless something is done immediately, the freeze step in 2016 could be impossible);
- (5) how to create a system for critical use exemptions of MB;
- (6) destruction and recycling and how to deal with remaining stocks;
- (7) how to integrate the ozone and climate change issues;
- (8) compliance by all the Parties;
- (9) curtailing the service sector demand;
- (10) how to keep “ozone” on the “radar screen”;
- (11) synergy with other MEAs.

## **Annex 2: Summary Meeting Reports of Meetings with Regional Network Co-ordinators and Implementing Agencies**

### **SUMMARY REPORT of the Meeting of the REGIONAL NETWORK COORDINATORS (RNCs) with the RTF, UNEP Paris, 28 February**

The meeting was attended by RNCs from Africa (one), Asia (two), Latin America and the Caribbean (one), and Europe (one). It was opened by the Network and Policy Manager, who stated that responses to the RTF's questionnaire were to be orally presented, in a summary form, by one of the RNCs (copies of the responses were given to the representatives of the RTF on the following day).

The Co-chair of the RTF briefed the meeting on the Terms of Reference for the replenishment study, the steps so far undertaken by the RTF, making particular reference to discussions held with the Chief Officer and staff of the MLF Secretariat, the Interagency Co-ordination meeting, and to the meeting to be held with the representatives of UNDP, UNEP, UNIDO and World Bank on the following day (1 March). He also explained why a different model for calculating the next replenishment will be used.

It was agreed to use the questionnaire (that was sent out before the meeting to the RNCs) as the meeting agenda. On this basis, a summary of the questionnaire responses was presented. The ensuing discussion dealt with all of the questions, and is summarized below, following the questionnaire order.

#### **MLF Secretariat Model for 2005-2010 Phase-out:**

There was a general agreement with the MLF Secretariat analysis. It was, however, pointed out that:

- two countries were seeking changes to their baseline consumption of different controlled substances;
- some entries in the IS tables for few countries were either inaccurate or the year indicated was not correct;
- some Parties in one region found it difficult to comment on the tables due to too many details; and
- the model did not take into account the needs of new Parties.
- 

The RTF clarified that the model is aimed at calculating the amounts of the remaining consumption of controlled substances that was needed to be phased out to enable compliance, and was based on data provided by Parties and

approvals by the Executive Committee. The RTF proposed, nonetheless, that the replenishment should include a contingency to fund emerging needs.

**Remaining CFC consumption:**

Ongoing projects, SMEs, the servicing sector (including the servicing of chillers) represent the remaining consumption of CFC.

**Addressing remaining CFC consumption:**

RMP/RMP update, TPMP, and Sector plans are all suitable modalities for addressing remaining consumption in LVCs. However, it was pointed out that new Parties could be in a state of non-compliance once they became Parties to the Protocol, which might require a different modality. For Non-LVCs, the NPPs seem to be the preferred modality due to their built-in flexibility in resource utilisation.

Regarding the funding of the remaining 15% consumption, the RNCs indicated that the amount needed should be proportional to the amount approved for the original RMP, and that amount should be dedicated to training and related activities. However, more thorough surveys would need to be undertaken to determine the users, and the potential of using drop-in substitutes should be explored due to the very large population of CFC-based appliances.

**Compliance trends:**

The RNCs emphasised that, irrespective of the modality of addressing the remaining consumption, achieving the 85% and the 100% reductions in consumption will be much more difficult than the freeze and the 50% reductions. In their views, this is due to the fact that the Protocol assigned longer time periods to achieve the earlier control measures, and shorter periods to achieve the later ones. The earlier control measure could be met by phasing out consumption in the industrial sector (which constitutes of few enterprises in many countries) by employing non-ODS based technologies, which is not the case with the residual consumption where the servicing sector and SMEs dominate. How to phase out this residual consumption would vary, depending on local conditions in the countries concerned. RNCs indicated that RMPs, TPMPs and NPPs would be the likely modalities.

**Status of compliance:**

The RNCs reiterated that virtually all new Parties would become automatically non-compliant once the various control measures enter into force for them. Such Parties will need immediate help which could involve

larger funding than that for countries with similar consumption that had received assistance much earlier.

In addition to new Parties, several Parties that have already received Fund assistance might not be in compliance / able to achieve compliance with one or more control measure(s). This could be due to the inadequacy of such assistance, expected changes in base-line, delays in implementation of approved projects especially in the SME sector, omission of MDI inclusion in TPMPs, and, in the case of methyl bromide, the recent developments associated with critical use exemption requests of industrialised countries.

#### **Evaluation by the MLF Secretariat of RMP implementation:**

There was a general agreement by the RNCs with the conclusions reached from the evaluation, which was conducted with their assistance. Emphasis should, however, be focused on the training of customs officers and technicians, rather than on R&R, which proved to be elusive and with poor outcome, as elicited by the evaluation.

#### **Beyond 2010:**

There was a general agreement by the RNCs that CFC needs beyond 2010 could be satisfied by a combination of: recycled CFC, stock-piled CFC, retrofits for substitutes. However, one should be aware of the very large number of existing CFC-based appliances, the production of new appliances based on CFC (it was reported at the meeting that China produces some three million units per year for export to other Article 5(1) Parties, and will continue to do so until 2007).

The Task Force representatives mentioned that, provided the right procedures are in place, retrofits of refrigerators (in case they need to be repaired) can be done with a mixture of hydrocarbon refrigerants. This procedure was confirmed by some of the RNCs present in the meeting. It was mentioned that drop in refrigerants exist for most uses, such as mobile air conditioning and commercial refrigeration (if this was not based on HCFC-22, but on CFCs or on R-502). It was mentioned that retrofits of CFC chillers should not be considered, because this would be very expensive and it would concern too old (CFC) chillers to be cost effective.

#### **Halons:**

The regional banking of halon has not been successful, and doubling of the funding for halon banking could not guarantee for success. Several countries in the respective regions have zero consumption, and only have halon banking projects. In other cases, the large halon consumption reported by some countries could not be explained. RNCs mentioned that the halon

consumption figures reported by several countries may be exaggerated. This would need further investigation.

### **CTC and TCA:**

In all the countries that report low CTC consumption, one can assume that this is for spot cleaning, particularly in the garment industry, and it would not concern industrial processes. One large consuming country (that has a sectoral CTC phase-out plan) may be in non-compliance as of 2005, and the RNC from that region could not further explain what is the case here, and in how far it concerns reporting problems.

There will certainly be CTC used for laboratory and analytical uses in several Article 5(1) countries with low CTC consumption; further investigation is needed whether it is predominantly used for laboratory and analytical uses. Similarly as in the non-Article 5(1) countries, this use should be exempted from phase-out in Article 5(1) countries, if alternatives are not available for small CTC quantities (so far, Article 5(1) countries do not get lab and analytical use exemptions). The RTF, in calculating the funding requirement for the next replenishment period, will assume that all CTC is used for cleaning purposes and has to be phased out.

In the case of TCA, one would have to virtually approve funding for a complete phase-out in the period 2006-2008. However, as is the case for CTC, there are a large number of Article 5(1) countries with a small TCA consumption. In 2010 there will be further reduction in the control schedule, with a complete phase-out by 2015. This would imply that only a certain portion of the TCA would need to be funded in the next replenishment period. The RTF representatives proposed a complete phase-out of TCA, because a gradual phase-out would not be realistic if consumption is very small. The RNCs agreed to this approach.

### **Methyl bromide:**

The RNCs indicated that the methyl bromide consumption in 2004 is expected to be equal to 2003. They were of the opinion that Article 5(1) countries with a low consumption of MB (1 tonne or less) should benefit from assistance for a total phase-out. RTF representatives mentioned the problem of the use of MB for QPS, which is exempted, and where certain quantities might be used for fumigation etc. uses. RNCs agreed that this could be the case in certain countries, but they could not further substantiate this.

The Field School in Kenya was reported to have been very successful in reducing MB consumption in the country, but not so successful in neighbouring countries, such as Uganda and others. It was mentioned that in

the LAC region, especially in Central America, countries are concerned about the amount of MB critical use exemptions for the USA; these countries themselves generally have a relatively large consumption, and the amount of CUEs granted will not stimulate a phase-out of MB.

