



**United Nations  
Environment  
Programme**

Distr.  
LIMITED

UNEP/OzL.Pro/ExCom/45/46  
8 March 2005

ORIGINAL: ENGLISH



EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Forty-fifth Meeting  
Montreal, 4-8 April 2005

**FURTHER ASSISTANCE FOR THE POST-2007 PERIOD FOR LOW-VOLUME  
CONSUMING COUNTRIES: A REVIEW OF DECISION 31/48**

For reasons of economy, this document is printed in a limited number. Delegates are kindly requested to bring their copies to the meeting and not to request additional copies.

## **I. Introduction**

1. Phasing out CFC use in the refrigeration servicing sector has long been one of the Executive Committee's priorities.
2. The Executive Committee was approving training programmes for refrigeration technicians, and recovery and recycling (R&R) projects for this purpose as early as 1991. Since then, R&R projects and stand-alone training programmes have been replaced by refrigerant management plans (RMPs). The main objective of an RMP is to develop and implement a strategy that will manage the use and phase-out of CFCs used in the refrigeration servicing sector. As such, an RMP has been a tool used by Article 5 countries to achieve compliance with the control measures established by the Montreal Protocol.
3. At its 31st Meeting, the Executive Committee decided on the modalities for approving funding for the preparation and implementation of RMP projects (decision 31/48). The Executive Committee also decided to "review in 2005 whether further assistance is needed for the post-2007 period, and what assistance the Fund might consider at that time to enable full compliance with the Protocol's phase-out requirements".
4. The Secretariat has prepared the present paper pursuant to decision 31/48.

### Structure of the paper

5. The paper analyzes the results of RMP projects that have been approved to phase out CFC consumption in the refrigeration sector in LVC countries and analyzes the effectiveness of these projects in assisting countries to achieve compliance.
6. The paper also analyzes the experience gained to date in the implementation of a limited number of terminal phase-out plans (TPMPs) that have been approved in LVC countries and compares the major commitments embodied in RMP and TPMP projects.
7. The paper then examines issues related to the CFC phase-out in the post-2007 period including the role of TPMPs in this phase-out. The paper describes a possible methodology for establishing the level of funding for complete phase-out of CFCs in LVC countries. Consideration is given to whether efforts to phase out minor consumption of other ODSs, in particular TCA, CTC and, where appropriate, small MB consumption, should be covered in TPMPs for CFCs, in order to optimize implementation efficiency and resource use. Finally, a set of recommendations is proposed for consideration by the Executive Committee.
8. The paper does not review the needs of non-LVC countries since the phase-out of CFCs for non-LVC countries has already been addressed by the Executive Committee through the modality of approval and implementation of national ODS phase-out plans.

9. In preparing the present paper, the Secretariat reviewed:
- (a) All policy papers that have been considered by the Executive Committee on the refrigeration servicing sector (Annex I to the present paper includes a list of those policy papers);
  - (b) Project completion reports on stand-alone training programmes and R&R projects;
  - (c) Progress reports on the implementation of RMPs that were prepared by Article 5 countries; and
  - (d) Evaluation reports on R&R and RMP projects.
10. The quantitative analysis is based on the data reported by Article 5 countries to the Ozone Secretariat under Article 7 of the Montreal Protocol, and on the Inventory of Approved Projects database.

#### Overview of countries and CFC consumption

11. Of the current 188 Parties to the Montreal Protocol, 137 that are classified as operating under paragraph 1 of Article 5 of the Protocol are receiving assistance. Additionally, 6 countries have not yet become parties to the Montreal Protocol.
12. Article 5 countries can be classified in two broad categories according to their level of CFC consumption:
- (a) Low-volume consuming (LVC) countries with a CFC baseline consumption below 360 ODP tonnes<sup>1</sup>, and
  - (b) Non-low volume consuming (non-LVC) countries, with a CFC baseline consumption above 360 ODP tonnes.
13. The distribution of CFC baselines and latest reported CFC consumption in Article 5 countries is shown in Table 1 below.

---

<sup>1</sup> At its 17th Meeting, the Executive Committee decided to take an annual consumption level of 360 tonnes as the cut-off point below which a country would be considered to be a low-ODS-consuming country.

**Table 1. Categories of Article 5 countries according to their CFC baseline for consumption**

| Category | No. of countries | Aggregated CFC (ODP tonnes) |                      | Ratio:<br>Latest/Baseline |
|----------|------------------|-----------------------------|----------------------|---------------------------|
|          |                  | Baseline                    | Latest consumption * |                           |
| non-LVC  | 38               | 143,887.8                   | 63,801.3             | 44.3%                     |
| LVC      | 99               | 7,485.9                     | 4,356.6              | 58.2%                     |
| Total    | 137              | 151,041.5                   | 67,986.6             | 45.0%                     |

(\*) 2002 or 2003 (latest) total CFC reported consumption under Article 7 of the Montreal Protocol.

14. The ratio between latest consumption and baseline shows that the progress of phase-out in LVC countries has been slower than in non-LVC countries. This could be partly attributed to the fact that most of the CFCs used in LVC countries are in the refrigeration servicing sub-sector, a sub-sector characterized by many stakeholders and small users scattered throughout each country. The refrigeration servicing sector is therefore considered to be the most challenging sector of CFC consumption.

15. Most of the 99 LVC countries have received assistance from the Multilateral Fund for the phase-out of part of their CFC consumption.

#### Relevant decisions on the refrigeration servicing sector

16. As early as its 22nd Meeting (June 1997), the Executive Committee began taking decisions relating to the refrigeration servicing sector. The most relevant decisions include the following:

- (a) Revised guidelines for the preparation of RMPs were approved at the 23rd Meeting of the Executive Committee (decision 23/15);
- (b) At its 27th Meeting, the Executive Committee constituted a contact group with a mandate to improve the quality of RMP project preparation and implementation. The contact group submitted its final report to the 31st Meeting, containing draft guidelines on RMPs. On the basis of the report, the Executive Committee adopted decision 31/48 on RMP projects; and
- (c) At its 38th Meeting, the Executive Committee decided that specific requests for funding of TPMPs for LVC countries might be considered on a case-by-case basis (decision 38/64); and
- (d) Subsequent to the evaluation of RMPs in LVC countries by the Executive Committee at its 41st Meeting, the Committee adopted decision 41/100 on ways to reorient the approach to RMP projects to better facilitate compliance by LVC countries.

17. A historical analysis of relevant decisions taken by the Executive Committee related to the refrigeration servicing sector is presented in Annex II to this paper.

## II. Implementation of RMPs and compliance

18. Currently, total remaining CFC consumption in LVC countries is linked predominantly to the refrigeration servicing sector, since most CFC-based manufacturing enterprises, where applicable and eligible, have already been converted to non-CFC technologies.<sup>2</sup> RMPs and, more recently TPMPs, have been the means used by LVC countries to phase out their CFC consumption.

19. The design of an RMP is influenced significantly by the prevailing circumstances in the country concerned. Specifically:

- (a) The amount of CFC consumed in the servicing sector and its distribution in the various refrigeration sub-sectors: i.e., domestic, mobile air conditioning, commercial, industrial and, to a lesser extent, air-conditioning and refrigerated transport;
- (b) The size of the country in terms of population and surface area; the number of major cities and towns; and the geographical distribution of main commercial and industrial activities;
- (c) The size and distribution of the refrigeration servicing sector, including the number of refrigeration service technicians, the number of service workshops and their geographical distribution; and
- (d) The existence or otherwise of ODS regulations including a licensing system, and the number of customs officers available to control ODS imports.

### Components of RMPs

20. The main components frequently included in most RMP projects are: support for development of a regulatory framework for ODS control and its enforcement; training of refrigeration service technicians; supply of basic tools and ancillary equipment for service workshops; and, R&R equipment.

21. With the level of funding provided under decision 31/48, the majority of RMP update proposals included additional training activities for refrigeration service technicians and customs officers and expanding the approved R&R programme. Two new activities were included in more recent proposals: an incentive programme for retrofitting commercial refrigeration equipment, and monitoring the implementation of the activities proposed in the RMP project.

---

<sup>2</sup> As of the 44th Meeting, the Executive Committee has approved US \$22,984,920 for the phase-out of 2,658 ODP tonnes of CFCs in the manufacturing sector in 27 LVC countries. Annex IV attached to the present report lists the amount of CFCs to be phased-out in the manufacturing sector in each LVC country with manufacturing enterprises.

Effectiveness of RMPs in assisting countries achieve compliance

22. To assess the effectiveness of RMPs in helping countries achieve compliance, the Secretariat grouped the 99 LVC countries into four groups according to the level of assistance received in the refrigeration servicing sector, as shown in Table 2 below. The 2001-2003 CFC consumption and the level of funding approved in the refrigeration servicing sector for each LVC country in each of the groups is presented in Annex IV to the present paper.

**Table 2. Grouping of LVC countries according to the type of assistance received in the refrigeration servicing sector**

| Group | Number of countries  | CFC baseline (ODP tonnes) |
|-------|--|---------------------------|
| I     | 4 countries that do not have an approved RMP project   | 295.9                     |
| II    | 13 countries with an RMP approved prior to decision 31/48, i.e., without a commitment to achieve the 2005 and 2007 CFC limits  | 1,017.9                   |
| III   | 57 countries with an RMP approved in accordance with decision 31/48, i.e., commitment to achieve the 50 and 85 per cent reduction targets without further assistance from the Fund | 4,763.9                   |
| IV    | 25 countries with approved total phase-out plans (TPMPs) <sup>3</sup> , i.e., the countries will not seek further assistance from the Fund to achieve the total CFC phase-out      | 1,408.2                   |
| Total | 99 countries   | 7,485.9                   |

23. In order to associate the reported reductions in CFC consumption in LVC countries (i.e., from a 1995-1997 average CFC consumption of 7,485.9 ODP tonnes to 4,356.6 ODP tonnes in 2003) with approved projects, the Secretariat also considered progress reports on implementation of projects related to the refrigeration servicing sector prepared by LVC countries and bilateral and implementing agencies, as well as desk studies and field evaluations of training programmes, R&R projects, licensing systems and RMP projects.

24. A review of the above reports makes it possible to conclude that several factors have contributed to the reduction in the consumption of CFCs in LVC countries. These factors are:

- (a) *ODS legislation and regulations, including an import licensing and quota system and bans on the import of ODS-based equipment.* Enforcement of regulations and application of import licensing quotas<sup>4</sup> has led to a reduction in the availability of ODS and imported second-hand CFC-based refrigeration equipment. It has also contributed to a change in the market price relationship between CFC and non-CFC refrigerants (though to a highly variable degree);

<sup>3</sup> Including Armenia and Turkmenistan that received financial assistance from the GEF when these countries were not operating under Article 5(1) of the Montreal Protocol.

<sup>4</sup> Most of the existing licensing systems in LVC countries became operational in the recent past and, therefore, there is relatively little experience with their operation and effectiveness.

