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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Forty-first Meeting  
Montreal, 17 -19 December 2003

**REFRIGERATION MANAGEMENT PLANS**

**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 (Decision 40/20)**

## Background

1. At its 23<sup>rd</sup> Meeting the Executive Committee approved guidelines for the preparation of refrigerant management plan (RMP) project proposals for low-volume consuming (LVC) countries (UNEP/OzL.Pro/ExCom/23/52).

### RMPs for LVC countries

2. At its 31<sup>st</sup> Meeting, the Executive Committee decided on the modalities for approving the funding for the preparation and implementation of RMPs for both LVC countries and non-LVC countries (Decision 31/48). A copy of this decision is attached to this note.

### Terminal phase out plans for LVC countries

3. At its 37<sup>th</sup> Meeting, the Executive Committee discussed whether RMP activities included in business plans could be submitted as new terminal phase-out management plans (TPMPs) if countries requested agencies to do so. Subsequently, the Executive Committee decided “to request the Secretariat, in collaboration with the implementing agencies and interested Executive Committee members to prepare a document on the issue, taking account of the content of Decision 31/48, for consideration at the 38<sup>th</sup> Meeting” (Decision 37/70).

4. Pursuant to Decision 37/70, the Secretariat prepared a report that was considered by the Executive Committee at its 38<sup>th</sup> Meeting. Following the discussion, the Executive Committee decided (Decision 38/64) 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:

- (a) The country concerned has a licensing system in operation and has enacted or improved legislation to phase-out ODS consumption;
- (b) The Government concerned is committed to achieve, without further request for funding from the Multilateral Fund, the complete phase out of CFCs in accordance with its obligation under the Montreal Protocol;
- (c) The Government is committed to annual reporting of progress in implementing the activities proposed and meeting the reduction steps; and
- (d) Implementing and/or bilateral agency(ies) responsible for implementing the terminal phase-out plan be requested to advise the Government concerned on the financial implications to the country for submitting a terminal phase out plan, and make every effort to assist the Government concerned to achieve phase-out targets specified in the plan.

5. At its 39<sup>th</sup> Meeting, the Executive Committee requested agencies *inter alia*, to coordinate their project preparation requests associated with RMPs or RMP updates so that the total funding sought remained within the limits established by the guidelines in Decision 31/48 and to nominate all of the agencies that would be involved in the RMP and the lead agency that would

be responsible for overall RMP implementation and for reporting on overall progress and on achievement (Decision 39/16).

6. On the conversion of RMP updates into TPMPs, in the context of the document on issues identified during project review (UNEP/OzL.Pro/ExCom/40/27), the Secretariat pointed out that TPMPs typically contain the same sub-project elements as RMPs (e.g., additional recovery and recycling equipment; incentive programmes for end user conversions; training for technicians and customs officers, and; a management component), and their approval at this 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 apart from institutional strengthening.

7. Subsequently, the Executive Committee decided (Decision 40/21) to urge LVC countries to consider carefully whether it was in their interests at this stage to request final funding to achieve total phase-out of CFCs; requested agencies to give priority to assisting countries with implementation of the approved RMP to meet their 2005 and 2007 CFC control targets; also urged all countries concerned to ensure that all the provisions of Decision 38/64 were applied before submitting projects for TPMPs.

#### Contribution of RMPs to ensuring compliance

8. At its 40<sup>th</sup> Meeting, in the context of the document on issues identified during project review (UNEP/OzL.Pro/ExCom/40/27), the Executive Committee considered relevant issues associated with RMPs, including:

- (a) Since the inception of the Fund, the Executive Committee has approved funding for the implementation of 79 RMPs in LVC countries (including projects submitted to the 41<sup>st</sup> Meeting), of which 35 are under Decision 31/48 on RMPs and 17 are total CFC phase-out plans (Table 1);
- (b) 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. The RMP is, in effect, a strategic phase-out plan through which an Article 5 country will achieve specific phase-out targets in 2005 and 2007. The level of funding for the RMP is based on a set of specific activities and governed by Decision 31/48. 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. The RMP does not cease when the equipment or activity in the sub-project has been delivered;
- (c) In this regard, determining the effectiveness of ongoing implementation presents a challenge. For countries with an RMP approved, the only indicator for determining actual reductions in CFC consumption is the data that the countries concerned report under Article 7. This indicator has a major limitation, since the data reported is typically between six and 18 months out of date;