Additional information:

Some other points that came forward in the discussion were:

- (i) Iraq could become a Party with large consumption,
- (ii) Somalia seems to have a large halon consumption, which needs to be investigated,
- (iii) specific training aspects, and
- (iv) some of the remaining 15% consumption after 1/1/2007 would be for the servicing of CFC chillers (a large number would be CFC-11 chillers) but this could not be quantified for LVC countries; it was mentioned that it may be useful to look at the CFC-11 consumption of countries which would give a somewhat more precise idea of the importance of CFC-11 in the consumption pattern.

*Dr. Omar E. El-Arini, RTF Advisor*

*Dr. Lambert Kuijpers, RTF Co-chair*

**SUMMARY REPORT**  
**of the Meeting of the Implementing Agencies**  
**(UNDP, UNEP, UNIDO, World Bank) with RTF Representatives**  
**UNEP Paris, 1 March 2005**

**Introduction**

The co-chair of the RTF, who highlighted the composition of the Task Force, made a brief introduction. He summarised the conclusions reached during the January meeting with the MLF Secretariat in Montreal, as well as the conclusions from the meeting with the Regional Network Co-ordinators on 28 February 2005, the day before the meeting with the Implementing Agencies. The Implementing Agencies (UNDP and WB) requested to include ODS destruction and HCFC matters under “Other Matters” on the Agenda.

**Discussion of paragraph 1(a) of the Terms of Reference**

The RTF representatives emphasised that the remit for the preparation of the report was clearly defined in paragraph 1 (a) of Decision XVI/35, which provided the limits within which the RTF will execute its mandate. There was a discussion on issues that could impact the 2006-2008 replenishment and that might not be decided by the Executive Committee prior to its 46<sup>th</sup> Meeting (the Replenishment report will be discussed by the 25th OEWG, which will precede the 46th Executive Committee Meeting).

It was, however, noted that, based on past practice, the OEWG meeting -- which will consider the draft replenishment report-- might reflect on these issues and recommend accordingly.

**Business Plans**

The Implementing Agencies provided the RTF with copies of the latest version of their Business Plans. The IAs informed the RTF that the figures in the Business Plans 2005 are firm with the exception of those associated with chillers and HCFC surveys, which might both raise further policy issues. UNDP and UNIDO considered that the funding level indicated for their Business Plans for 2006 and 2007 would constitute the minimum requirements envisioned for those two years for the item “*Planned New Activities*”.

However, the World Bank was uncertain where it concerned the figure it submitted for 2007. There were no figures provided for 2008 by any of the agencies. The RTF representatives made enquiries about the status of implementation of the approved projects, amounting to phasing out of about 76,000 ODP tonnes in consumption and 69,000 ODP tonnes in production (the figures include some 20,000 ODP tonnes in consumption approved in

2003/2004 and about 23,000 ODP tonnes in production approved during the same period).

The agencies expressed confidence that these implementation targets will be met on time. There was a discussion on specific controlled substances and this can be summarised as follows:

*(a) CFCs:* The agencies informed the RTF that 5-7 national phase-out plans will be submitted during 2005, as well as several TPMPs and RMP /RMP updates. They intimated that some of the residual CFC consumption is related to chiller servicing.

Due to the unavailability of a firm figure for consumption in the chiller servicing sector, the RTF suggested that the MLF Secretariat might have the required information, in the data submitted by Article 5 (1) countries within the framework of their annual reporting of the implementation of their country programs. The RTF will seek the information from the MLF Secretariat. MDI projects are foreseen for countries where there is eligible consumption in the sector, in accordance with the relevant Executive Committee decisions.

*(b) MB:* Similar to the position taken by the RNCs, the Implementing Agencies were also of the opinion that the very low (remaining) consumption reported by many Article 5(1) countries should receive funding for a total phase-out.

*(c) CTC and TCA:* No additional information was provided by the Implementing Agencies compared to the information communicated by the RNCs (meeting 28 February 2005).

### **NPPs and TPMPs**

The discussion pertained to the timing of the implementation of NPPs and TPMPs, and the four Implementing Agencies expressed confidence that targets of implementation would be met and in some countries this would be ahead of the schedules agreed.

### **RMPs and LVC Issues**

The RTF representatives stated they were aware of the study currently being undertaken by the MLF Secretariat in relation to RMPs, as mandated by Decision 31/48. However, they were uncertain about at which meeting the Executive Committee would decide new directives to govern the funding of the phase-out of the remaining 15% for countries that (had) received RMP/ RMP update funding in accordance with Decision 31/48. The RTF enquired whether the RMP/ TPMP modality would ensure compliance, and if so, whether the agencies could estimate what the level of funding would or

should be. UNDP and UNIDO made an estimation, which was calculated as proportion of the current RMP funding, as indicated in their 2007 Business Plan.

The RTF representatives drew attention to the discussion they had had in Montreal regarding the conversion of RMPs to TPMPs and to the feasibility of estimating the funding associated with that. It was then agreed that, based on the status quo, there would be two modalities to estimate the cost of phasing out of the remaining 15% consumption: (1) funding based on the impending decision of the Executive Committee on the RMPs as envisioned in Decision 31/48, and (2) funding based on conversion of the existing RMPs into TPMPs. In addition, the RTF, while noting the large number of appliances /equipment that will need continued servicing with CFCs for the foreseeable future, and being cognisant of the existence in the market of drop-in substitutes for CFC-12/ R-502, requested the agencies to consider the feasibility of implementing a phase-out in LVCs, based on this scenario.

The World Bank then indicated that they are implementing a phase-out program in Antigua and Barbuda based on drop-in substitutes.

UNDP and UNIDO mentioned that this scenario appeared to be implementable. However, they were not sure of the costs that would be involved. The RTF representatives indicated that the cost could be calculated as incremental operating cost for a period of 4 years.

The World Bank indicated that it would provide the RTF with a spreadsheet that may assist in the relevant calculations for the funding requirement of the replenishment. The RTF indicated that it would perform cost calculations based on the three scenarios.

### **General remarks by Implementing agencies during discussions**

Responding to a question on the failure of Article 5(1) countries to report on progress in implementation of their approved RMPs (as mandated by Decision 31/48), UNDP indicated that funding allocated for the monitoring component in the approved RMPs was transferred to the countries, therefore leaving the agency with *no resources for monitoring*.

Responding to a question by the RTF, the agencies reacted that they realised that the task ahead is not easy and that they are nevertheless committed to carry it through. However, job security for their core staff needs to be maintained and ensured. This issue was further elaborated and it was agreed that it might merit addressing in the 2006-2008 Replenishment Report. It should then not only cover human resources in the Implementing Agencies, but also in the MLF Secretariat. It was realised that this would be similar to

assurances decided by the Executive Committee in Decision 35/57 for the NOUs.

### **Other Matters**

Both the World Bank and UNDP made brief presentations on the HCFC issue. The RTF representatives made a reference to Decision 43/19 and they indicated that it could be dealt with dependent on whatever decision the Executive Committee might take during its 45th Meeting.

*Dr. Omar E. El-Arini, RTF advisor*

*Dr. Lambert Kuijpers, RTRF co-chair*

## **Annex 3: Control Schedules**

### **A3.1 Compliance with the Control Schedules**

The individual Parties, respectively, are responsible for their own compliance with the control schedules.

External financial assistance and technology transfer are essential to the phase-out process. Recognition of these needs led to the establishment of the Multilateral Fund. The Multilateral Fund is mandated to assist the Article 5(1) countries to comply with the control schedules of the Montreal Protocol.

The resources to be made available through the 2003-2005 replenishment of the Multilateral Fund will be instrumental in making it possible for the Article 5(1) countries to meet their, respective, incremental costs in securing progressive compliance with all the control measures.

A full description of all control measures for all controlled substances is given in Table A3-1.