- (b) *Implementation of training programmes for customs officers.* In many instances, these training programmes have been useful in establishing a more reliable control mechanism for ODS imports, introducing the ODS legislation and the licensing system, and enhancing awareness on ODS issues among customs officers. Local trainers have been trained and the curricula of customs departments, which are now the basis for ongoing training programmes, have been adapted to include ODS;
- (c) *Implementation of training programmes for refrigeration service technicians in good practices.* The introduction of good practices in refrigeration servicing<sup>5</sup> has been a decisive factor in reducing CFC consumption. However, there has been no quantification of the actual amount of CFCs not emitted as a result of the introduction of good servicing practices;
- (d) *Market forces that have impact on the prices of refrigerants (both CFC and non-CFC).* The price differential between CFC and non-CFC refrigerants has decreased in the majority of LVC countries. This tendency will continue as the availability of CFCs is reduced throughout the compliance period;
- (e) *The rate of introduction of refrigeration equipment.* The majority of the refrigeration manufacturing enterprises in LVC countries have already been converted to non-CFC technologies (see Annex III). Also, most of the CFC-based refrigeration equipment discarded in LVC countries is now being replaced by new non-ODS based equipment. Further, the rate of introduction of second-hand CFC-based equipment has been reduced by ODS regulations and by a reduction in supply from non-Article 5 countries;
- (f) *Recovery and re-use of CFC.* This practice is performed in service workshops that have received recovery equipment, if commercial or industrial installations are serviced and large quantities of refrigerants can be recovered and re-used at the site. However, the amount of CFC refrigerants that have been recovered is generally much lower than the amount estimated in the project proposal. In many cases, it has been reported that larger amounts of non-CFC refrigerants are being recovered<sup>6</sup>.

25. From the analysis of the effectiveness of RMPs in assisting LVC countries achieve compliance, it can be concluded that most of the LVC countries might be able to achieve the 2005 allowable CFC consumption level. However, it is too early to assess how many of these countries will actually comply with the 2007 reduction step. Furthermore, during the implementation of RMPs some structural deficiencies have been found which make them less suitable for the challenges of a complete CFC phase-out. These deficiencies are:

---

<sup>5</sup> Good servicing practices include, among others, leak detection and repair, replacement of CFC for flushing systems with nitrogen or compressed air, improved refrigerant charging methods to avoid over-charging the systems with CFC refrigerants, and reduced equipment failures after repairs.

<sup>6</sup> In some countries, increasing volumes of recovered contaminated CFCs are stored, waiting for either reclamation or destruction, while such facilities are not available in the country concerned.

- (a) The co-ordination requirements of the different activities in the RMP are not clearly delineated, leading in a number of cases to a lack of co-ordination among the principal stakeholders. This specifically refers to the co-ordination in implementation of activities in cases where two or more agencies are involved, as well as to the co-ordination needs between Government action and agencies' implementation;
- (b) The monitoring and reporting requirements are limited, and have rarely been fulfilled, reducing the ability of the country to observe problematic developments, and the ability of the Executive Committee to address such developments at an early stage to avoid a country being in non compliance with the provisions of the Montreal Protocol;
- (c) The flexibility of RMPs, despite recent improvements, is still insufficient for a multi-year plan aiming to address all remaining uses, thus potentially reducing their capacity/ability to address challenges that are not yet fully known; and
- (d) The lack of clear and binding interim phase-out targets, which have proved in national and sectoral phase-out plans and existing TPMPs to be beneficial in supporting countries in their prioritisation.

### **III. Comparison of RMPs with TPMPs**

26. TPMP proposals for LVC and non-LVC countries that have been approved by the Executive Committee (starting from the 35th Meeting), have been prepared by bilateral and/or implementing agencies on behalf of LVC countries with the objective of phasing out the remaining CFC consumption in the country without causing undue economic hardship. In some cases, TPMPs have also addressed the phase-out of small amounts of other ODS consumption<sup>7</sup>.

27. The plan of action proposed in the TPMPs is supported by several individual activities for which funding is requested. With the exception of institutional strengthening, TPMPs provide the last support from the Multilateral Fund related to CFC phase-out.

#### TPMP projects for LVC countries

28. At the time of the submission of a TPMP project, the LVC country concerned would need to have enacted ODS legislation and have in place an ODS licensing system. In some cases, additional support would have been requested to strengthen the institutional capacities in the country, in particular the customs department including enforcement officers; to strengthen the regulatory framework by drafting new/or reviewing existing ODS legislation and enforcing the licensing system; and to increase the sense of ownership of the CFC phase-out plan by local authorities.

---

<sup>7</sup> Some TPMPs have also incorporated activities for the total phase-out of other substances, typically related to small amounts of CTC or TCA consumption in the country.



29. Additional training and/or retraining of customs officers in monitoring, detection and control of ODSs and ODS-based equipment and assessment of any possible illegal trade in ODS and ODS-based equipment is also requested as a follow-up to previous training programmes under the approved RMP project.

30. TPMP projects usually also include additional support for continuation of training programmes for refrigeration servicing technicians in good service practices that were funded in the original RMP projects.

31. Subsequent to adoption of decision 41/100 on ways to reorient the approach to RMP projects to better facilitate compliance by LVC countries, in several TPMP projects the typical R&R component has been modified into a broader technical assistance programme. This technical assistance programme supplements CFC phase-out activities that were initiated under the approved RMP.

32. In TPMP projects, the roles and responsibilities of major stakeholders, mainly the Ozone Units and the bilateral and implementing agencies assisting Article 5 countries in implementing their phase-out plans, have been re-focussed. Specifically:

- (a) The Ozone Units play a key role in achieving overall ODS phase-out, by co-ordinating and implementing the country's ODS phase-out programme;
- (b) The major co-ordination requirements for implementation of all the activities proposed under the TPMP are fulfilled by project management units (PMU), which are responsible for the preparation of annual action programmes; co-ordination of phase-out activities with major stakeholders, and monitoring and reporting. Depending on the local circumstances, in the majority of the LVC countries the PMUs can be managed by one staff member working on a part time or full time basis; and
- (c) The lead agency and, where applicable, the cooperating agencies will assist the Ozone Units and PMUs in the implementation of the activities proposed in TPMP projects.

33. The roles and responsibilities of the principal stakeholders implementing TPMP projects are presented in Annex V to the present report.

#### Commitments in RMP and TPMP projects for LVC countries

34. A comparison of the major commitments in RMP and TPMP projects for LVC countries is presented in Table 3 below.

**Table 3. Comparison of RMP and TPMP projects in LVC countries**

|     | <b>RMP projects</b>  | <b>TPMP projects</b>  |
|-----|--|---|
| (a) | Phase-out of CFCs to achieve the 2005 and 2007 CFC consumption levels  | Complete phase-out of CFCs. For some countries, other ODSs are also included in the phase-out plan  |
| (b) | The phase-out commitments by the beneficiary LVC country are embedded in decision 31/48  | A bilateral agreement is entered between the beneficiary LVC country and the Executive Committee. This agreement provides for a clearer commitment by the Government, enhances ownership of the phase-out plan by the country (i.e., country-driven approach adopted in the strategic planning for the Multilateral Fund) and delineates the responsibilities of major stakeholders   |
| (c) | The Government is committed to enact regulations and legislation required for the effective implementation of phase-out activities   | A licensing system must be in operation and the Government has enacted or improved legislation to phase-out ODS consumption   |
| (d) | The commitments to achieve the 2005 and 2007 CFC consumption levels are based on the CFC baseline consumption and not on the level of CFC consumption in the country at the time of the preparation of the RMP proposal. Therefore, CFC consumption could increase in any given year up to the level of consumption allowable under the Protocol | The phase-out of CFCs is from an established level of consumption (i.e., “starting point”) which is typically equivalent to the level of consumption in the country at the time of the preparation of the TPMP proposal. In subsequent years, CFC consumption cannot increase   |
| (e) | Additional funding might be approved for the post-2007 period (i.e., addressing the remaining 15 per cent consumption of the CFC baseline)   | No further funding for the phase-out of CFCs (or other ODSs if included)  |
| (f) | The total level of funding is completely disbursed (i.e., in one tranche) to a relevant bilateral and/or implementing agency at the time the project is approved by the Executive Committee  | The total level of funding is approved in principle. Subsequent to the first tranche of the project (which is usually approved at the time of approval of the TPMP), other tranches must also be individually approved on the basis of a progress report on implementation during the previous period and a plan of action for the following period, both prepared by the Government concerned and the lead implementing agency |
| (g) | Flexibility is given to the beneficiary country for selecting and implementing RMP components which are deemed most relevant in order to meet its phase-out commitments  | Total flexibility is given in the agreement between the beneficiary LVC country and the Executive Committee to address specific needs that might arise during project implementation  |

|     | <b>RMP projects</b>   | <b>TPMP projects</b>  |
|-----|---|---|
| (h) | The beneficiary LVC country has committed to annual reporting of progress in implementing the RMP and meeting the reduction steps. However, the only reports available on the implementation of RMPs are those submitted by LVC countries on the original RMP projects upon requesting funding for the RMP update, and those prepared by bilateral and implementing agencies in the context of their mandatory annual progress reports, which only include a very brief status report on the individual activities comprising the RMP | Mandatory annual reporting as a condition of approval of the next years' funding  |
| (i) | The roles and responsibilities of the implementing agencies are typically related to the specific sub-projects included in the RMP proposal   | Roles and responsibilities of the lead agency and, where applicable, coordinating agencies are clearly delineated in the agreement. The lead agency has an overarching responsibility |

### **III. CFC phase-out in the post-2007 period in LVC countries**

35. For the 57 countries with an RMP approved under decision 31/48 (Group III in Table 2), the total remaining CFC consumption that has not been funded by the Multilateral Fund is relatively small, i.e., 714.6 ODP tonnes equivalent to 15 per cent of their CFC baseline. For the other 17 LVC countries without an approved RMP (Groups I and II in Table 2), the total 2003 reported CFC consumption figure is 590.9 ODP tonnes and the aggregated CFC baseline is 1,313.8 ODP tonnes.

36. Although the CFC consumption to be addressed in LVC countries is small in comparison to CFC consumption in non-LVC countries, the achievement of complete phase-out may still provide challenges. Although the total amount of CFCs that will be available from 2005 (when the level of production will be reduced by 50 per cent of the baseline, with subsequent reductions in 2007 and a complete phase-out by 1 January 2010) is likely to be sufficient to address the consumption needs in all Article 5 countries; on a country-by-country basis, the availability of CFCs might be limited. From 2010, the only CFCs possibly available at that stage would be a limited supply of recycled substances plus any stockpiling.

37. Some governments have expressed their concern about the negative impact of future non-availability and higher prices of CFC refrigerants on local consumers, particularly on the low-income segment of the population. Non-availability of CFCs could force premature replacement of refrigeration systems such as domestic refrigerators, industrial and food storage facilities and the like before the end of their useful life.