- (d) The desk studies on recovery and recycling projects (document UNEP/OzL.Pro/ExCom/31/18) and RMPs (document UNEP/OzL.Pro/ExCom/39/14) generally contribute to the view that RMPs as currently implemented are not demonstrating their effectiveness in contributing to the reductions in consumption that are needed to enable compliance. The condition in Decision 31/48 that the country will meet its 2005 and 2007 obligations without further assistance from the 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;
- (e) The above observations indicate the need for urgent re-consideration of the approach currently being taken to the implementation of RMPs and other non-investment activities. 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 recovery and recycling machines, training programmes or assistance with development of legislation. This approach needs to be re-oriented to encompass the primary goal of assisting countries to achieve compliance;
- (f) It appears that if such a re-orientation takes place, the role of the 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;
- (g) Decision 39/16 (b) requires nomination of all the agencies that will be involved in the RMP and the lead agency that would be responsible for overall RMP implementation, including its phase-out objectives and for reporting on overall progress with achievement. While this decision captures the main policy requirement, the challenge remains to achieve a re-orientation of the approach;
- (h) To this end, the Secretariat suggested at the 40<sup>th</sup> Meeting, that the Executive Committee might consider whether the lead in instituting this change in approach needs to be taken up by the implementing agencies, who represent the Fund at the country level and who exercise financial management of the projects. The primary focus will shift away from achievement of the narrower goals of the individual sub-projects and towards achievement of compliance. The Executive Committee may wish to urge implementing agencies to view all non-investment projects from the perspective of their contribution to compliance, both qualitatively and quantitatively, and to request them to include in all future project submissions and progress reports clear indications of the roles of relevant national authorities and the implementing agencies concerned in achieving the required reduction targets, the timeline and the reduction steps to be achieved and the measures to be taken

to monitor on-going achievement.

9. On the basis of the above observations, the Executive Committee decided (Decision 40/20) 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, with members chosen from both the Sub Committee on Project Review and the Sub-Committee on Monitoring, Evaluation and Finance as well as representatives of the implementing agencies.

#### Reports considered by the Executive Committee

10. The Executive Committee has considered the following reports on RMP or components of RMP project proposals:

- (a) Desk study on recovery and recycling projects (UNEP/OzL.Pro/ExCom/31/18);
- (b) Report on evaluation of training projects ((UNEP/OzL.Pro/ExCom/31/20);
- (c) An extended desk study with country studies on Guatemala, Jamaica and Saint Lucia (document UNEP/OzL.Pro/ExCom/39/14); and
- (d) Final report on the evaluation of the implementation of RMPs (UNEP/OzL.Pro.ExCom/41/7).

#### Findings from the implementation of RMP components

11. The lessons learnt from the implementation of projects and activities related to the refrigeration servicing sector have been reported by Article 5 countries and implementing and bilateral agencies through project completion reports, progress reports on implementation of institutional strengthening projects; progress report on the status of work being undertaken in the projects approved as part of the original RMP project, included in RMP update projects as required by Decision 33/13; and summary reports prepared by relevant agencies assisting in the preparation and implementation of RMPs.