**Table A3-1 Control Schedules for Article 5(1) Countries**

<b>Annex A – Group I (Production and Consumption)</b>	
<b>Chlorofluorocarbons: CFC-11, CFC-12, CFC-113, CFC-114 and CFC-115</b>	Base level: average of 1995-97 Freeze: July 1, 1999* 50 percent reduction by January 1, 2005 * 85 percent reduction by January 1, 2007 * 100 percent reduction by January 1, 2010 (with possible exemptions for essential uses) **
<b>Annex A – Group II (Production and Consumption)</b>	
<b>Halons: halon 1211, halon 1301 and halon 2402</b>	Base level: average of 1995-97 Freeze: January 1, 2002* 50 percent reduction by January 1, 2005 * 100 percent reduction by January 1, 2010 (with possible exemptions for essential uses) **
<b>Annex B – Group I (Production and Consumption)</b>	
<b>Other fully halogenated CFCs CFC-13, CFC-111, CFC-112, CFC-211, CFC-212, CFC-213, CFC-214, CFC-215, CFC-216, and CFC-217</b>	Base level: average of 1998-2000 20 percent reduction by January 1, 2003 * 85 percent reduction by January 1, 2007 * 100 percent reduction by January 1, 2010 (with possible exemptions for essential uses) **
<b>Annex B – Group II (Production and Consumption)</b>	
<b>Carbon Tetrachloride</b>	Base level: average of 1998-2000 85 percent reduction by January 1, 2005 100 percent reduction by January 1, 2010 (with possible exemptions for essential uses)
<b>Annex B – Group III (Production and Consumption)</b>	
<b>1,1,1-trichloroethane (methyl chloroform)</b>	Base level: average of 1998-2000 Freeze: January 1, 2003* 30 percent reduction by January 1, 2005 * 70 percent reduction by January 1, 2010 * 100 percent reduction by January 1, 2015 (with possible exemptions for essential uses) **
<b>Annex C – Group I (Consumption)</b>	
<b>HCFCs</b>	Base level: 2015 Freeze: January 1, 2016 100 percent reduction by January 1, 2040
<b>Annex C, Group II (Production and Consumption)</b>	
<b>HBFCs</b>	100 percent reduction by January 1, 1996 (with possible exemptions for essential uses)
<b>Annex E (Production and Consumption) (exemption for quarantine and pre-shipment)</b>	
<b>Methyl Bromide</b>	Base level: Average of 1995-1998 Freeze: January 1, 2002 * 20 percent reduction by January 1, 2005 100 percent reduction by January 1, 2015

\* 10% of base level of production allowed to be produced additionally to meet the basic domestic needs of Parties operating under Article 5(1).

\*\* 15% of base level production allowed to be produced additionally to meet the basic domestic needs of Parties operating under Article 5(1).

## Annex 4: CFC Consumption in Article 5(1) countries (1986-2003)

	1986	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Base
China	29237.2	50263.2	57044.6	66282.6	70778.6	75290.8	47089	51076.4	55414.2	42983.4	39123.6	33922.6	30621.2	22808.8	-	57818.7
Brazil	10973.5	8503.6	8933.6	9817.8	10778.2	10895.7	10872	9809.7	9542.9	11612	9275.1	6230.9	3000.6	3224.3	-	10525.8
Korea, Republic of	8528.6	-	19605	8727.6	10069.6	10039	8220.2	9220.2	5298.8	7402.6	7395.4	6802.2	6646.6	5171.6	-	9159.8
Indonesia	350.2	-	5249	4363.4	6910	8351.2	9012	7634.8	6182.8	5865.8	5411.1	5003.3	5506.3	4829.3	-	8332.7
India	2202	0	4501	5276.8	6387	6402.4	6937.4	6703.3	5264.7	4142.9	5614.3	4514.3	3917.7	2631.5	-	6681
Thailand	2300	7904	9057.2	8053.2	6865.2	8248	5550.2	4448	3783	3610.6	3568.3	3375.1	2177.3	1857	-	6082.1
Argentina	5210.6	2796.8	4306	1805.9	4569.4	6365.9	4202.1	3523.7	3546.3	4316.3	2396.7	3293.1	2139.2	2255.2	-	4697.2
Mexico	8818.2	10290.7	8512.8	9198.2	9652	4858.7	4858.8	4157.2	3482.9	2837.9	3059.5	2223.9	1946.7	1983.2	-	4624.9
Iran, Islamic Republic of	1275.9	4750	4750	4495	4327.6	4140	3692	5883	5571	4399	4156.5	4204.8	4437.8	4088.8	-	4571.7
Turkey	4122	3223.2	4118.4	4450.9	2660.8	3788.8	3758.8	3869.6	3985	1791.1	820.2	731.2	698.9	440.9	-	3805.7
Nigeria	1717.5	1019.8	1070.8	1995.5	1794.7	1535.6	4548.1	4866.2	4761.5	4286.2	4094.8	3665.5	3286.7	2662.4	-	3650
Venezuela	4269.4	3786.5	4070.8	3624.1	3092.9	3220	3040.9	3703.9	3213.9	1922.1	2705.9	2546.2	1552.8	1313.5	-	3322.4
Malaysia	2190.2	3829.3	3420.5	3624.2	4729.8	3426.6	3038.2	3348.4	2333.7	2010.1	1979.8	1946.9	1605.5	1174.4	-	3271.1
Philippines	1875.7	2022.9	3520.2	3778.7	3959.4	3381.7	3039	2746.8	2130.2	2087.6	2905.2	2049.4	1644.5	1422.4	-	3055.9
Syrian Arab Republic	1554	1325.7	1365.4	1406.4	2380	2370.2	2260	2043.7	1245.6	1280.7	1174.7	1392.2	1201.6	1124.6	-	2224.6
Colombia	1193.8	1686	-	-	2114.6	2156.4	2301.8	2166.4	1224	985.5	1149.3	1164.8	907	1058.1	-	2208.2
Algeria	6626.8			2146.4	2226	2292.2	2292.2	1774.2	1549.2	1502.2	1474.6	1021.8	1761.8	1761.8	-	2119.5
Saudi Arabia	5259.9		833	645.5	2081.5	1828.4	1668.2	1899	1921.8	1710.4	1593.6	1593	1531	1300	-	1798.5
Yemen	180	2422.7	-	-	-	2350.2	1673.7	1364.4	1060.8	1040.7	1045	1023.4	959.9	758.6	-	1796.1
Pakistan	678.1	674	945	1781	1823	2103.7	1670.8	1263.8	1196	1421.8	1945.3	1666.3	1647	1124	-	1679.4
Egypt	2362.4	1960	2015	1746	1870	1640	1732	1632	1540	1373.6	1267	1334.8	1294	1102.2	1047.6	1668
<b>Total</b>	<b>100926</b>	<b>106458</b>	<b>143318</b>	<b>143219</b>	<b>159070</b>	<b>164686</b>	<b>131457</b>	<b>133135</b>	<b>124248</b>	<b>108583</b>	<b>102156</b>	<b>89706</b>	<b>78484</b>	<b>64093</b>	<b>1048</b>	<b>143093</b>
Tunisia	584	1055	567.6	581.2	508.1	758	882	970.2	790.6	566	555	570	465.8	362.5	-	870.1
Serbia and Montenegro	2745	1198.8	1079	999	868	819.6	895.6	832.5	519.4	548.6	309.7	263.3	371.7	412	-	849.2
Chile	28.1	674.6	572.7	892.2	852.6	933.5	878.2	674.5	737.9	657.5	576	470.2	370.2	424.5	-	828.7
Morocco	346	690.9	1069.6	629.6	756.8	706.8	814	886	923.6	870.6	564	435.2	668.6	474.8	-	802.3
Lebanon	287.4	-	-	908	725.7	819.8	735.3	621.3	475.3	463.4	527.9	533.4	491.7	480.2	-	725.5
Libyan Arab Jamahiriya	299.2	531.2	673.6	704.2	643	772.8	729.8	647.5	659.8	894	985.4	985.4	985.4	704.1	-	716.7
Romania	829.7	-	-	1649.5	960.2	544	762.8	720.5	582	338.2	360.6	185.7	359.4	362.1	-	675.8
Jordan	536.6	545	531	580	520	535	627.4	857.4	647.2	398	354	321	90	74.4	-	673.3