#### TPMPs for LVC countries in the post-2007 period

38. Since the approval of the first TPMP for LVC countries in 2001, 22 additional TPMPs have been approved including one phase-out strategy for eleven Pacific Island countries. As implementation of TPMPs in LVC countries only started in the recent past, final results on their

performance are not yet available. However, annual reporting on their CFC consumption to date indicates that all LVC countries are so far meeting their commitments.

39. The content and modality of TPMPs has been based on the cumulative experience and knowledge gained in the Multilateral Fund since 1991, through its review of projects in the refrigeration servicing sector, and on the large number of decisions (as shown in Annex II to this paper) that have improved their performance. In regard to performance commitments, TPMPs for LVC countries also draw on the substantial experience gained in the development and implementation of phase-out plans for larger ODS consuming countries.

40. As a result of this evolving process, all TPMP projects approved have indicated a stronger commitment by the Governments concerned; have demonstrated enhanced ownership of the phase-out plan by the country (i.e., country-driven approach adopted in the strategic planning for the Multilateral Fund); and had provided a clearer delineation of the responsibilities of major stakeholders as compared to an RMP. Moreover, the identified structural deficiencies of RMPs have been addressed in TPMP projects.

41. Based on the above findings, the TPMP project modalities should provide an effective framework for the complete phase-out of CFC consumption not so far addressed in LVC countries.

#### Submission of TPMPs

42. If final assistance for CFC phase-out in LVC countries was to be based on the TPMP modality, it would include the following:

- (a) The commitment by the Government concerned to the phased reduction and complete phase-out of the consumption of CFCs in the country according to a specific phase-out schedule which is at a minimum consistent with the Montreal Protocol's control measures;
- (b) An agreement that no additional resources would be requested by the country concerned from the Multilateral Fund or bilateral agencies for activities related to the phase-out of CFCs, and other ODS where applicable;
- (c) An understanding of the flexibility accorded to the Government concerned so that activities may be incorporated during implementation of the TPMP to address specific needs that might arise to facilitate the smoothest possible phase-out of ODSs;
- (d) A commitment to annual reporting on the implementation of the activities undertaken in the previous year as well as a thorough work plan for the implementation of next year's activities, being a precondition for the release of annual tranches; and
- (e) The establishment of PMU in the country describing the decision making process and the specific roles and responsibilities of the major national stakeholders, the

responsibilities of the lead implementing agency and the co-operating agencies if applicable.

43. On the basis of experience with the implementation of current RMPs and TPMPs, it may also be relevant to have an agreement that the underlying data on annual consumption could be subject to verification at the request of the Executive Committee.

#### **V. Level of funding for complete CFC phase-out in LVC countries**

44. The level of funding of RMP projects is based on the specific circumstances prevailing in each country. In this regard, the Executive Committee has not taken any decision related to the establishment of a threshold level for funding complete CFC phase-out in the refrigeration servicing sector in LVC countries.

#### Proposed methodology for determining the level of funding for the post-2007 period

45. The decision taken by the Executive Committee at its 31st Meeting for an increase in the funding level of original RMP proposals was based on the cost of the original RMP project (i.e., the additional funding shall not exceed 50 per cent of the funds approved for the original RMP) and not on the basis of a cost-effectiveness threshold. Similarly, the level of funding for new RMPs (approved after the 31st Meeting) was based on the level of funding typically approved for that type of project.

46. So far, the Executive Committee has approved TPMP projects in 13 LVC countries, nine of which already had an approved RMP project. A phase-out strategy addressing the CFC consumption of 11 LVC Pacific Island countries has also been approved by the Executive Committee.

47. As in the case of RMP proposals, the level of funding approved for TPMPs was based on the specific circumstances of the refrigeration servicing sector in the countries concerned, including:

- (a) The CFC baseline for compliance and the level of CFC consumption at the time of preparation of the TPMP<sup>8</sup>;
- (b) The sectoral distribution of CFCs in the refrigeration servicing sector (e.g., domestic, commercial, MAC, industrial) at the time of preparation of the proposal;
- (c) The status of implementation of previous projects and activities related to the refrigeration servicing sector, in particular the training programmes and the R&R project;

---

<sup>8</sup> Mauritius had a CFC baseline of 29.1 ODP tonnes and a CFC consumption of 2.0 ODP tonnes at the time of submission of the proposal. However, the CFC baseline and the 2003 CFC consumption level in Bosnia and Herzegovina was 24.2 and 230.0 ODP tonnes, respectively.

- (d) The level of funding approved for projects in the refrigeration servicing sector and the time of their approval<sup>9</sup>;
- (e) The local market conditions that will impact on the prices of CFC and non-CFC refrigerants and their availability;
- (f) The distribution of the remaining CFC consumption in the manufacturing sector and the refrigeration servicing sector<sup>10</sup>; and
- (g) The phase-out of other ODS besides CFCs included in the TPMP<sup>11</sup>.

48. On the basis of the above observations, it is neither possible nor equitable to establish a simple correlation or to set a threshold level for assessing the level of funding required for the post-2007 period for the LVC countries without an approved TPMP. Instead, the funding level could be determined for each country according to the baseline consumption and the assistance provided so far, including the funding for RMPs, taking into consideration the recent experience with additional funding allocated to LVC countries with TPMPs to complete the final 15 per cent of their phase-out. Improved accountability, continuous monitoring and annual reporting would need to be included within the additional funding allocation.

49. To develop this methodology, the Secretariat first analyzed the level of funding approved by the Executive Committee for the TPMPs in the nine LVC countries that had an RMP project approved prior to decision 31/48. The analysis was as follows:

- (a) The level of funding approved for the original RMP and the additional funding approved for the TPMP was listed in a tabular form;
- (b) The level of funding that each country would have received if an RMP update had been approved was calculated (i.e., 50 per cent of the level of funding approved for the original RMP project); and
- (c) The incremental difference (“%Increase) between the potential total funding of the original RMP plus the estimated RMP update and the actual approved total funding (original RMP plus TPMP) was calculated for each country.

50. The results of the analysis are shown in the Table 4 below.

---

<sup>9</sup> Recovery and recycling projects for LVC countries have been approved by the Executive Committee since the 8th Meeting.

<sup>10</sup> About 40 per cent of the total funding approved for the TPMP for Ecuador was associated with the phase-out of 59 ODP tonnes of CFCs used in the foam and refrigeration manufacturing sectors.

<sup>11</sup> The Bosnia and Herzegovina TPMP included the phasing out of 133 ODP tonnes of CFCs and 1.7 ODP tonnes of TCA.

**Table 4: Analysis of the funding approved for TPMPs in 9 LVC countries (US \$)**

| No  | Country <sup>(*)</sup>    | Total level of funding (US \$) |                  |                  |                        |                  | %Increase     |
|---|---------------------------|--------------------------------|------------------|------------------|------------------------|------------------|---------------|
|   |                           | RMP approved                   | TPMP approved    | Total (RMP+TPMP) | RMP update (estimated) | RMP+RMP update   |               |
| (a)                                       | (b)                       | (c)                            | (d)              | (e)=(c)+(d)      | (f)=0.5*(c)            | (g)=(e)+(f)      | (h)=(e-g)/(g) |
| <b>LVC countries with an approved RMP</b> |                           |                                |                  |                  |                        |                  |               |
| 1   | Antigua and Barbuda       | 124,400                        | 97,300           | 221,700          | 62,200                 | 186,600          | 18.8          |
| 2   | Bahamas                   | 227,900                        | 560,000          | 787,900          | 113,950                | 341,850          | 130.5         |
| 3   | Croatia                   | 398,160                        | 379,700          | 777,860          | 199,080                | 597,240          | 30.2          |
| 4   | Jamaica                   | 407,555                        | 380,000          | 787,555          | 203,778                | 611,333          | 28.8          |
| 5   | Kenya                     | 422,040                        | 725,000          | 1,147,040        | 211,020                | 633,060          | 81.2          |
| 6   | Lesotho                   | 139,310                        | 127,300          | 266,610          | 69,655                 | 208,965          | 27.6          |
| 7   | Mauritius <sup>(**)</sup> | 452,942                        | 212,030          | 664,972          | 226,471                | 679,413          | -2.1          |
| 8   | Namibia                   | 216,055                        | 252,500          | 468,555          | 108,028                | 324,083          | 44.6          |
| 9   | Trinidad and Tobago       | 407,490                        | 460,000          | 867,490          | 203,745                | 611,235          | 41.9          |
|   | <b>Total</b>              | <b>2,795,852</b>               | <b>3,193,830</b> | <b>5,989,682</b> | <b>1,397,926</b>       | <b>4,193,778</b> | <b>42.8</b>   |

(\*) LVC countries with an approved RMP prior to decision 31/48 and an approved TPMP.

(\*\*) The negative value (“%Increase”) obtained for one country indicates that approved level of funding of the TPMP project was below the funding of a RMP update calculated on the basis of decision 31/48

51. From the results presented in the above table, the following observations are relevant:

- (a) The incremental difference between the approval of an RMP/RMP update approach and the approval of the TPMP without an RMP update ranges from a minus 2 per cent (Mauritius) to about 131 per cent (Bahamas);
- (b) The lower range in the percentage increment (i.e., 18.8 per cent for Antigua and Barbuda, and 27.6 per cent for Lesotho) is associated with LVC countries with the lowest current (2003) CFC consumption (i.e., below 4 ODP tonnes);
- (c) The average incremental difference for the nine LVC countries is 42.8 per cent; and
- (d) If the minimum and maximum values were excluded (e.g., TPMPs for Mauritius and Bahamas, respectively), the average incremental difference would be 43.0 per cent.

52. The Secretariat then calculated the additional funding that might be required for the post-2007 period for the 57 LVC countries with an RMP approved according to decision 31/48. The countries were sorted according to their CFC baselines.

53. A funding range was calculated for each LVC country by multiplying both the average funding increase in TPMPs (42.8 per cent, or “lower” limit) and the maximum funding increase (130.5 per cent, or “higher” limit) from Table 4 above by the total level of funding approved for the RMP. The lower range in the percentage increment was not used to calculate the “lower” limit, since it would not be representative of the prevailing circumstances in a large number of LVC countries.

54. The Secretariat noted, however, that this approach was not equitable for all LVC countries with similar CFC baselines, since LVC countries that received funding for activities in the refrigeration servicing sector prior to the adoption of the RMP guidelines<sup>12</sup> would be receiving proportionately higher levels of funding than other countries that commenced their phase-out programme after the RMP guidelines were adopted or after decision 31/48 was taken.

55. To address this equity issue, the Secretariat “normalized” the additional funding that would be needed for the post-2007 period. This was accomplished by dividing the 57 LVC countries into five sub-groups according to their CFC baseline, as shown in Table 5 below.

**Table 5: Grouping of the 57 LVC countries with a RMP according to their CFC baseline**

| Sub-group | CFC baseline (ODP tonnes) | No. of countries |
|-----------|---------------------------|------------------|
| A         | <15                       | 12               |
| B         | 15 to 30                  | 11               |
| C         | 30 to 60                  | 14               |
| D         | 60 to 120                 | 8                |
| E         | >120                      | 12               |

56. For each sub-group, the Secretariat then calculated a mean “lower value”, a “median value” and a mean “upper value” for the entire sub-group<sup>13</sup>. The results of this approach are shown in Table 6 below.