12. From the review of the above reports, it can be concluded that CFC consumption in the refrigeration servicing sector depends on combination of the following factors:

- (a) The low price of CFCs. Although the price of CFC refrigerants has increased in the majority of Article 5 countries, it is still lower compared to the price of non-CFC refrigerants. This price differential has been indicated as a reason for the use of CFCs to service non-CFC refrigeration equipment, and low CFC recovery rates, since there is no economic incentive to recover CFC. It is also been indicated that recovery and recycling equipment is then used to recover more expensive refrigerants such as R-22;
- (b) The large number of semi-skilled and non-qualified service technicians in relation to the number of accredited technicians. The relatively low technical qualification of many service technicians has resulted in larger amounts of refrigerants being used in servicing operations (three to five times more than the actual refrigerant

contained in the equipment). The train-the-trainer approach is now slowly reaching a considerable proportion of a country's refrigeration technicians and teaching them better service practices;

- (c) The level of enforcement of regulations to control CFCs imports. In the majority of LVC countries, ODS regulations have been enacted and licensing systems have been implemented. However, in many countries the enforcement of the legislation has taken longer time than it was anticipated;
- (d) The rate of introduction of second-hand CFC-based refrigeration equipment. It appears, however, that this situation has been mitigated by two factors: (i) regulations initiated/implemented by several Article 5 and non-Article 5 countries addressing import of CFC-based refrigeration equipment; and (ii) the relative reduction in the numbers of CFC-based equipment becoming available in non-Article 5 countries for export;
- (e) The rate of introduction of non-CFC based refrigeration equipment in operation, replacing CFC-based equipment that is being discarded. Conversion of domestic and/or commercial refrigeration manufacturing plants in 23 LVC countries has been funded by the Multilateral Fund (US \$18.7 million approved to phase out 830 tonnes of CFCs). In many cases, however, the non-CFC based equipment is currently serviced with CFC refrigerant because of its lower cost compared to non-CFC refrigerants (as discussed in (a) above);
- (f) The ageing of refrigeration equipment and the poor maintenance provided throughout the years has lead to high leakage rates. In some cases, the amount of CFCs used annually for servicing has been reported to be more than five times the actual charge of the refrigerant in the system.

**Table 1****CFC consumption data in LVC countries with projects approved in the refrigeration servicing sector (ODP tonnes)**

No.	Country	Latest consumption	Baseline	50%Base	85%Base
<b>LVC countries with RMP</b>					
1	Antigua and Barbuda	5.0	10.7	5.4	1.6
2	Bahrain	113.1	135.4	67.7	20.3
3	Belize	8.8	16.0	8.0	2.4
4	Botswana	2.5	6.8	3.4	1.0
5	Chad	36.5	34.6	17.3	5.2
6	Cote D'Ivoire	166.2	294.2	147.1	44.1
7	Dominica	1.1	1.5	0.8	0.2
8	El Salvador	99.1	306.6	153.3	46.0
9	Ethiopia	39.2	33.8	16.9	5.1
10	Fiji	-	33.4	16.7	5.0
11	Grenada	3.8	6.0	3.0	0.9
12	Guinea	38.3	42.4	21.2	6.4
13	Honduras	172.3	331.6	165.8	49.7
14	Kenya	203.3	239.5	119.8	35.9
15	Madagascar	13.9	47.9	24.0	7.2
16	Malawi	50.9	57.7	28.9	8.7
17	Moldova	31.7	73.3	36.7	11.0
18	Mozambique	13.8	18.2	9.1	2.7
19	Nepal	25.0	27.0	13.5	4.1
20	Nicaragua	52.6	82.8	41.4	12.4
21	Niger	39.9	32.0	16.0	4.8
22	Peru	347.0	289.5	144.8	43.4
23	Saint Kitts and Nevis	2.6	3.7	1.9	0.6
24	Saint Vincent and the Grenadines	2.3	1.8	0.9	0.3
25	Tanzania	88.9	253.9	127.0	38.1
26	Uganda	12.2	12.8	6.4	1.9
27	Zambia	23.3	27.4	13.7	4.1
	<b>Subtotal</b>	<b>1,593.3</b>	<b>2,420.5</b>	<b>1,210.3</b>	<b>363.1</b>
<b>LVC countries with RMP/RMP update approved in accordance to Decision 31/48</b>					
1	Benin	54.6	59.9	30.0	9.0
2	Bolivia	78.8	75.7	37.9	11.4
3	Burkina Faso	25.4	36.3	18.2	5.4
4	Burundi *	53.8	59.0	29.5	8.9
5	Cambodia *	94.2	94.2	47.1	14.1
6	Central African Republic	4.3	11.3	5.7	1.7
7	Comoros	2.7	2.5	1.3	0.4
8	Congo	11.4	11.9	6.0	1.8
9	Costa Rica *	137.4	250.2	125.1	37.5
10	Djibouti	20.8	21.1	10.6	3.2
11	Gabon *	13.7	10.3	5.2	1.5