Congo, Democratic Republic of	9.2	7.2	-	-	-	793	735	469	688.5	368.1	386.6	639.4	569.4	566.9	-	665.7
Cuba	884.4	327.8	122	125	150	546.2	663.8	665.4	531.4	571.4	533.7	504	488.8	481	-	625.1
South Africa	12449	4795.3	3951.4	4127.4	2416.6	1679.6	0	98.3	155.1	117.3	80.5	16	86.6	60.8	-	592.6
Bangladesh	176.7	92.9	213.1	226.6	180.6	280.7	628.3	832.2	830.4	800.6	805	807.9	328	333	-	581.6
Dominican Republic	228.7	-	274.2	329.8	433.3	634	558.7	426.8	311.4	752.1	401.9	485.8	329.8	266.5	-	539.8
United Arab Emirates	379.4	521.9	498	477.9	425	513.8	511.2	562.8	737.4	529.2	476.2	423.4	370.4	317.5	-	529.3
The Former Yugoslav Republic of Macedonia	1620	-	-	-	206	558	514	487.1	62.8	191.9	49.5	46.7	34.1	49.3	-	519.7
Viet Nam	24	303.4	-	-	380	480	520	500	392	293.9	220	243	235.5	243.7	-	500
Kuwait	2527.6	-	-	546	600.2	484.6	471.9	484.8	399.2	450	419.9	354.2	349	247.4	-	480.4
Sudan	339	601	-	320	338	635	429.5	306	294.5	294.5	291.5	266	253	216	-	456.8
Zimbabwe	281	-	-	217.8	475.6	462.1	456.6	435.4	390.2	229.1	145	259.4	129.1	117.5	-	451.4
Sri Lanka	215	184.8	216.5	294	346.6	520.5	497.8	318.5	250.4	216.4	220.3	190.4	185	179.9	-	445.6
Korea, Democratic People's Republic of	950	-	-	-	-	825	267	233	112	106	77	320.8	299	265.4	-	441.7
Panama	129.9	376.7	168	358.8	254.2	439.7	354.8	357.9	346	301.1	249.9	180.4	195.3	168.5	-	384.2

<b>Total</b>	<b>25870</b>	<b>11907</b>	<b>9936.7</b>	<b>13967</b>	<b>12041</b>	<b>14742</b>	<b>12934</b>	<b>12387.1</b>	<b>10837</b>	<b>9957.9</b>	<b>8589.6</b>	<b>8501.6</b>	<b>7655.8</b>	<b>6808</b>	<b>0</b>	<b>13355.5</b>
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Honduras	87.7	-	-	-	114.8	117.5	523.3	354.1	157.4	334.8	172.3	121.6	131.2	219.1	-	331.6
El Salvador	331.8	423.4	644.7	398.2	255.7	329.7	312.1	277.8	194.6	109.5	99.1	116.9	101.6	97.5	-	306.6
Ecuador	703.6	690.9	403.5	261.5	78.4	314.7	269.2	320.4	271.7	153	230.5	207	229.6	256.3	-	301.4
Côte d'Ivoire	141.6	257.5	-	204.1	342	354.3	383.9	144.4	267.8	166.2	206.4	148	106.5	93.4	-	294.2
Peru	1058.3	541.3	242.9	279.2	248.6	366.8	243	258.8	326.7	295.6	347	189	196.5	178.4	-	289.5
Cameroon	118.5	66.5	63.7	156.6	156.6	230.7	280.4	259.5	311.8	361.5	368.7	364.1	226	220.5	-	256.9
Tanzania, United Republic of	40.2	-	-	185.3	262.9	280.4	293.6	187.7	131.5	88.9	215.5	131.2	71.5	148.2	-	253.9
Costa Rica	242.5	267	216	221.5	184	158.5	497.2	94.8	-204.2	152.3	105.9	144.6	137.4	142.5	-	250.2
Oman	305.3	-	305.3	244	308.6	229.9	264.9	250.5	261.1	259.6	282.1	207.3	179.5	134.5	98.7	248.4
Somalia	266.3	46.7	20.7	24.7	28.3	241.1	241.3	241.7	246.9	48.6	65.6	86.9	98.5	108.2	-	241.4
Kenya	230	105	47	47	273	301	166.8	250.6	245.3	241.1	203.3	168.6	152.3	168.6	-	239.5
Guatemala	482.2	357.3	357.3	357.3	269.3	231	235.6	207.3	188.7	191.1	187.9	265	239.6	147.1	-	224.6
Croatia	515	337	433.8	252.8	314	193.5	184.1	280.4	85.7	141.5	171.2	113.8	140.1	88.7	-	219.3
Paraguay	151.2	-	240	190.5	221	211.2	180.4	240.1	113.4	345.3	153.5	116	96.9	91.8	-	210.6
Singapore	4052	639.2	1371.8	1481.6	791.6	773.6	36.8	-178.9	16.7	24.1	21.7	21.6	0.9	11.1	-	210.5
Uruguay	322.8	416.2	304.6	223	311.8	232	172.1	193.1	194	111.4	106.8	102.3	75.2	111.4	-	199.1

Armenia	2384.5	0	-	-	-	201.8	196.5	191.2	185.9	9	25	162.7	172.7	172.7	-	196.5
Haiti	0	-	-	-	-	169	169	169	-	-	169	169	181.2	115.9	-	169
Senegal	86.2	99.8	102.3	156.4	117.7	151	178.4	138.1	128.5	121.1	116.5	98	71.9	51	-	155.8
Cyprus	909	249	264.7	429.3	196.4	164.6	141	143	81	114.9	165	137.6	131.8	62.5	0	149.5
Bahrain	76.4	85.3	118.6	111.1	118.1	121.9	137.2	147.2	149.5	129	113.1	106	94.6	85.8	-	135.4
Trinidad and Tobago	101.6	115.6	104	96.8	108.6	111.3	114.1	134.6	155.6	81.7	101.3	79.2	63.6	62.5	-	120
Angola	115.9	-	-	-	-	114.8	114.8	114.8	115.9	-	107	114.8	105	104.2	-	114.8
Mali	26.2	0	0	0	0	103.9	109.3	111.1	113.1	37.1	29.2	27	26	26	-	108.1
Qatar	85.2	-	-	-	-	90.9	102.4	111	120.8	89	85.8	85.4	86.7	95.1	-	101.4

<b>Total</b>	<b>12834</b>	<b>4697.7</b>	<b>5240.9</b>	<b>5320.9</b>	<b>4701.4</b>	<b>5795.1</b>	<b>5547.4</b>	<b>4642.3</b>	<b>3859.4</b>	<b>3606.3</b>	<b>3849.4</b>	<b>3483.6</b>	<b>3116.8</b>	<b>2993</b>	<b>98.7</b>	<b>5328.2</b>
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Cambodia	94.2	-	-	-	-	94.2	94.2	94.2	94.2	94.2	94.2	94.2	94.2	86.7	-	94.2
Jamaica	196.1	350.1	464	66.2	49.2	82	91.1	106.6	199	210.4	59.8	48.6	31.7	16.2	-	93.2
Nicaragua	86.5	90	94.5	100	105.5	110	82.7	55.7	37.3	52.6	44.4	35.2	54.9	29.9	-	82.8
Sierra Leone	81.7	78.4	75.1	69.9	68.5	67.1	86.7	81.9	81	75.9	75.9	92.9	80.8	66.3	-	78.6
Brunei Darussalam	68.8	-	58.6	81.2	63.3	64.6	80.1	90	63.5	36.7	46.6	31.4	43.4	32.3	-	78.2
Bolivia	34.8	14.4	-	-	76	81.6	87.1	58.4	74.1	72.2	78.8	76.7	65.5	32.1	-	75.7
Moldova	279.5	-	-	-	-	85.4	51.5	83.1	40.5	11.1	31.7	23.5	29.6	18.9	-	73.3
Kyrgyzstan	122.1	117.6	106.2	92.5	84.7	81.5	67.4	69.6	56.8	52.4	53.5	53	38	33	-	72.8
Bahamas	51.1	-	0.7	65.8	68.1	69.9	72	52.7	54.6	53.8	65.9	63	55	24.6	-	64.9
Benin	14.7	37.3	44.3	37	37	61.8	58.4	59.6	54.2	56.6	54.6	54	35.5	17.3	-	59.9
Burundi	32.4	45.6	48.2	-	-	56.2	58.8	61.9	64.5	59.6	53.8	46.5	19.1	9.2	-	59
Malawi	14.3	23.1	45.6	88	30	61.5	55.9	55.6	56.9	50.4	21.5	19	19	18.7	-	57.7
Liberia	54.3	64.1	65.2	42.1	33.1	45.2	67.4	55.7	31.1	18.2	41.4	25.1	32.8	26.3	-	56.1
Myanmar	1.4	-	16.4	-	2.1	49.5	58.6	54.8	52.3	30.7	26.3	39.4	43.5	51.6	-	54.3
Guyana	18.3	17.3	22.6	59.5	42.3	90.8	41	27.8	29.2	39.9	24.4	19.8	14.3	10.4	-	53.2
Madagascar	49	-	-	-	-	19.5	20.5	103.6	23.9	26.3	12.4	9.9	7.8	7.2	-	47.9
Lao People's Democratic Republic	2.3	-	3.6	-	-	43.3	43.3	43.3	43.3	44.1	44.6	41.2	42.3	35.3	-	43.3
Guinea	24.5	28.8	29.8	30.3	32.4	37.4	44	45.9	41.8	39.9	37.5	35.4	31.3	25.9	-	42.4
Suriname	39.5	39.8	-	-	-	41	41	42	42	43	44	46	46	12.3	-	41.3
Albania	40.3	-	-	-	-	40.3	40.1	41.9	46.5	53.1	61.9	68.8	49.9	35	-	40.8
Togo	35.3	42.8	44.5	46.4	48.3	50.4	33.7	35.2	36.7	41.7	37.5	34.7	35.3	33.7	-	39.8
Turkmenistan	172.4	96.6	67.1	61.4	57	56	29.6	26.4	25.3	18.6	21	57.7	10.5	N.R.	-	37.3
Burkina Faso	22.8	29.2	29.2	30.6	33.6	33.6	37.6	37.6	37	30.6	25.4	19.6	16.3	13.2	10.5	36.3
Papua New Guinea	48.5	28.3	38.7	39.4	52.8	9.7	62.7	36.4	45.2	35.5	47.9	15	34.6	22.7	-	36.3
Ghana	89.6	96.6	72	24.2	39.3	44	14.2	48.7	50.3	46.8	47	35.6	21.2	32	-	35.8
Chad	15.5	28.5	29.9	31.2	31.6	32.8	34.6	36.3	38.1	37.5	36.5	31.6	27.1	22.8	-	34.6