**Table 6: Options for additional funding for the post-2007 period in LVC countries with an approved RMP**

| Sub-group    | No. of countries | CFC baseline ODP tonnes | Additional funding (US \$) |                      |                     |                   |                    |                   |
|--------------|------------------|-------------------------|----------------------------|----------------------|---------------------|-------------------|--------------------|-------------------|
|              |                  |                         | “Lower” per country        | “Medium” per country | “Upper” per country | “Lower” per group | “Medium” per group | “Upper” per group |
| A            | 12               | <15                     | 100,000                    | 205,000              | 305,000             | 1,200,000         | 2,460,000          | 3,660,000         |
| B            | 11               | 15 to 30                | 145,000                    | 295,000              | 440,000             | 1,595,000         | 3,245,000          | 4,840,000         |
| C            | 14               | 30 to 60                | 170,000                    | 345,000              | 515,000             | 2,380,000         | 4,830,000          | 7,210,000         |
| D            | 8                | 60 to 120               | 260,000                    | 520,000              | 780,000             | 2,080,000         | 4,160,000          | 6,240,000         |
| E            | 12               | >120                    | 280,000                    | 565,000              | 850,000             | 3,360,000         | 6,780,000          | 10,200,000        |
| <b>Total</b> | <b>57</b>        |                         |                            |                      |                     | <b>10,615,000</b> | <b>21,475,000</b>  | <b>32,150,000</b> |

57. It should be noted that the funding level suggested represents a threshold and that individual project proposals would still need to demonstrate that this funding level is indeed necessary to achieve the complete phase-out of CFCs.

<sup>12</sup> Stand-alone refrigeration training programmes and R&R projects were approved in several LVC countries. Additional funding was also approved in several LVC countries as part of regional/sub-regional training programmes or R&R demonstration projects.

<sup>13</sup> The mean “lower value” was calculated as the sum of the funding approved for the RMP multiplied by the “lower” limit funding increase in TPMPs (42.8 per cent) divided by the total number of LVC countries in the sub-group. The calculated mean “lower value” was applied to all the countries within the sub-group. Following a similar approach, a mean “upper value” was calculated using the “higher” limit funding increase in TPMPs (130.5 per cent). The “median value” was calculated as the arithmetic mean of the “lower value” and the “upper value” and rounded to the closest 5,000.



58. The Secretariat then calculated the additional funding that might be required for the remaining 17 LVC countries that do not have an approved RMP project. The level of funding was calculated on the basis of the CFC baseline reported in these countries (where available), the level of funding already approved in the refrigeration servicing sector, and the “lower” and “higher” percentage increase in TPMP funding over the funding provided to reach the 2005 and 2007 reduction targets. On this basis, an additional US \$6.56 million (“lower”) to US \$12.28 million (“upper”) (with a “medium” value of US \$9.42 million) would have to be made available for these 17 LVC countries.

59. Given an immediate start on a post-2007 programme, the project preparation and project approval process will leave only part of 2006 and the years 2007 to 2009 for project implementation and complete phase-out of CFC consumption. Additionally, while funding based on the “lower” funding approach might address the needs of the average country in each subgroup, the requirement of a post-2007 period is to ensure that all countries receive sufficient funding programme support to achieve complete CFC phase-out. On this basis it might be prudent to consider a funding approach which is based on existing experience and which fully covers, with a sufficient degree of certainty, the needs of the countries concerned.

#### Funding for preparation of TPMPs

60. At its 33rd Meeting, the Executive Committee decided to approve additional funding for the preparation of RMP updates on the understanding that the approval of the additional funding would be contingent on submission of a progress report on the status of work being undertaken in the projects contained in the approved RMP, and an explanation of how the additional activities were related to the original RMP and the country’s phase-out commitments (decision 33/13).

61. With the additional resources provided for the preparation of the RMP update, the majority of the LVC countries conducted field surveys to better assess the prevailing situation of the refrigeration servicing sector, including CFC consumption. During the survey, the status of implementation of the phase-out activities approved within the original RMP project was also reviewed. With the information obtained from the field, the bilateral and/or implementing agencies assisted LVC countries in designing additional activities suitable for the specific needs in the country.

62. To properly address the complete phase-out of CFCs in LVC countries and following a similar approach used for the preparation of RMP updates, up to US \$30,000<sup>14</sup> might be considered for approval per country for the preparation of TPMPs. Through this funding, LVC countries would be committed to:

- (a) Assessing the prevailing circumstances of the refrigeration servicing sector in the country at the time of the preparation of the proposal (e.g., refrigeration

---

<sup>14</sup> On the basis of decision 31/48, the level of funding that has been approved by the Executive Committee for the preparation of country programmes/RMPs is usually US \$60,000. On the basis of decision 33/13, the level of funding for preparation of RMP update proposals could be up to 50 per cent of the funding approved for the original RMP project.

equipment in the country, CFC consumption by type of equipment, number of refrigeration service technicians and service workshops, prices of CFC and non-CFC refrigerants and availability of non-CFC refrigerants);

- (b) Conducting a survey of the use of CFC-based metered dose inhalers (MDIs) in the country and whether or not a transitional strategy for CFC-MDIs would be needed. The maximum level of additional funding for the preparation of a transitional strategy would be up to US \$30,000 (based on similar requests so far approved by the Executive Committee);
- (c) Conducting a survey of other ODS consumed in those LVC countries with established halon, CTC and/or TCA baselines and/or recent consumption of any of these substances to ascertain eligibility of funding for phase-out through the Multilateral Fund. The level of additional funding to be provided for the phase-out of these chemicals could in general be up to US \$30,000 (based on similar requests so far approved by the Executive Committee), to be considered on a case-by-case basis;
- (d) Finalizing and enacting legislation to phase-out ODS consumption including a licensing system. TPMP projects can not be submitted for the consideration by the Executive Committee until the licensing system is in place (as required by decision 38/64); and
- (e) Identifying specific activities that will assist the LVC country concerned to achieve a sustainable phase-out of CFCs used in the refrigeration servicing sector.

Total additional funding for CFC phase-out in LVC countries

63. On the basis of the proposed methodology used for calculating the threshold level of funding that might be needed to achieve the complete phase-out of CFCs in all LVC countries, an additional funding level ranging from US \$17.17 million to US \$44.43 million might be needed in the post-2007 period (with a medium value of US \$30.80 million). This funding level does not include either the additional funding that might be required for the preparation of TPMP proposals or the funding that might be needed for the phase-out of other ODSs.

64. If the additional funding level that might be needed to achieve the complete phase-out of CFCs in all LVC countries was added to funding that has already been approved for the phase-out of CFCs in these countries, since the inception of the Multilateral Fund, the resulting total cost would be from US \$78.28 million to US \$105.54 million (with a medium value of US \$91.91 million). Cost-effectiveness is not an appropriate tool for LVC countries, and it has never been used as a basis for establishing the eligible incremental costs of addressing the phase-out of CFCs in such countries by means of RMPs/TPMPs. However, for the information of Executive Committee members, the theoretical overall cost-effectiveness value of the

phase-out of all CFCs in LVC countries would be between US \$10.27/kg and US \$13.85/kg (with a medium value of US \$12.06/kg), based on the total CFC baseline<sup>15</sup>.

## Recommendations

65. The Executive Committee may consider whether it wishes to provide assistance to LVC countries for the post-2007 period along the basis indicated in this paper, and in particular to:

- (a) Request bilateral and/or implementing agencies on behalf of LVC countries without an approved TPMP to submit TPMP proposals, on the understanding that:
  - (i) TPMP project proposals should be in conformity with all relevant decisions that have been taken by the Executive Committee;
  - (ii) TPMP project proposals should contain, as a minimum, the commitment by the Government concerned to the phased reduction and complete phase-out of the consumption of CFCs in the country according to a specific phase-out schedule which is at a minimum consistent with the Montreal Protocol's control measures;
  - (iii) No additional resources would be requested from the Multilateral Fund or bilateral agencies for activities related to the phase-out of CFCs and other ODS where applicable;
  - (iv) The Government concerned would have flexibility in utilizing the resources available to address specific needs that might arise during project implementation to facilitate the smoothest possible phase-out of ODSs;
  - (v) Annual reporting on the implementation of the activities undertaken in the previous year as well as a thorough and comprehensive work plan for the implementation of next year's activities are mandatory; and
  - (vi) The roles and responsibilities of the major national stakeholders, as well as the lead implementing agency and the co-operating agencies when applicable, must be defined;
- (b) Decide that additional funding of up to US \$30,000 could be requested for the preparation of a TPMP proposal;
- (c) Decide that future TPMP proposals for the post-2007 period may include requests for funding up to the levels indicated below, on the understanding that individual project proposals would still need to demonstrate that the funding level is necessary to achieve complete phase-out of CFCs:

---

<sup>15</sup> As a comparison, the cost effectiveness threshold values adopted by the Executive Committee for the refrigeration sector are US \$13/76/kg for commercial refrigeration sub-sector and US \$15.21/kg for the domestic refrigeration sub-sector.

| CFC baseline<br>(ODP tonnes) | Funding level based on: |                |               |
|------------------------------|-------------------------|----------------|---------------|
|                              | “Lower” value           | “Medium” value | “Upper” value |
| <15                          | [100,000]               | [205,000]      | [305,000]     |
| 15 to 30                     | [145,000]               | [295,000]      | [440,000]     |
| 30 to 60                     | [170,000]               | [345,000]      | [515,000]     |
| 60 to 120                    | [260,000]               | [520,000]      | [780,000]     |
| >120                         | [280,000]               | [565,000]      | [850,000]     |

- (d) Decide to require on an annual basis, verification of a sample of approved TPMPs for LVC countries under implementation (i.e., 10 per cent of approved TPMPs) randomly selected. The costs associated with verification would be added to the relevant work programme of the lead implementing agency;
- (e) Decide to approve, on a case-by-case basis, up to US \$30,000 for the preparation of a transitional strategy for CFC-MDIs in LVC countries where the need for a strategy has been fully demonstrated and documented; and
- (f) Decide to approve, on a case-by-case basis, up to 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 following established Multilateral Fund rules and guidelines.