No.	Country	Latest consumption	Baseline	50%Base	85%Base
12	Gambia	6.1	23.8	11.9	3.6
13	Georgia	21.5	22.5	11.3	3.4
14	Ghana	47.0	35.6	17.8	5.3
15	Guatemala	187.9	224.6	112.3	33.7
16	Guyana	24.4	53.2	26.6	8.0
17	Kuwait	419.9	480.4	240.2	72.1
18	Kyrgyzstan	53.5	72.8	36.4	10.9
19	Lao, PDR	44.6	43.3	21.7	6.5
20	Liberia *	32.6	32.6	16.3	4.9
21	Mali	29.2	108.1	54.1	16.2
22	Mauritania *	14.8	15.7	7.9	2.4
23	Mongolia	13.9	10.6	5.3	1.6
24	Oman	282.1	248.4	124.2	37.3
25	Paraguay	153.5	146.9	73.5	22.0
26	Qatar	85.8	101.4	50.7	15.2
27	Rwanda *	29.9	29.9	15.0	4.5
28	Saint Lucia *	3.2	8.3	4.2	1.2
29	Senegal	116.5	155.8	77.9	23.4
30	Seychelles	0.8	2.8	1.4	0.4
31	Sierra Leone *	80.8	78.6	39.3	11.8
32	Suriname *	46.0	42.0	21.0	6.3
33	Swaziland *	0.1	24.6	12.3	3.7
34	Uruguay	106.8	199.1	99.6	29.9
35	Western Samoa	0.6	4.5	2.3	0.7
	<b>Subtotal</b>	<b>2,298.6</b>	<b>2,797.9</b>	<b>1,399.0</b>	<b>419.7</b>
<b>LVC countries with total phase-out plans</b>					
1	Bahamas	65.9	64.9	32.5	9.7
2	Croatia	171.2	219.3	109.7	32.9
3	Ecuador *	229.6	301.4	150.7	45.2
4	Jamaica	59.8	93.2	46.6	14.0
5	Kiribati	0.5	0.3	0.2	0.0
6	Lesotho *	2.4	5.1	2.6	0.8
7	Marshall Islands	1.1	1.1	0.6	0.2
8	Mauritius *	19.1	29.1	14.6	4.4
9	Micronesia		1.2	0.6	0.2
10	Namibia *	22.1	21.9	11.0	3.3
11	Palau		1.6	0.8	0.2
12	Papua New Guinea	34.6	36.3	18.2	5.4
13	Solomon Islands	0.3	2.3	1.2	0.3
14	Tonga	-	1.7	0.9	0.3
15	Trinidad and Tobago	101.3	120.0	60.0	18.0
16	Tuvalu	0.2	0.3	0.2	0.0
17	Vanuatu	-	1.2	0.6	0.2
	<b>Subtotal</b>	<b>708.1</b>	<b>900.9</b>	<b>450.5</b>	<b>135.1</b>
<b>Total</b>		<b>4,600.0</b>	<b>6,119.3</b>	<b>3,059.7</b>	<b>917.9</b>

\*Submitted to the 41<sup>st</sup> Meeting



## Annex I

### DECISION 31/48 ON RMPs

1. At its 31<sup>st</sup> Meeting, the Executive Committee decided:
  - 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% cut in 2005, 85% cut in 2007 and phase-out in 2010 and calculate the size of consumption cuts in the refrigeration sector required to meet these targets;
      - (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 subsectors, 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% 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% reduction step in 2005 and the 85% 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 subsectors, 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% 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 fulfilment of the countries’ control obligations at least up to and including the 85% 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.

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