Ethiopia	36.5	-	-	-	-	32.5	33.8	35.1	38.2	39.2	39.2	34.6	30	28	-	33.8
Fiji	16.8	42.1	8.5	7.4	0.1	59.8	26.7	13.7	13.1	9.4	0	0	0	0	0.5	33.4
Niger	15	16.6	17.8	17.5	17.5	18.6	18.1	59.4	60.7	58.3	39.9	29.1	26.6	24.5	-	32
Rwanda	34.7	29.2	28.5	27.5	19.8	26.5	30.2	34.4	37.7	30.1	30.1	30.1	30.1	30.1	-	30.4
Mauritius	57.2	-	66.6	64.1	42.3	23.9	36.2	27.3	39	18.6	19.1	14.5	7.3	4	3.4	29.1
Zambia	34.6	22.1	24.1	25.4	37.8	23	30.4	28.7	26.7	24.3	23.3	11.8	10.6	10.4	-	27.4
Nepal	25	20	20	20	20	25	27	29	32.9	25	94	0	0	0	-	27
Guinea Bissau	20	23	23.4	23.9	24.4	25.7	26.3	26.8	27.1	26	26	26.9	27.4	29.4	-	26.3
Swaziland	10	-	-	82.7	82.7	35.4	22.1	16.3	2.2	2.1	0.1	1.3	1.2	1.9	-	24.6
Belize	15	-	-	-	-	22.3	24.7	26.1	25	25.1	15.5	28	21.7	15.1	-	24.4
Bosnia and Herzegovina	329	145.1	19.5	15	7.5	3	20.6	49	45.1	151	175.9	199.7	243.6	230	-	24.2
Gambia	6.5	11.4	12.2	21	22.8	22.7	20.6	28	10.9	6.9	6.1	5.8	4.7	5.1	-	23.8
Georgia	532.8	-	-	-	53.2	13.1	23.5	30.9	26	21.5	21.5	18.8	15.5	12.6	-	22.5
Namibia	17.6	-	-	33.8	34.6	27.1	19.3	19.3	16.4	16.8	22.1	24	20	17.2	-	21.9
Barbados	15.8	25.4	20.6	29.5	35.3	25	22.4	17.2	22.5	16.5	8.1	12.5	9.5	8.6	-	21.5
Djibouti	21.9	22.1	-	-	-	22.7	21.5	18.9	20.6	20.6	20.7	18	15.8	12.1	-	21
Mozambique	55.5	-	-	-	18.1	20.3	21.7	12.7	3.2	13.8	9.9	8.4	9.9	1.7	-	18.2
Mauritania	14.8	-	-	-	17.3	23.2	7.8	16	14.7	13.4	14.2	15	14.7	14.3	-	15.7
Uganda	7.1	14.6	15.3	16.1	9.2	11.8	12.8	13.9	11.4	12.2	12.7	13.4	12.7	4.1	-	12.8
Congo	16.9	53.4	-	-	27.1	13.6	12.8	9.2	6.6	9.3	11.4	2.5	5.5	7	-	11.9
Central African Republic	24	42.8	44.5	31.2	31.2	27.3	6.4	0	7	1.4	4.3	4	4.4	4.1	-	11.3
Antigua and Barbuda	430.4	427.8	429	426.1	12.4	11.5	10.3	10.3	26.5	-2	5	3.1	3.7	1.5	-	10.7
Mongolia	7.2	-	-	-	-	7.2	12.2	12.5	13.2	12.4	11.2	9.3	6.9	5.7	-	10.6
Gabon	12.4	9.9	-	12.6	12	7.3	11.5	12	12	7.8	13.7	6.4	5	5	4.5	10.3
Saint Lucia	6	-	-	10.6	7.7	8.1	8.3	8.5	6.3	3.2	4.2	4.1	7.6	2.5	-	8.3
Botswana	2.6	-	12	14.6	8.4	8.4	5.4	6.8	2.6	2.6	2.5	4	3.6	5.1	-	6.8
Grenada	3.8	-	-	3.8	3.8	6.5	4.9	6.5	3.8	2.9	2.9	1.3	2.1	2.1	-	6
Lesotho	4.8	-	-	-	5.1	6	5.9	3.5	3.4	2.8	2.4	1.8	1.6	1.4	1.2	5.1
Sao Tome and Principe	1	3	4	4	4	4.8	4.2	5.2	3.8	3.4	3.9	4.1	4.3	4.6	-	4.7
Maldives	0.1	5.9	5.8	6.3	7.2	5.9	0	7.8	0.9	1.5	4.6	14	2.8	0	-	4.6
Samoa	4.4	4	4	4	4	4.4	4.5	4.5	2.6	6.1	0.6	2	2.2	0	-	4.5
Saint Kitts and Nevis	6.1	-	6.4	5.4	4.7	4.1	3.4	3.6	1.6	2.6	7	6.6	5.3	2.8	-	3.7
Seychelles	2.5	3.6	4.7	10.3	3.7	3.9	2.2	2.5	2	1.1	0.8	0.7	1.5	0.6	0	2.8
Comoros	2.9	1.3	-	-	-	2.3	2.3	2.9	3.6	2.5	2.7	1.9	1.8	1.2	-	2.5
Cape Verde	2.1	2.1	2.2	2.3	2.3	2.4	2.3	2.2	2.1	2	1.9	1.9	1.8	1.8	-	2.3
Solomon Islands	0	1.9	3.4	5.1	0.2	2.1	2	2.3	0.8	6.2	0.3	0.6	0.5	0.8	1.1	2
Saint Vincent and the	2.5	-	-	-	-	2.3	3.9	2.2	2.3	10	6	6.9	6	3.1	-	1.8

Grenadines																
Palau	0	-	-	-	-	1.7	1.1	2.1	2.1	0.4	0.6	0.6	0.1	1	-	1.6
Dominica	0	-	-	1.5	1.5	1	1.7	1.7	2.1	1.1	2.1	1.6	3	1.4	-	1.5
Tonga	1.8	-	-	-	-	1.8	0.9	1.2	0	83.4	0.5	0.7	0.8	0.3	0	1.3
Federated States of Micronesia	1.3	0	-	-	-	1.3	1.1	1.2	1.2	1.2	1	N.R.	N.R.	N.R.	-	1.2
Marshall Islands	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1	0.6	1.1	0.5	0.2	0.2	0.2	1.3	1.2
Kiribati	0.8	-	-	0.8	0.8	0.8	0.7	0.6	0.5	0	0	0	0	0	-	0.7
Nauru	0.6	-	-	-	-	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0	0	-	0.5
Tuvalu	0.3	-	-	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0	0	0	N.R.	-	0.3
Bhutan	0.1	0	-	-	-	0.1	0.2	0.2	0	0	0	-	-	-	-	0.2
Niue	0.1	0	-	-	-	0.1	0.1	0	0	0	0	-	-	0	-	0
Vanuatu	0	-	-	-	-	0	0	0	0	0	0	0	0	0	-	0
Afghanistan	N.R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N.R.
Cook Islands	N.R.	0	-	-	-	-	-	1.7	-	-	-	-	-	0	-	N.R.