**Annex I**

**List of policy papers on the refrigeration servicing sector that have been considered by the Executive Committee**

| <b>Title of the document</b>   | <b>Document number</b>                       |
|--|--|
| Strategic options for retrofitting of mobile air conditioners and chillers (an interim report)   | UNEP/OzL.Pro/ExCom/11/35                     |
| Report on strategic options for retrofitting of mobile air conditioners and chillers   | UNEP/OzL.Pro/ExCom/12/33                     |
| Circumstances for the consideration of ODS phase out in the commercial refrigeration end-user sector   | UNEP/OzL.Pro/ExCom/27/39                     |
| Circumstances for the consideration of ODS phase-out in the commercial refrigeration end-user sector: additional considerations  | UNEP/OzL.Pro/ExCom/28/47                     |
| Desk study on recovery and recycling projects  | UNEP/OzL.Pro/ExCom/31/18                     |
| Report on evaluation of training projects  | UNEP/OzL.Pro/ExCom/31/20                     |
| Refrigerant management plans and terminal phase-out management plans   | UNEP/OzL.Pro/ExCom/38/56                     |
| An extended desk study on RMP evaluation   | UNEP/OzL.Pro/ExCom/39/14                     |
| Final report on the evaluation of the implementation of RMPs   | UNEP/OzL.Pro/ExCom/41/7                      |
| Background note prepared by the Fund Secretariat to assist the open-ended working group set up by the Executive Committee to reorient the approach to RMPs to better facilitate compliance | UNEP/OzL.Pro/ExCom/41/Inf.4                  |
| Potential implications of subsequently increasing the amounts approved for institutional strengthening projects  | UNEP/OzL.Pro/ExCom/43/49                     |
| Desk study on the evaluation of customs officer training and licensing system projects   | UNEP/OzL.Pro/ExCom/44/12                     |
| Model rolling three-year phase-out plan: 2005-2007   | UNEP/OzL.Pro/ExCom/44/7                      |
| Criteria for the assessment of the progress reports and verification audits of multi-year agreements   | UNEP/OzL.Pro/ExCom/44/70                     |
| Report of the TEAP Basic Domestic Needs Task Force   | Decision XV/2 (15th Meeting of the Parties)  |
| Report of the TEAP Chiller Task Force  | Decision XIV/9 (14th Meeting of the Parties) |



## **Annex II**

### **Relevant decisions by the Executive Committee on the refrigeration servicing sector**

#### **Introduction**

1. Between 1991 and the end of 1997 (23rd Meeting of the Executive Committee), reductions in CFC consumption in the servicing sector in LVC countries were addressed through training programmes for refrigeration service technicians aimed at enhancing their technical skills in the proper handling of CFC-refrigerants, and through R&R projects for containing and reusing CFCs in refrigeration equipment.

#### **Decisions on RMPs**

2. At its 22nd Meeting (May 1997), the Executive Committee started to consider that, in addition to training refrigeration technicians and establishing R&R networks, LVC countries needed activities aimed at strengthening their legislative, regulatory and monitoring frameworks, improving the law enforcement and control techniques of their customs officers and inspectors, and enhancing awareness on ODS-related issues among key stakeholders. In this regard, at its 22nd Meeting, the Executive Committee decided that future R&R programmes should be prepared within the context of the national phase-out strategy of the country concerned, and urged implementing agencies to work with Article 5 countries to ensure that some prerequisites were put in place before R&R projects were implemented (decision 22/23). The concept of a refrigerant management plan (RMP) was adopted for the first time by the Executive Committee.

#### Guidelines for RMP projects

3. At the same Meeting, UNEP submitted draft guidelines for the preparation of RMP project proposals for the Executive Committee's consideration. The Executive Committee then requested UNEP, in consultation with the Secretariat, the implementing agencies and members of the Committee, to review the guidelines and submit them to a later meeting; meanwhile, LVC countries could submit RMPs based on the draft guidelines. UNEP was also requested to adjust country programmes under preparation to accommodate the requirements of the draft guidelines for RMPs and to develop RMP/country programme combination documents in countries where the preparation of country programmes had not yet started.

4. Furthermore, the Executive Committee urged the implementing agencies to view the discussion on RMPs as an opportunity to help countries consider appropriate measures for facilitating compliance with the Montreal Protocol. In this regard, recycling projects should not be proposed unless there were incentives or regulatory measures in place to ensure the sustainability of such projects (decision 22/24).

5. Pursuant to decision 22/24, the Executive Committee approved the guidelines for the preparation of RMPs (UNEP/OzL.Pro/ExCom/23/52) at its 23rd Meeting (decision 23/15). Subsequently, at its 24th Meeting, the Executive Committee decided that a strategy for phasing out CFCs in the entire refrigeration sector, including institutional and legislative aspects, should be part of an RMP. The Executive Committee also considered it to be highly important that a

clear political commitment be shown by the country concerned at the time of approval of its RMP (decision 24/24).

6. In July 1998, after having reviewed and approved funding for RMP projects for 12 Article 5 countries, the Executive Committee decided to improve the quality of the preparation and implementation of RMP projects, and requested UNEP to organize a workshop for that purpose (decision 25/25).

7. Pursuant to this decision, UNEP organized a workshop in November 1998 (Cairo) and submitted a report to the 27th Meeting of the Executive Committee (document UNEP/OzL.Pro/ExCom/27/Inf.4). Subsequently, the Committee constituted a contact group<sup>1</sup> on RMPs. The group, in its first report to the Executive Committee, noted that the approach to RMPs was determined by a number of factors that might have adverse effects on the preparation and implementation of RMPs, such as time constraints, the availability of large amounts of CFCs at low costs, the lack of policies or legislative framework. The group considered that there was a need to collect additional information including field experience and draw conclusions from it.

#### Report of the contact group on RMPs: Decision 31/48

8. The contact group held subsequent meetings (28th to the 31st Meetings of the Executive Committee) including a meeting in Paris, in January 2000,<sup>2</sup> and submitted its final report to the 31<sup>st</sup> Meeting of the Executive Committee, containing draft guidelines on RMPs (document UNEP/OzL.Pro/ExCom/31/57).

9. On the basis of this report, the Executive Committee adopted decision 31/48 on RMP projects.

#### A. *Already approved refrigerant management plans (RMPs) for low-volume-consuming countries (LVCs)*

- (a) To request national ozone officers, with the assistance of the implementing agency concerned, to review and assess the content, implementation to date and expected outcomes of their RMPs against their objective to phase out all consumption in the refrigeration sector according to the Montreal Protocol timetable. In undertaking this review, national ozone officers should:
  - (i) Calculate current and forecast future consumption in relation to the freeze, 50 per cent cut in 2005, 85 per cent cut in 2007 and phase-out in 2010 and calculate the size of consumption cuts in the refrigeration sector required to meet these targets;

---

<sup>1</sup> The contact group was composed of Algeria, Belgium, Burkina Faso, Canada, Italy, Sweden (facilitator), Uganda and the United States of America.

<sup>2</sup> The contact group was reconstituted at the 30th Meeting of the Executive Committee from members of the new Executive Committee (Decision 29/70).



- (ii) Include forecast cuts in consumption attributable to the activities already approved under the RMP, including training activities and recovery/recycling;
  - (iii) Ensure that the current and expected future consumption of all sub-sectors, including the informal sector, small and medium-sized enterprises and mobile air conditioners, are included in the review;
  - (iv) For each activity identified, consider the cost and means of funding, including national financing;
  - (v) Ensure that the RMP and government strategy for delivering phase-out includes adequate provision for monitoring and reporting on progress;
- (b) That LVCs (or groups of LVCs) with already approved RMPs may submit to the Executive Committee requests for funding additional activities necessary to reduce consumption and thereby ensure compliance with the Protocol. Such additional activities should be essential parts of their comprehensive strategy for phase-out in the refrigeration sector. Additional funding shall not exceed 50 per cent of the funds approved for the original RMP or, where relevant, RMP components. With the possible exception of the post-2007 period noted in subparagraph (d) below, no further funding beyond this level, including funding related to retrofits, would be considered for activities in this sector;
- (c) That requests for additional funding consistent with subparagraph (b) above should be accompanied by:
- (i) A justification for the additional activities to be funded in the context of the country's national phase-out strategy;
  - (ii) A clear explanation of how this funding, together with the initial RMP funding and steps to be taken by the government, will ensure compliance with the Protocol's reduction steps and phase-out;
  - (iii) A commitment to achieve, without further requests for funding for the RMP, at least the 50 per cent reduction step in 2005 and the 85 per cent reduction step in 2007. This shall include a commitment by the country to restrict imports if necessary to achieve compliance with the reduction steps and to support RMP activities;
  - (iv) A commitment to annual reporting of progress in implementing the RMP and meeting the reduction steps;
- (d) That it will review in 2005 whether further assistance is needed for the post-2007 period, and what assistance the Fund might consider at that time to enable full compliance with the Protocol's phase-out requirements;

*B. Preparation and approval of new RMPs for LVCs*

- (e) That the project preparation phase for RMPs should, as intended by the existing guidelines, include a full survey of CFC consumption in all sub-sectors, the development of a comprehensive government phase-out strategy and a commitment by the government to enact regulations and legislation required for the effective implementation of activities to phase out the use of CFC refrigerants. To enable these preparatory activities, including the development of legislation and regulations, to be completed in full, the funding provided for the project preparation phase should be double the level traditionally provided;
- (f) That the provisions relating to existing RMPs in section A, subparagraphs (a), (c) and (d) above shall also apply to new RMPs submitted pursuant to this decision;
- (g) That in lieu of the ability given to already approved RMPs to request additional funds, the total level of funding for the implementation of new RMPs could be increased by up to 50 per cent compared to the level of RMP funding typically approved to date, with flexibility for the country in selecting and implementing the RMP components which it deems most relevant in order to meet its phase-out commitments. With the exception of the post-2007 phase noted in section A, subparagraph (d) above, no further funding beyond this level, including funding for retrofits, would be considered for activities in this sector;
- (h) That the following text should be added to the RMP guidelines (decision 23/15) after the last bullet in section 3.1:

“The elements and activities proposed for an RMP, whether they are to be funded by the Multilateral Fund or the country itself, should reflect the country’s particular circumstances and address all relevant sectors including the informal sector. They should be sufficient to ensure fulfillment of the countries’ control obligations at least up to and including the 85 per cent reduction in 2007, and should include mechanisms for reporting progress.”

*C. RMPs for higher-volume-consuming countries*

- (i) That, taking into account the need for large consuming countries to initiate planning for dealing with this large and complex sector, as well as the related decision of the Meeting of the Parties, it will consider requests for funding the development of long-term strategies for the refrigeration sector for high-volume-consuming countries. High-volume-consuming countries that have not yet undertaken country programme updates should undertake this strategic RMP development in the context of such updates, consistent with any Executive Committee guidance on country programme updates;
- (j) That future Executive Committee decisions on funding the implementation of the elements of such RMP strategies should take into account the relative priority in national government planning of CFC reductions in the refrigeration sector and

the availability of other reduction opportunities in meeting the country's control obligations;

- (k) That, in that context, the Executive Committee may consider whether certain activities often considered to be part of an RMP (such as training of customs officers) could be initiated before an RMP was developed.

10. Implementation of decision 31/48 will have the greatest impact on the ODS phase-out process in the majority of LVCs as well as in a large number of medium-sized ODS-consuming countries, where the majority of ODS consumption is in the refrigeration servicing sector.

#### Proposals to update RMPs

11. At its 33rd Meeting, the Executive Committee reiterated that proposals to update RMPs should be in conformity with Decision 31/48, and requested Article 5 countries and implementing agencies to submit, together with the proposals to update RMPs, a progress report (from the implementing agencies) on the status of work being undertaken in the projects contained in the approved RMP; and a written justification (from countries) for additional activities, explaining how the additional activities were related to the original RMP and the country's phase-out commitments.