<b>Total</b>	<b>3491.6</b>	<b>2157</b>	<b>2129.9</b>	<b>1889.7</b>	<b>1535</b>	<b>2107.9</b>	<b>2010.2</b>	<b>2120.7</b>	<b>2001.1</b>	<b>2026.2</b>	<b>1857.4</b>	<b>1688.4</b>	<b>1551.6</b>	<b>1214.9</b>		<b>2078.1</b>
<b>Grand Total</b>	<b>143122</b>	<b>125220</b>	<b>160626</b>	<b>164397</b>	<b>177347</b>	<b>187330</b>	<b>151949</b>	<b>152285</b>	<b>140946</b>	<b>124173</b>	<b>116452</b>	<b>103379</b>	<b>90808</b>	<b>75109</b>		<b>163855</b>
<b>Grand Total</b>	<b>120072</b>	<b>119014</b>	<b>134102</b>	<b>148508</b>	<b>161367</b>	<b>172331</b>	<b>141371</b>	<b>140540</b>	<b>132735</b>	<b>114274</b>	<b>106720</b>	<b>94386</b>	<b>82041</b>	<b>68185</b>		<b>151415</b>

**This is the total for countries receiving MLF support and excludes countries such as Rep. Korea, Saudi Arabia, UAE, Singapore etc. (compare Table 2-1)**

## Annex 5: Approved Multi-year Agreements and Impacts on the 2006-2008 Funding Requirement (status May 2005)

### MULTI YEAR AGREEMENTS (with separate agency support costs)

Country	Sector	Agency	Total (*)	2005	2006	2007	2008	2006-08	2006-08 net	Agency perc	Agency amt
<b>Antigua and Barbuda</b>	CFC phase-out	IBRD	30,411		30,411			30,411	27,900	9.00	2,511
<b>Bahamas</b>	CFC phase-out	IBRD	135,600	135,600				0	0		0
<b>Croatia</b>	CFC phase-out	Sweden	23,113	23,113				0	0		0
<b>Croatia</b>	CFC phase-out	UNIDO	59,340	37,625	10,965	5,375	5,375	21,715	20,200	7.50	1,515
<b>Kenya</b>	CFC phase-out	France	575,267	372,900		202,367		202,367	179,086	13.00	23,281
<b>Lesotho</b>	CFC phase-out	Germany	59,099	39,550	19,549			19,549	17,008	13.00	2,541
<b>Namibia</b>	CFC phase-out	Germany	104,525	104,525				0	0		0
<b>Trinidad and Tobago</b>	CFC phase-out	UNDP	258,000		258,000			258,000	240,000	7.50	18,000
<b>Mauritius</b>	ODS phase-out	Germany	115,294	70,094	45,200			45,200	41,132	9.00	4,068
<b>Bosnia and Herzegovina</b>	ODS phase-out	UNIDO	325,725	325,725				0	0		0
<b>Ecuador</b>	CFC phase-out	IBRD	980,309	471,668	244,465	244,467	19,709	508,641	473,155	7.50	35,486
<b>Papua New Guinea</b>	ODS phase-out	Germany	247,300		247,300			247,300	220,000	12.40	27,300
<b>Subtotal</b>			<b>2,913,983</b>	<b>1,580,800</b>	<b>855,890</b>	<b>452,209</b>	<b>25,084</b>	<b>1,333,183</b>	<b>1,218,481</b>		<b>114,702</b>
<b>Argentina</b>	CFC phase-out	UNIDO	4,967,414	2,526,250	1,186,263	1,254,901		2,441,164	2,270,850	7.50	170,314
<b>Brazil</b>	CFC phase-out	Germany	1,682,524		1,682,524			1,682,524	1,602,404	5.00	80,120
<b>Brazil</b>	CFC phase-out	UNDP	9,994,476	7,411,176	1,282,300	933,500	262,500	2,478,300	2,360,286	5.00	118,014
<b>Dominican Republic</b>	CFC phase-out	UNDP	1,839,970	537,500	430,000	430,000	227,470	1,087,470	1,011,600	7.50	75,870
<b>Lebanon</b>	CFC phase-out	UNDP	1,107,250	537,500	392,375	107,500	69,875	569,750	530,000	7.50	39,750
<b>Libya</b>	CFC phase-out	UNIDO	1,072,793	774,000	298,793			298,793	277,947	7.50	20,846
<b>Macedonia</b>	CFC phase-out	UNIDO	300,012	165,776	85,861	16125	16125	118,111	109,871	7.50	8,240
<b>Mexico</b>	CFC phase-out	UNIDO	5,673,313	5,351,350	321,963			321,963	299,500	7.50	22,463
<b>Nigeria</b>	CFC phase-out	UNDP	2,306,198	866,383	531,327	417,770	369,428	1,318,525	1,209,656	9.00	108,869
<b>Panama</b>	CFC phase-out	UNDP	744,975	255,850	215,000	197,800	76,325	489,125	455,000	7.50	34,125
<b>Panama</b>	CFC phase-out	UNEP	28,250	16,950	11,300			11,300	10,000	13.00	1,300
<b>Philippines</b>	CFC phase-out	IBRD	3,595,797	3,121,785	358,512	115,500		474,012	434,873	9.00	39,139
<b>Romania</b>	CFC phase-out	UNIDO	457,735	170,979	254,506	32,250		286,756	266,750	7.50	20,006
<b>Romania</b>	CFC phase-out	Sweden	135,035	135,035				0	0	13.00	0
<b>Serbia and Montenegro</b>	CFC phase-out	UNIDO	2,072,601	815,925	1,048,663	132,763	75,250	1,256,676	1,169,001	7.50	87,675
<b>Serbia and Montenegro</b>	CFC phase-out	Sweden	216,784	151,420	65,364			65,364	57,844	13.00	7,520
<b>Turkey</b>	CFC phase-out	IBRD	1,395,000	780,000	530,000	30,000	30,000	590,000	548,837	7.50	41,163
<b>Venezuela</b>	CFC phase-out	UNIDO	4,671,404	1,754,218	2,227,218	689,968		2,917,186	2,713,661	7.50	203,525
<b>India</b>	CFC phase-out (foam)	UNDP	735,289	490,500	244,789			244,789	227,711	7.50	17,078
<b>Iran</b>	CFC phase-out	Germany	4,278,508	531,739	1,117,908	1,022,163	810,129	2,950,200	2,657,838	11.00	292,362

	(foam)										
<b>Iran</b>	CFC phase-out (MAC)	France	555,000	555,000				0	0		0
<b>India</b>	CFC phase-out (ref. man.)	UNDP	227,565	162,973	64,592			64,592	59,259	9.00	5,333
<b>India</b>	CFC phase-out (ref. ser.)	Germany	2,148,006	118,752	492,906	492,906	1,043,442	2,029,254	1,795,800	13.00	233,454
<b>India</b>	CFC phase-out (ref. ser.)	Switzerland	1,119,751	290,015	414,868	414,868		829,736	734,280	13.00	95,456
<b>India</b>	CFC phase-out (ref. ser.)	UNEP	324,762	96,050	96,050	96,050	36,612	228,712	202,400	13.00	26,312
<b>India</b>	CFC phase-out (ref. ser.)	UNDP	1,040,612	481,976	180,450	163,766	214,420	558,636	519,661	7.50	38,975
<b>Iran</b>	CFC phase-out (ref. ser.)	UNIDO	937,594	798,133	71,191	38,892	29,378	139,461	129,731	7.50	9,730
<b>Albania</b>	ODS phase-out	UNIDO	380,476	185,246	77,746	45,496	23,996	147,238	135,081	9.00	12,157
<b>Bangladesh</b>	ODS phase-out	UNDP	935,250	554,700	144,050	59,125	59,125	262,300	244,000	7.50	18,300
<b>Bangladesh</b>	ODS phase-out	UNEP	270,635	141,815	34,465	34,465	34,465	103,395	91,500	13.00	11,895
<b>Sudan</b>	ODS phase-out	UNIDO	688,000		236,500	236,500	215,000	688,000	640,000	7.50	48,000
<b>Colombia</b>	ODS phase-out	UNDP	2,529,668	2,529,668				0	0		0
<b>Cuba</b>	ODS phase-out	Germany	470,080	131,080	113,000	90,400	79,100	282,500	250,000	13.00	32,500
<b>Cuba</b>	ODS phase-out	France	605,680	226,000	226,000	113,000	40,680	379,680	336,000	13.00	43,680
<b>Cuba</b>	ODS phase-out	Canada	70,060	70,060				0	0		0
<b>Cuba</b>	ODS phase-out	UNDP	441,825	268,750	173,075			173,075	161,000	7.50	12,075
<b>Malaysia</b>	ODS phase-out	IBRD	3,304,113	1,310,432	1,098,949	298,244	298,244	1,695,437	1,555,447	9.00	139,990
<b>Thailand</b>	ODS phase-out	IBRD	3,981,634	1,444,550	924,668	597,191	597,191	2,119,050	1,944,083	9.00	174,967
<b>Vietnam</b>	ODS phase-out	IBRD	1,354,500	532,702	629,950		191,848	821,798	764,463	7.50	57,335
<b>Indonesia</b>	ODS phase-out (foam)	IBRD	1,325,006	1,128,750	158,631	37,625		196,256	182,564	7.50	13,692
<b>Indonesia</b>	ODS phase-out (MAC)	IBRD	272,694	136,892	135,802			135,802	126,327	7.50	9,475
<b>Indonesia</b>	ODS phase-out (ref. man.)	UNDP	1,251,320	817,500	236,530	197,290		433,820	403,553	7.50	30,267
<b>Indonesia</b>	ODS phase-out (Ref. ser.)	UNDP	444,015	271,300	172,715			172,715	160,665	7.50	12,050
<b>China</b>	Foam	IBRD	10,371,700	3,602,800	2,916,840	1,926,030	1,926,030	6,768,900	6,210,000	9.00	558,900
<b>China</b>	Refrigeration servicing	UNIDO	3,101,380		752,500	752,500	752,500	2,257,500	2,100,000	7.50	157,500
<b>China</b>	Refrigeration servicing	Japan	3,390,000	3,390,000				0	0		0
<b>Pakistan</b>	RMP	UNIDO	445,373	445,373				0	0		0
<b>China</b>	Solvent	UNDP	22,204,125	6,106,000	5,434,125	5,891,000	1,591,000	12,916,125	12,015,000	7.50	901,125
<b>Nigeria</b>	Solvent	UNIDO	1,123,590	340,775	456,875	325,940		782,815	728,200	7.50	54,615
<b>China</b>	Tobacco	UNIDO	3,440,000	1,827,500	1,612,500			1,612,500	1,500,000	7.50	112,500
<b>Subtotal</b>			<b>116,029,742</b>	<b>54,359,128</b>	<b>29,139,644</b>	<b>17,191,528</b>	<b>9,070,133</b>	<b>55,401,305</b>	<b>51,202,643</b>		<b>4,198,662</b>
<b>India</b>	CTC phase-out	France	2,255,000	1,085,000	585,000	585,000		1,170,000	1,000,000	17.00	170,000
<b>India</b>	CTC phase-out	Germany	1,472,500	757,500	357,500	357,500		715,000	599,832	19.20	115,168
<b>India</b>	CTC phase-out	Japan	2,780,000	2,780,000				0	0		0
<b>Korea, DPR</b>	CTC phase-out	UNIDO	2,348,707	1,075,000	322,500	537,500	306,207	1,166,207	1,084,844	7.50	81,363
<b>Pakistan</b>	CTC phase-out	UNIDO	271,589	271,589				0	0		0

<b>Subtotal</b>			<b>9,127,796</b>	<b>5,969,089</b>	<b>1,265,000</b>	<b>1,480,000</b>	<b>306,207</b>	<b>3,051,207</b>	<b>2,684,676</b>		<b>366,531</b>
									0		0
<b>China</b>	Process agent	IBRD	29,025,000	2,150,000	17,200,000	5,375,000	3,225,000	25,800,000	24,000,000	7.50	1,800,000
<b>Subtotal</b>			<b>29,025,000</b>	<b>2,150,000</b>	<b>17,200,000</b>	<b>5,375,000</b>	<b>3,225,000</b>	<b>25,800,000</b>	<b>24,000,000</b>		<b>1,800,000</b>
<b>Argentina</b>	MB	UNDP	1,004,050	502,025	502,025			502,025	467,000	7.50	35,025
<b>Chile</b>	MB	IBRD	2,738,193	743,581	574,623	710,489	118,250	1,403,362	1,305,453	7.50	97,909
<b>China</b>	MB	UNIDO	5,267,500			1,290,000	1,935,000	3,225,000	3,000,000	7.50	225,000
<b>China</b>	MB	Italy	4,470,000	4,470,000				0	0		0
<b>Costa Rica</b>	MB	UNDP	1,823,037	1,041,736	781,301			781,301	703,875	11.00	77,426
<b>Morocco</b>	MB	UNIDO	3,123,344	1,796,320	442,505	456,210	428,309	1,327,024	1,234,441	7.50	92,583
<b>Syria</b>	MB	UNIDO	464,846	261,559	203,287			203,287	189,104	7.50	14,183
<b>Thailand</b>	MB	IBRD	2,531,205		1,518,130		1,013,075	2,531,205	2,354,609	7.50	176,596
<b>Turkey</b>	MB	UNIDO	1,514,507	752,500	762,007			762,007	708,844	7.50	53,163
<b>Kenya</b>	MB (flowers)	UNDP	219,583		219,583			219,583	197,823	11.00	21,760
<b>Kenya</b>	MB	Germany	129,835		129,835			129,835	114,898	13.00	14,937
	(horticulture)										
<b>Lebanon</b>	MB	UNIDO	45,692	45,692				0	0		0
	(strawberries)										
<b>Lebanon</b>	MB (vegetable/ tobacco)	UNDP	322,500	322,500				0	0		0
<b>Subtotal</b>			<b>23,654,292</b>	<b>9,935,913</b>	<b>5,133,296</b>	<b>2,456,699</b>	<b>3,494,634</b>	<b>11,084,629</b>	<b>10,276,047</b>		<b>808,582</b>
<b>China</b>	Accelerated phase-out	USA	5,375,000	5,375,000				0	0		0
<b>Korea, DPR</b>	Production	UNIDO	513,188	513,188				0	0		0
<b>Argentina</b>	Production CFC	IBRD	4,807,000	420,000	2,100,000	120,000	1,120,000	3,340,000	3,106,977	7.50	233,023
<b>China</b>	Production CFC	IBRD	69,875,000	13,975,000	13,975,000	25,800,000	8,062,500	47,837,500	44,500,000	7.50	3,337,500
<b>India</b>	Production CFC	IBRD	32,250,000	6,450,000	6,450,000	6,450,000	6,450,000	19,350,000	18,000,000	7.50	1,350,000
<b>Korea, DPR</b>	Production	UNIDO	513,188	513,188				0	0		0
<b>Mexico</b>	Production CFC	UNIDO	17,038,750	4,300,000	12,738,750			12,738,750	11,850,000	7.50	888,750
<b>Venezuela</b>	Production CFC	IBRD	14,190,000	8,707,500	1,881,250	2,472,500	1,128,750	5,482,500	5,100,000	7.50	382,500
<b>China</b>	Production TCA	IBRD	752,500				752,500	752,500	700,000	7.50	52,500
<b>China</b>	Halon	IBRD	13,115,000	12,255,000	430,000	322,500	107,500	860,000	800,000	7.50	60,000
<b>India</b>	CTC phase-out	IBRD	26,121,474	4,191,474	10,701,961	4,322,508	3,452,766	18,477,235	17,188,126	7.50	1,289,109
<b>Subtotal</b>			<b>184,551,100</b>	<b>56,700,350</b>	<b>48,276,961</b>	<b>39,487,508</b>	<b>21,074,016</b>	<b>108,838,485</b>	<b>101,245,102</b>		<b>7,593,383</b>
<b>TOTAL</b>			<b>365,301,913</b>	<b>130,695,280</b>	<b>101,870,791</b>	<b>66,442,944</b>	<b>37,195,074</b>	<b>205,508,809</b>	<b>190,626,949</b>		<b>14,881,860</b>