12. The Executive Committee also decided that the level of funding for such requests could be up to 50 per cent of the level of funding approved prior to the 31st Meeting for the preparation of the original RMP; and that the approval of the additional funding would be contingent on submission of the progress report and the written justification (decision 33/13).

#### Terminal phase-out management plans for LVC countries

13. At its 37th Meeting, the Executive Committee considered whether RMP activities included in business plans could instead be submitted as new terminal phase-out management plans (TPMP) if countries requested agencies to do so. The Executive Committee requested that a document be prepared on the issue, taking account of the content of decision 31/48 (decision 37/70). Pursuant to this decision, the Executive Committee decided at its 38th Meeting that specific requests for funding of terminal CFC phase-out plans for LVC countries might be considered on a case-by-case basis, provided that, *inter alia*, the Article 5 country concerned had a licensing system in operation, had enacted or improved legislation to phase out ODS consumption, and the Government was committed to achieve, without further request for funding from the Fund, the complete phase out of CFCs in accordance with its obligation under the Montreal Protocol (decision 38/64).

#### Agency responsible for the RMP

14. At its 39th Meeting, in the context of the document on issues identified during project review (document UNEP/OzL.Pro/ExCom/39/20 and Corr.1) the Secretariat pointed out that the guidelines for the preparation of RMPs adopted by the Committee at its 23rd Meeting set out, in substantial detail, the requirements for comprehensive and integrated project preparation activities, which would not seem to be met when investment and non-investment sub-projects

were prepared and treated as separate entities. Following a discussion, the Executive Committee decided, *inter alia*, to require, with the first project preparation request, nomination of all the agencies that would be involved in the RMP, and of the lead agency that would be responsible for overall RMP implementation, including its phase-out objectives, and for reporting on overall progress and achievement (decision 39/16).

### Re-orientation of RMPs

15. At the 40th Meeting, in the context of the paper on issues identified during project review (UNEP/OzL.Pro/ExCom/40/27), the Secretariat brought to the attention of the Executive Committee relevant issues associated with RMPs, *inter alia*:

- (a) For the majority of Article 5 countries, and particularly all LVC countries, the extent of their success in reducing CFC consumption in the refrigeration servicing sector will determine their ability to achieve compliance. For LVC countries, the only means for phasing out CFCs is through the successful implementation of their RMPs;
- (b) Project completion reports, progress reports, discussions at network meetings and bilateral discussions with countries and implementing agencies all indicate unambiguously that RMPs are prepared and implemented on a sub-project by sub-project basis, the objective being to deliver the relevant product specified in the sub-project, whether it be recovery and recycling machines, training programmes or assistance with development of legislation;
- (c) However, unlike investment projects, the activities in the RMP are ongoing. While a particular component of an RMP such as a training programme or the installation of recovery and recycling machines may be implemented within a short time, the objective of the RMP to reduce consumption will be achieved over a longer period (i.e., the RMP project does not cease when the equipment has been delivered or the core training programme has been completed). Therefore, determining the effectiveness of ongoing implementation presents a challenge;
- (d) For countries with an approved RMP, the only indicator available for determining actual reductions in CFC consumption is the data that the countries concerned report under Article 7. This indicator has, however, a major limitation, since the data reported is typically between six and 18 months out of date;
- (e) The condition in decision 31/48 that the country will meet its 2005 and 2007 obligations without further assistance from the Multilateral Fund does not, of itself, contribute to the achievement of the phase-out objective, even though it obviates the Fund's obligation to provide additional funding; and
- (f) The role of the bilateral and/or implementing agency (or agencies) in providing assistance to Article 5 countries will not cease at the time the recovery machines are delivered, or the first training course has been completed. Rather, the agency or agencies may need to continue their involvement, as technical assistance

bodies, over the whole RMP implementation period to assist in delivery of the overall objective, namely the reductions in consumption to which the country is committed.

16. Based on the above issues, the Secretariat suggested that there was a need for urgent re-consideration of the approach currently being taken to the implementation of RMPs and that the new approach should be based on ensuring that such projects achieved the phase-out and compliance objectives that they were intended to facilitate. The primary focus would shift away from achievement of the narrower goals of the individual sub-projects and towards achievement of compliance.

17. At the 40th Meeting, the Secretariat pointed out that TPMPs typically contained the same sub-project elements as RMP projects, and their approval at that time may not provide the type of assistance needed, while at the same time cutting off any access by the countries concerned to any further support other than institutional strengthening. Subsequently, the Executive Committee urged LVC countries to consider carefully whether it was in their interest at this stage to request final funding to achieve total phase-out of CFCs, and requested agencies to give priority to assisting countries with implementation of the approved RMPs to meet their 2005 and 2007 CFC control targets (decision 40/21).

18. Subsequently, the Executive Committee decided to set up an open-ended working group to discuss, in the margins of the 41st Meeting of the Executive Committee, ways to reorient the approach to RMPs to better facilitate compliance (decision 40/20).

19. At its 41st Meeting, the Executive Committee considered the final report on the evaluation of the implementation of RMPs (UNEP/OzL.Pro/ExCom/41/7) prepared by the Senior Monitoring and Evaluation Officer of the Secretariat, which provided a set of recommendations related to the implementation of RMPs. Subsequently, the Executive Committee decided to refer the recommendations contained in the evaluation report to the open-ended working group on RMPs set up by decision 40/20 (decision 41/5).

20. At the same meeting, the Executive Committee considered the report of the facilitator of the open-ended working group and decided to recommend that bilateral and implementing agencies, in collaboration with Article 5 countries, be given flexibility to implement RMP components that were adapted to meet the specific needs of relevant Article 5 countries. In developing appropriate interventions, Article 5 countries and bilateral and implementing agencies should give consideration to, *inter alia*, concentrating support on the development of legislation and coordination mechanisms with industry and on further training programmes for refrigeration technicians and customs officers; concentrating recovery and reuse of CFCs on large-size commercial and industrial installations and MAC sectors, if significant numbers of CFC-12 based systems still existed and the availability of CFCs was strongly reduced by the adoption of effective import control measures; further exploring possibilities for facilitating cost-effective retrofitting and/or use of drop-in substitutes and becoming more selective in providing new recovery and, in particular, recycling equipment (decision 41/100).

### **Other decisions relevant to the refrigeration servicing sector**

21. In addition to the decisions on RMPs, the Executive Committee has also adopted relevant decisions on specific issues related to the refrigeration servicing sector, namely the retrofitting of refrigeration equipment, the mobile air conditioning (MAC) sub-sector and the chiller sub-sector.

#### Retrofitting of refrigeration equipment

22. Since September 1994 (14th Meeting), the Executive Committee decided that projects for the conversion of commercial refrigeration systems should be assessed on a case-by-case basis taking into consideration the importance of the commercial refrigeration sub-sector in the economy of the country. Four years later (26th Meeting) the Executive Committee requested the Secretariat, in conjunction with the implementing agencies, to prepare a paper on the circumstances under which projects to retrofit commercial refrigeration systems could be considered.

23. Subsequently, at its 28th Meeting, on the basis of a document submitted by the Secretariat (UNEP/OzL.Pro/ExCom/28/47), the Executive Committee adopted (for an initial period of 18 months) relevant circumstances which must prevail before priority will be accorded to end-user conversion projects. These circumstances include, among others, that the country has production and import controls on CFCs and CFC-based equipment in place and restricts the deployment of new CFC components, and that the remaining CFC consumption is mainly in the refrigeration servicing sector; that either no other possible activities would allow the country to meet its CFC control obligations, or the comparative consumer price of CFCs, relative to substitute refrigerants, has been high for at least 9 months and is predicted to continue to increase.

24. At the same meeting, the Executive Committee adopted (for an initial period of 18 months) specific guidelines for end-user conversion in the commercial refrigeration sub-sector. The guidelines recognized that training of refrigeration technicians should be a part of end-user conversion projects and the retrofitting of refrigeration equipment would be considered for funding based on the experience gained from implementation of the relevant parts of RMPs. During the initial period, conversion should be proposed for cold stores in the agricultural, fisheries or other food-chain industries important for the economies of the countries concerned and indicated which costs would be eligible incremental costs. The Committee also decided that the funding for the initial period would be limited to US \$10 million (decision 28/44).

25. Retrofit incentive projects for LVCs countries were also considered by the Executive Committee at its 32nd Meeting. At that meeting, the Committee decided that projects for retrofitting of refrigeration equipment could be submitted within an RMP, on the understanding that all of the implementing agencies concerned should consult with the country concerned and that the country was fully informed about all of the investment and non-investment activities which might be available (decision 32/28).

### MAC sub-sector

26. Recommendations on MAC project proposals were addressed by the Executive Committee as early as its 12th Meeting (March 1994). Through these recommendations, the Committee encouraged Article 5 countries to pursue a more aggressive recycling and reclamation programme in the MAC sector, and to convert their CFC-12 MAC production plants to HFC-134a technology for new vehicles.<sup>3</sup> Regarding projects in MAC retrofitting, the Executive Committee decided to delay them until the retrofitting technology was proven cost-effective and adequately mature to be transferred to Article 5 countries.

### Chiller sub-sector

27. At its 11th Meeting (November 1993), the Executive Committee discussed an interim report prepared by the Secretariat on retrofits of MAC and chillers<sup>4</sup> (UNEP/OzL.Pro/ExCom/11/35) and at its 12th Meeting (March 1994), the Committee discussed a revised report incorporating the comments made during the discussion of the interim report (UNEP/OzL.Pro/12/33).

28. In the Secretariat's report it was noted that CFC phase-out in the chiller sector may be achieved by improving refrigerant containment and servicing practices to minimize CFC emissions; replacing of CFC-based equipment with non-CFC systems, and/or retrofitting existing chillers to a non-CFC refrigerant. When considering the options available, factors such as the availability of proven CFC phase-out technology and alternative refrigerants, energy consumption, safety and risk in use, the total equivalent warming impact (TEWI) of the alternative refrigerants, cost-effectiveness and regulatory implications should be taken into account, which may determine the priorities between and within the choices.

29. On the basis of the reports prepared by the Secretariat, the Executive Committee adopted a set of recommendations on chiller project proposals. When selecting an alternative technology, consideration should be given to the refrigerant global warming potential, system energy efficiency, human health and safety aspects. Refrigerant containment and better operation and maintenance practices, including recovery, recycling and reclamation should be considered as a strategic option in ODS phase-out in the chiller sub-sector. The Executive Committee approved replacement of CFC chillers as a first priority of strategic options in ODS phase-out in the chiller sector, taking into consideration energy savings when calculating the incremental costs of replacement; however, the Executive Committee chose to defer consideration of projects to retrofit chillers, except in special cases and when definite substitutes are used. Finally, the Executive Committee encouraged Article 5 countries to give full consideration to appropriate regulatory and legislative action facilitating the implementation of CFC phase-out projects in the chiller sub-sector.