## Annex 6: Planned Multi-year Agreements as of 2005 in Business Plans and Their Impacts on the Funding Requirement for the Period 2006-2008 (status April 2005, inserted the decisions taken at 45th ExCom)

Country	Agency	Sector and Sub-Sector	Value (\$000) in 2005	ODP in 2005	Value (\$000) in 2006	ODP in 2006	Value (\$000) in 2007	ODP in 2007	Value (\$000) after 2007	ODP after 2007	Total 2006-2008	Net amount 2006-2008	Agency fees 2006-2008	CE
Central Afr. Republic	France	Implem. of a terminal CFC Phase out Plan	0		283		170				453,000	394,110	58,890	
Laos	France	Implem. of a terminal CFC Phase out Plan	0		339		226				565,000	491,550	73,450	
<b>Subtotal</b>			<b>0</b>	<b>0</b>	<b>622</b>	<b>0</b>	<b>396</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1018000</b>	<b>885660</b>	<b>132340</b>	
Afghanistan	Germany	Refrigeration - service sector training of technicians			300	?	300	?			600,000	522,000	78,000	
Afghanistan	Sweden	Refrigeration Servicing - Technical Assistance to implement the Country Programme	88		200		200				400,000	348,000	52,000	
Algeria	UNIDO	ODS Phase-out Plan	1075	173	538	86	753	121	0	0	1,291,000	1,194,175	96,825	5.97
Algeria	UNIDO	ODS Phase-out Plan	247	21	0	0	0	0	0	0		0	0	11.76
Algeria	UNIDO	ODS Phase-out Plan	81	6	0	0	0	0	0	0		0	0	13.50
China	UNIDO	MDI, Phase-out Plan	538	15	2150	62	1075	31	9138	261	12,363,000	11,435,775	927,225	32.45
Egypt	UNIDO	MDI Phase-out Plan	0	0	1075	29	1075	29	2688	72	4,838,000	4,475,150	362,850	34.42
Egypt	UNIDO	ODS Phase-out plan	1075	194	1075	194	1290	233	0	0	2,365,000	2,187,625	177,375	5.25
Korea, DPR	UNIDO	RMP, II. Phase	0	0	645	115	538	96	0	0	1,183,000	1,094,275	88,725	5.19
Romania	UNIDO	CFC Phase-out Plan, Refrigeration	177	33	285	53	70	13	0	0	355,000	328,375	26,625	5.10
Tunisia	UNIDO	RMP	0	0	538	91	323	54	0	0	861,000	796,425	64,575	5.49
Yemen	UNIDO	Refrigeration, Terminal umbrella project	430	36	430	36	0	0	0	0	430,000	397,750	32,250	11.50
Zimbabwe	Germany	Refrigeration - Terminal Phase out project	0	0	575	100	500	85	475	65	1,550,000	1,348,500	201,500	5.39
<b>Subtotal</b>			<b>3711</b>	<b>478</b>	<b>7811</b>	<b>766</b>	<b>6124</b>	<b>662</b>	<b>1230</b>	<b>398</b>	<b>26236000</b>	<b>24128050</b>	<b>2107950</b>	
China	IBRD	Process Agents Phaseout Plan (Phase II)	10750	1	32250	4500					32,250,000	29,831,250	2,418,750	9.02
<b>Subtotal</b>			<b>10750</b>	<b>1</b>	<b>32250</b>	<b>4500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>32250000</b>	<b>29831250</b>	<b>2418750</b>	
Iran	UNIDO	Solvents, CTC	828	77	1075	100	2150	200	6.697	623	3,231,697	2,989,320	242,377	3.82
Congo, DR	UNIDO	Process Agents, Terminal Umbrella			185	15					185,000	169,725	15,275	
Korea, DPR	UNIDO	Process Agents, Terminal Umbrella			914	146					914,000	850,233	63,767	
Romania	UNIDO	Process Agents, Terminal Umbrella	0	0	753	117	538	83	0	0	1,291,000	1,194,175	96,825	5.97
<b>Subtotal</b>			<b>0</b>	<b>0</b>	<b>1852</b>	<b>278</b>	<b>538</b>	<b>83</b>	<b>0</b>	<b>0</b>	<b>2390000</b>	<b>2214133</b>	<b>175867</b>	
Iran	UNIDO	Solvents, TCA	323	29	1075	97	2150	193	753	68	3,978,000	3,679,650	298,350	10.34
<b>Subtotal</b>			<b>323</b>	<b>29</b>	<b>1075</b>	<b>97</b>	<b>2150</b>	<b>193</b>	<b>753</b>	<b>68</b>	<b>3978000</b>	<b>3679650</b>	<b>298350</b>	

Romania	UNIDO	Production, CFC/CTC/MBR-closure	1290	229	968	171	0	0	0	0	968,000	895,400	72,600	5.46
<b>Subtotal</b>			<b>1290</b>	<b>229</b>	<b>968</b>	<b>171</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>968000</b>	<b>895400</b>	<b>72600</b>	
Turkey	UNIDO	BCM phase-out			753	20					753,000	700,465	52,535	
Turkey	UNIDO	BCM phase-out, project preparation			#20#									
<b>Subtotal</b>			<b>0</b>	<b>0</b>	<b>753</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>753000</b>	<b>700465</b>	<b>52535</b>	
Kuwait	UNIDO	Halon Phase-out			484						484,000	450,000	34,000	
<b>Subtotal</b>			<b>0</b>	<b>0</b>	<b>484</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>484000</b>	<b>450000</b>	<b>34000</b>	
China	UNIDO	Fumigants, Production Phase-out plan	0	0	1075	111	1075	111	5375	555	7,525,000	6,960,625	564,375	8.96
<b>Subtotal</b>			<b>0</b>	<b>0</b>	<b>1075</b>	<b>111</b>	<b>1075</b>	<b>111</b>	<b>5375</b>	<b>555</b>	<b>7525000</b>	<b>6960625</b>	<b>564375</b>	
Brazil	UNIDO	Sectoral Phase-out Plan	1075	73	1075	73	1075	73	0	0	2,150,000	1,988,750	161,250	13.99
China	Germany	Fumigant - MeBr Sector Phase-Out Project	0		0		200	10	1800	90	2,000,000	1,740,000	260,000	17.40
Egypt	UNIDO	Fumigants, Phase-out plan							2429	190.4	2,429,000	2,259,535	169,465	
Guatemala	UNIDO	Fumigants, Phase-out plan							3502	320.6	3,502,000	3,257,674	244,325	
Honduras	UNIDO	Fumigants, Phase-out plan	0	0	1075	93	0	0	1183	102	2,258,000	2,088,650	169,350	10.71
Libya	UNIDO	Fumigants, Phase-out plan	538	38	0	0	430	30	323	23	753,000	696,525	56,475	13.57
Vietnam	IBRD	Methyl Bromide phaseout plan	323	0	0	20	323	0	129	40	452,000	418,100	33,900	12.35
Zimbabwe	UNDP	Fumigant Methyl bromide	218	15	218	15	0		0	0	218,000	201,650	16,350	13.99
Zimbabwe	UNIDO	Fumigants, Phase-out in tobacco seedling	430	33	0	0	430	33	430	33	860,000	795,500	64,500	12.38
<b>Subtotal</b>			<b>2584</b>	<b>159</b>	<b>2368</b>	<b>201</b>	<b>2458</b>	<b>146</b>	<b>9796</b>	<b>799</b>	<b>14622000</b>	<b>13446384</b>	<b>1175615</b>	