---

<sup>3</sup> As of December 2004, all CFC-12 based MAC manufacturing facilities in Article 5 countries have been converted to HFC-134a technology.

<sup>4</sup> Chillers are refrigeration systems that cool a water or a water/antifreeze mixture, which is circulated for use in building comfort air-conditioning, industrial processes, or food preservation.

30. Since the adoption of the policy guidance for projects to reduce consumption in chillers, little priority was given to the phase-out of CFCs in the chiller sub-sector by the Fund. As of the 28th Meeting, only two chiller projects using loan mechanisms were approved (Thailand at the 26th Meeting and Mexico at the 28th Meeting). One additional chiller project (Côte d'Ivoire) was submitted to the 37th Meeting, however in the absence of more recent guidelines on the chiller sub-sector, the Secretariat was unable to make a recommendation on the project. Subsequently, the Executive Committee approved the project as a demonstration project (decision 37/27), and also decided to request the Secretariat to re-examine the issues raised in the chiller sub-sector providing a clarification of the nature of savings that could be envisaged as a result of increased energy efficiency and how soon those energy savings might be realized (decision 37/21).

31. Issues related to the phase-out of CFCs in the chiller sub-sector have also been discussed by the Parties to the Montreal Protocol. At their 14th Meeting, the Parties requested the TEAP to identify incentives and impediments to the transition to non-CFC based chillers (decision XIV/9). The report by the TEAP Chiller Task Force was presented to the Parties at their 16th Meeting. The Parties then decided to request the Executive Committee to consider funding of additional chiller demonstration projects (pursuant to relevant decisions of the Committee) and funding activities to increase awareness of users in Article 5 countries of the impending phase out and options that may be available for dealing with their chillers. The Parties also requested those countries preparing or implementing RMPs to consider developing measures for the effective use of CFCs recovered from the chillers to meet servicing needs in the sector (decision XVI/13).



**Annex III**

**Amount of CFCs to be phased-out from the conversion of CFC-based manufacturing enterprises in LVC countries**

| No | Country                | ODP tonnes   |                       |                               | Funds approved (US\$) |
|----|------------------------|--------------|-----------------------|-------------------------------|-----------------------|
|    |                        | CFC baseline | CFCs to be phased out | CFC phased out <sup>(*)</sup> |                       |
| 1  | Bahrain                | 135          | 17                    | -                             | 398,313               |
| 2  | Benin                  | 60           | 27                    | 27                            | 143,027               |
| 3  | Bolivia                | 76           | 16                    | -                             | 358,531               |
| 4  | Bosnia and Herzegovina | 24           | 114                   | -                             | 1,338,546             |
| 5  | Burundi                | 59           | 35                    | 35                            | 207,162               |
| 6  | Cameroon               | 257          | 427                   | 427                           | 4,304,920             |
| 7  | Costa Rica             | 250          | 40                    | 40                            | 1,125,698             |
| 8  | Croatia                | 219          | 36                    | 36                            | 200,559               |
| 9  | Ecuador                | 301          | 417                   | 285                           | 1,912,623             |
| 10 | El Salvador            | 307          | 22                    | 22                            | 306,229               |
| 11 | Gambia                 | 24           | 11                    | 11                            | 63,500                |
| 12 | Ghana                  | 36           | 316                   | 304                           | 345,000               |
| 13 | Guatemala              | 225          | 55                    | 55                            | 690,383               |
| 14 | Guyana                 | 53           | 7                     | 7                             | 461,000               |
| 15 | Jamaica                | 93           | 82                    | 82                            | 596,000               |
| 16 | Kenya                  | 240          | 199                   | 199                           | 483,125               |
| 17 | Lao, PDR               | 43           | 29                    | -                             | 324,003               |
| 18 | Malawi                 | 58           | 33                    | -                             | 156,500               |
| 19 | Mali                   | 108          | 20                    | 20                            | 151,000               |
| 20 | Mauritius              | 29           | 46                    | 46                            | 563,258               |
| 21 | Nicaragua              | 83           | 10                    | 10                            | 130,027               |
| 22 | Paraguay               | 211          | 65                    | 56                            | 815,979               |
| 23 | Peru                   | 290          | 223                   | 223                           | 3,359,762             |
| 24 | Tanzania               | 254          | 268                   | 152                           | 1,676,810             |
| 25 | Trinidad and Tobago    | 120          | 18                    | -                             | 119,570               |
| 26 | Uruguay                | 199          | 127                   | 117                           | 2,753,395             |
|    | <b>Total</b>           | <b>3,754</b> | <b>2,658</b>          | <b>2,152</b>                  | <b>22,984,920</b>     |

(\*) As of December 2003.



**Annex IV**

**Table 1: LVC countries with an RMP approved prior to Decision 31/48**

| No. | Country                  | CFC (ODP tonnes) |              |              |              | Approved funds<br>(US\$) (*) |
|-----|--------------------------|------------------|--------------|--------------|--------------|------------------------------|
|     |                          | Baseline         | 2001         | 2002         | 2003         |                              |
| 1   | Bahrain                  | 135.4            | 106          | 94.6         | 85.8         | 69,000                       |
| 2   | Botswana                 | 6.8              | 4            | 3.6          | 5.1          | 35,000                       |
| 3   | Cote D'Ivoire            | 294.2            | 148          | 106.5        | 93.4         | 40,000                       |
| 4   | Dominica                 | 1.5              | 1.6          | 3            | 1.4          | 20,000                       |
| 5   | Fiji                     | 33.4             | 0            | 0            | -            | 30,000                       |
| 6   | Grenada                  | 6                | 1.3          | 2.1          | 2.1          |                              |
| 7   | Guinea                   | 42.4             | 35.4         | 31.3         | 25.9         | 50,000                       |
| 8   | Madagascar               | 47.9             | 9.9          | 7.8          | 7.2          | 20,000                       |
| 9   | Mali                     | 108.1            | 27           | 26           | 26.0         | 20,000                       |
| 10  | Nicaragua                | 82.8             | 35.2         | 54.9         | 29.9         | 60,000                       |
| 11  | Saint Kitts and Nevis    | 3.7              | 6.6          | 5.3          | 2.8          | 45,000                       |
| 12  | Saint Vincent/Grenadines | 1.8              | 6.9          | 6            | 3.1          | 20,000                       |
| 13  | Tanzania                 | 253.9            | 131.2        | 71.5         | 148.2        | 15,000                       |
|     | <b>Total</b>             | <b>1,017.9</b>   | <b>513.1</b> | <b>412.6</b> | <b>430.9</b> | <b>424,000</b>               |

(\*) Total funds approved in the refrigeration servicing sector, excluding project preparation funds and agency support costs where applicable.

**Annex IV**

**Table 2: LVC countries with an RMP/RMP update approved in accordance with decision 31/48**

| No.  | Country                  | CFC (ODP tonnes) |                |                |                | Approved funds (US\$) <sup>(*)</sup> |
|--|--------------------------|------------------|----------------|----------------|----------------|--------------------------------------|
|  |                          | Baseline         | 2001           | 2002           | 2003           |                                      |
| <b>Countries with an approved RMP and RMP update</b> |                          |                  |                |                |                |                                      |
| 1  | Barbados                 | 21.5             | 12.5           | 9.5            | 8.6            | 441,931                              |
| 2  | Belize                   | 24.4             | 28             | 21.7           | 15.1           | 364,937                              |
| 3  | Benin                    | 59.9             | 54             | 35.5           | 17.3           | 384,900                              |
| 4  | Bolivia                  | 75.7             | 76.7           | 65.5           | 32.1           | 663,000                              |
| 5  | Burkina Faso             | 36.3             | 19.6           | 16.3           | 13.2           | 368,600                              |
| 6  | Burundi                  | 59               | 46.5           | 19.1           | 9.2            | 315,027                              |
| 7  | Central African Republic | 11.3             | 4              | 4.4            | 4.1            | 236,531                              |
| 8  | Chad                     | 34.6             | 31.6           | 27.1           | 22.8           | 553,248                              |
| 9  | Congo                    | 11.9             | 2.5            | 5.5            | 7              | 404,678                              |
| 10   | Costa Rica               | 250.2            | 144.6          | 137.4          | 142.5          | 888,000                              |
| 11   | Cote D'Ivoire            | 294.2            | 148            | 106.5          | 93.4           | 365,150                              |
| 12   | El Salvador              | 306.6            | 116.9          | 101.6          | 97.5           | 1,041,425                            |
| 13   | Ethiopia                 | 33.8             | 34.6           | 30             | 28             | 252,325                              |
| 14   | Gabon                    | 10.3             | 6.4            | 5              | 5              | 480,847                              |
| 15   | Gambia                   | 23.8             | 5.8            | 4.7            | 5.1            | 206,700                              |
| 16   | Georgia                  | 22.5             | 18.8           | 15.5           | 12.6           | 363,000                              |
| 17   | Ghana                    | 35.8             | 35.6           | 21.2           | 32             | 856,857                              |
| 18   | Guatemala                | 224.6            | 265            | 239.6          | 147.1          | 731,780                              |
| 19   | Guyana                   | 53.2             | 19.8           | 14.3           | 10.4           | 204,950                              |
| 20   | Honduras                 | 331.6            | 121.6          | 131.2          | 219.1          | 859,150                              |
| 21   | Malawi                   | 57.7             | 19             | 19             | 18.7           | 299,520                              |
| 22   | Mauritania               | 15.7             | 15             | 14.7           | 14.3           | 360,795                              |
| 23   | Moldova                  | 73.3             | 23.5           | 29.6           | 18.9           | 580,080                              |
| 24   | Mozambique               | 18.2             | 8.4            | 9.9            | 1.7            | 313,521                              |
| 25   | Nepal                    | 27               | 0              | 0              | 0              | 326,806                              |
| 26   | Niger                    | 32               | 29.1           | 26.6           | 24.5           | 311,305                              |
| 27   | Peru                     | 289.5            | 189            | 196.5          | 178.4          | 771,695                              |
| 28   | Saint Lucia              | 8.3              | 4.1            | 7.6            | 2.5            | 220,350                              |
| 29   | Senegal                  | 155.8            | 98             | 71.9           | 51             | 411,480                              |
| 30   | Seychelles               | 2.8              | 0.7            | 1.5            | 0.6            | 124,807                              |
| 31   | Swaziland                | 24.6             | 1.3            | 1.2            | 1.9            | 222,870                              |
| 32   | Uganda                   | 12.8             | 13.4           | 12.7           | 4.1            | 214,200                              |
| 33   | Uruguay                  | 199.1            | 102.3          | 75.2           | 111.4          | 628,351                              |
| 34   | Zambia                   | 27.4             | 11.8           | 10.6           | 10.4           | 407,620                              |
|  | <b>Total</b>             | <b>2,865.4</b>   | <b>1,708.1</b> | <b>1,488.6</b> | <b>1,360.5</b> | <b>15,176,436</b>                    |

**Annex IV**

**Table 2 (cont.)**

| No.                                      | Country               | CFC (ODP tonnes) |                |                |                | Approved funds (US\$) <sup>(*)</sup> |
|--|-----------------------|------------------|----------------|----------------|----------------|--------------------------------------|
|  |                       | Baseline         | 2001           | 2002           | 2003           |                                      |
| <b>RMP approved after Decision 31/48</b> |                       |                  |                |                |                |                                      |
| 1  | Angola                | 114.8            | 114.8          | 105.0          | 104.2          | 700,000                              |
| 2  | Brunei Darussalam     | 78.2             | 31.4           | 43.4           | 32.3           | 496,000                              |
| 3  | Cambodia              | 94.2             | 94.2           | 94.2           | 86.7           | 890,000                              |
| 4  | Cameroon              | 256.9            | 364.1          | 226.0          | 220.5          | 522,982                              |
| 5  | Cape Verde            | 2.3              | 1.9            | 1.8            | 1.8            | 175,400                              |
| 6  | Comoros               | 2.5              | 1.9            | 1.8            | 1.2            | 138,000                              |
| 7  | Djibouti              | 21.0             | 18.0           | 15.8           | 12.1           | 277,763                              |
| 8  | Guinea-Bissau         | 26.3             | 26.9           | 27.4           | 29.4           | 442,900                              |
| 9  | Haiti                 | 169.0            | 169.0          | 181.2          | 115.9          | 356,956                              |
| 10                                       | Kyrgyzstan            | 72.8             | 53.0           | 38.0           | 33.0           | 561,727                              |
| 11                                       | Lao, PDR              | 43.3             | 41.2           | 42.3           | 35.3           | 273,592                              |
| 12                                       | Liberia               | 56.1             | 25.1           | 32.8           | 26.3           | 436,563                              |
| 13                                       | Maldives              | 4.6              | 14.0           | 2.8            | -              | 200,000                              |
| 14                                       | Mongolia              | 10.6             | 9.3            | 6.9            | 5.7            | 251,770                              |
| 15                                       | Oman                  | 248.4            | 207.3          | 179.5          | 134.5          | 470,000                              |
| 16                                       | Paraguay              | 210.6            | 116.0          | 96.9           | 91.8           | 508,098                              |
| 17                                       | Qatar                 | 101.4            | 85.4           | 86.7           | 95.1           | 470,000                              |
| 18                                       | Rwanda                | 30.4             | 30.1           | 30.1           | 30.1           | 238,758                              |
| 19                                       | Sao Tome and Principe | 4.7              | 4.1            | 4.3            | 4.6            | 250,000                              |
| 20                                       | Sierra Leone          | 78.6             | 92.9           | 80.8           | 66.3           | 438,363                              |
| 21                                       | Suriname              | 41.3             | 46.0           | 46.0           | 12.3           | 458,180                              |
| 22                                       | Togo                  | 39.8             | 34.7           | 35.3           | 33.7           | 382,500                              |
| 23                                       | Western Samoa         | 4.5              | 2.0            | 2.2            | -              | 102,300                              |
|  | <b>Total</b>          | <b>1,712.3</b>   | <b>1,583.3</b> | <b>1,381.2</b> | <b>1,172.8</b> | <b>9,041,852</b>                     |

(\*) Total funds approved in the refrigeration servicing sector, excluding project preparation funds and agency support costs where applicable.

**Annex IV**

**Table 3: LVC countries with an approved TPMP project**

| No.                 | Country                | CFC (ODP tonnes) |                |                |                | Approved funds (US\$) |
|---------------------|------------------------|------------------|----------------|----------------|----------------|-----------------------|
|                     |                        | Baseline         | 2001           | 2002           | 2003           |                       |
| 1                   | Albania                | 40.8             | 68.8           | 49.9           | 35             | 653,125               |
| 2                   | Antigua and Barbuda    | 10.7             | 3.1            | 3.7            | 1.5            | 221,700               |
| 3                   | Armenia(*)             | 196.5            | 162.7          | 172.7          | 172.7          |                       |
| 4                   | Bahamas                | 64.9             | 63             | 55             | 24.6           | 787,900               |
| 5                   | Bosnia and Herzegovina | 24.2             | 199.7          | 243.6          | 230            | 864,160               |
| 6                   | Croatia                | 219.3            | 113.8          | 140.1          | 88.7           | 777,860               |
| 7                   | Ecuador                | 301.4            | 207            | 229.6          | 256.3          | 1,689,800             |
| 8                   | Jamaica                | 93.2             | 48.6           | 31.7           | 16.2           | 787,555               |
| 9                   | Kenya                  | 239.5            | 168.6          | 152.3          | 168.6          | 1,132,025             |
| 10                  | Lesotho                | 5.1              | 1.8            | 1.6            | 1.4            | 266,595               |
| 11                  | Mauritius              | 29.1             | 14.5           | 7.3            | 4              | 664,957               |
| 12                  | Namibia                | 21.9             | 24             | 20             | 17.2           | 468,540               |
| 13                  | Papua New Guinea       | 36.3             | 15             | 34.6           | 22.7           | 700,000               |
| 14                  | Trinidad and Tobago    | 120              | 79.2           | 63.6           | 62.5           | 867,490               |
| 15                  | Turkmenistan(*)        | 37.3             | 57.7           | 10.5           |                |                       |
|                     | <b>Total</b>           | <b>1,440.2</b>   | <b>1,227.5</b> | <b>1,216.2</b> | <b>1,101.4</b> | <b>9,881,707</b>      |
| <b>PIC Strategy</b> |                        |                  |                |                |                |                       |
| 1                   | Cook Islands           |                  |                |                | 0              | 22000                 |
| 2                   | Kiribati               | 1                | 0              | 0              | 0              | 28000                 |
| 3                   | Marshall Islands       | 1                | 0              | 0              | 0              | 34000                 |
| 4                   | Micronesia             | 1                |                |                |                | 36000                 |
| 5                   | Nauru                  | 0                | 0              | 0              | 0              | 22000                 |
| 6                   | Niue                   |                  |                |                | 0              | 22000                 |
| 7                   | Palau                  | 2                | 1              | 0              | 1              | 38000                 |
| 8                   | Solomon Islands        | 2                | 1              | 0              |                | 42000                 |
| 9                   | Tonga                  | 1                | 1              | 1              | 0              | 38000                 |
| 10                  | Tuvalu                 | 0                | 0              | 0              |                | 26000                 |
| 11                  | Vanuatu                | 0                | 0              | 0              | 0              | 34000                 |
|                     | <b>Total</b>           | <b>8</b>         | <b>3</b>       | <b>1</b>       | <b>1</b>       | <b>342,000</b>        |

(\*) Funded through the GEF when the country was classified as a Party not operating under Article 5 of the Montreal Protocol.

## **Annex V**

### **Roles and responsibilities of main stakeholders implementing TPMP projects**

1. This Annex provides the major roles and responsibilities of main stakeholders implementing TPMP projects: the Ozone Unit, the project management unit, and the bilateral and/or implementing agency.

#### **Roles and responsibilities of the Ozone Unit**

2. During the grace period (prior to 1999), in LVC countries, the Ozone Unit was required to undertake a co-ordinating role to facilitate implementation of the R&R programme and the training programmes for refrigeration servicing technicians and customs officers. In the compliance period, and with the gradual completion of projects in the manufacturing sectors, the requirement for effective interventions by Ozone Units has increased. The country-driven approach ultimately relies on the Government concerned, supported by relevant market forces.

3. The Ozone Unit, financed through or supported by an institutional strengthening project, plays a key role in achieving overall ODS phase-out, by co-ordinating and implementing the country's phase-out programme. Its tasks range from information gathering and dissemination, monitoring and reporting, to the inter-departmental co-ordination of administrative measures and the setting of ODS import quotas and allocation of quotas to licensed importers on an annual basis.

4. The Ozone Unit is also responsible for carrying out national awareness-raising, providing annual reports on ODS consumption to the Fund and Ozone Secretariats, reviewing draft annual action programmes of TPMPs and ensuring that those are in line with the other phase-out efforts by the country (where applicable). In general, the Ozone Unit's role is to keep all elements of the phase-out efforts of the country well co-ordinated with a focus on government-related issues.

#### **Project Management Unit**

5. The implementation of activities under the TPMP leads to major co-ordination needs within the country. The co-ordination needs which, in the case of most TPMP projects approved so far, are fulfilled by a Project Management Unit (PMU), are:

- (a) Preparation of draft annual action programmes based on the needs of the country and the TPMP proposal, in cooperation with and with the support of experts from the implementing agency/agencies;
- (b) Co-ordination of proposed phase-out activities by major national stakeholders (e.g., ozone committees, customs departments, importers, refrigeration associations and the general public);
- (c) Monitoring of the various activities, both by bilateral and/or implementing agencies and other stakeholders and their relation to government actions, in order

to identify co-ordination or implementation shortcomings as well as other relevant issues; and

- (d) Annual reports on progress in the implementation of all the activities approved in the TPMP project, including reports on the use of funds approved.

6. Depending on the local circumstances, in the majority of the LVC countries the PMU can be managed by one staff member working on a part time or full time basis.

7. Although the roles and responsibilities of the PMU are specifically related to the phase-out activities and programmes included in the TPMP, co-ordination with the Ozone Unit is essential in order to achieve both the successful implementation of the TPMP and the allowable annual CFC consumption levels until complete phase-out by no later than 2010.

8. The PMU is related to the implementation of the project and should therefore typically remain under the overall supervision of the lead bilateral or implementing agency (selected by the beneficiary country), providing vital support for the agency's in-country project implementation and monitoring and an important link between the national government and the bilateral and/or implementing agencies.

9. Similarly, for the successful implementation of the TPMP project it is essential that the implementation experience of the bilateral and/or implementing agencies, relating to purchase and delivery services, outreach, experiences from other countries and general advice on multi-level project management be available to support the PMU in the fulfilment of its tasks. Consequently, the budget for the PMU, as part of the overall budget of the TPMP, should foresee sufficient funds for the involvement of international implementation advisers, allowing at least one annual visit by such an advisor until 2009. A brief report on the major issues discussed should be included in annual reporting.

### **Roles and responsibilities of bilateral and implementing agencies**

10. All of the TPMP proposals that have been approved so far, have included the specific roles and responsibilities of the lead agency and, where applicable, the cooperating agencies. The responsibilities of the lead agency include, *inter alia*:

- (a) Ensuring performance and financial verification; providing verification to the Executive Committee that the phase-out targets have been met and associated annual activities have been completed;
- (b) Assisting the relevant country in preparation of progress reports and annual implementation programmes; ensuring that, when required, independent technical experts carry out technical reviews;
- (c) Carrying out required supervision missions;
- (d) Ensuring the presence of an operating mechanism to allow effective, transparent implementation of the annual implementation programme and accurate data reporting;



- (e) Verification for the Executive Committee that consumption of ODSs has been eliminated in accordance with the proposed targets; and,
- (f) Ensuring that disbursements made are based on the use of the indicators; and providing assistance with policy, management and technical support when required.

----