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THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Ninety-first Meeting  
Montreal, 5-9 December 2022  
Item 11(a)(i) of the provisional agenda<sup>1</sup>

**ANALYSIS OF THE LEVEL AND MODALITIES OF FUNDING  
FOR HFC PHASE-DOWN IN THE REFRIGERATION SERVICING SECTOR**

This document consists of:

- A note by the Secretariat referring to discussions at the 89<sup>th</sup> and 90<sup>th</sup> meetings, including an observation on the use of HCFC baselines as a proxy for HFC phase-down and a revised recommendation
- An addendum to the analysis of the level and modalities of funding for HFC phase-down in the refrigeration servicing sector (decision 88/76), prepared by the Secretariat for discussion at the 89<sup>th</sup> meeting (document UNEP/OzL.Pro/ExCom/89/8/Add.1)

\*Re-issued for technical reasons on 16 November 2022.

<sup>1</sup> UNEP/OzL.Pro/ExCom/91/1

## Note by the Secretariat

### Introduction

1. In the course of developing its cost guidelines for HFC phase-down, the Executive Committee requested the Secretariat to provide an analysis of the level and modalities of funding in the refrigeration servicing sector, including any opportunities for the integrated implementation of HFC phase-down and HCFC phase-out activities.<sup>2</sup> Taking into account the preliminary report on all aspects related to the refrigeration servicing sector that support HFC phase-down<sup>3</sup> and guidance from the Executive Committee, the requested document was prepared and considered at the 88<sup>th</sup> meeting.<sup>4</sup> The contact group established to discuss the matter identified several issues that needed further attention, including challenges to the implementation of HCFC phase-out and HFC phase-down in the refrigeration servicing sector and the possibly premature discussion of modalities and levels of funding in the absence of cost guidelines. As no agreement was reached, the Executive Committee decided to pursue discussions at its 89<sup>th</sup> meeting.<sup>5</sup>

#### 89<sup>th</sup> meeting

2. At part I of the 89<sup>th</sup> meeting, the Executive Committee continued its discussions on the matter.<sup>6</sup> The contact group established to discuss the matter agreed that consideration of the request by the Parties in paragraph 16 of decision XXVIII/2, relating to the introduction of alternatives to HCFCs with low and/or zero global-warming potential (GWP) and the maintenance of energy efficiency in the servicing/end-user sector, would be discussed separately under the agenda item on energy efficiency.<sup>7</sup> Several other elements were discussed, with the following outcomes:

- (a) To consider the third funding modality proposed by the Secretariat<sup>8</sup> as the basis for establishing the overall value of funding allocated for the servicing sector for all countries;
- (b) A common understanding of the need to capitalize on existing infrastructure, with several Article 5 Parties emphasizing the additional effort and activities required as a result of HFC phase-down and the need to make sure that that was accounted for in the agreed funding;
- (c) A request to the Secretariat to categorize non-low-volume-consuming (LVC) countries by consumption and needs, and to suggest corresponding funding levels for further discussion at part II of the 89<sup>th</sup> meeting; and
- (d) To temporarily use HCFC baselines as a proxy for HFC consumption when considering funding; and to review and adjust funding levels, possibly in 2025, once HFC baselines were known.

3. Following the request of the contact group and the Executive Committee,<sup>9</sup> the Secretariat prepared and submitted an additional document to part II of the 89<sup>th</sup> meeting, expanding on the third modality of funding under discussion.<sup>10</sup> The additional document categorized non-LVC countries into four groups based

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<sup>2</sup> Decisions 83/65(b) and 84/86(b)(ii)

<sup>3</sup> UNEP/OzL.Pro/ExCom/82/64

<sup>4</sup> The analysis was requested for the 85<sup>th</sup> meeting; because of the COVID-19 pandemic it was prepared for the 86<sup>th</sup> meeting (UNEP/OzL.Pro/ExCom/86/89) and its discussion was deferred to the 88<sup>th</sup> meeting (online), when it was considered as document UNEP/OzL.Pro/ExCom/88/72.

<sup>5</sup> Decision 88/76

<sup>6</sup> Based on document UNEP/OzL.Pro/ExCom/89/8 (reissued document UNEP/OzL.Pro/ExCom/88/72).

<sup>7</sup> Accordingly, the discussion took place separately during part II of the 89<sup>th</sup> meeting, resulting in decision 89/6.

<sup>8</sup> Paragraphs 45-52 of document UNEP/OzL.Pro/ExCom/89/8

<sup>9</sup> Paragraph 44 of document UNEP/OzL.Pro/ExCom/89/15

<sup>10</sup> UNEP/OzL.Pro/ExCom/89/8/Add.1

on their levels of HCFC consumption and manufacturing, proposed different levels of funding for each group, and discussed several cases requiring individual modalities of funding.

4. At part II of the 89<sup>th</sup> meeting, members expressed the need for urgent decisions on the matter and the view that HFC reductions in the refrigeration servicing sector would require additional funding, taking into consideration the existing equipment obsolescence, inflation, growing costs, and fluctuating numbers of technicians. The need for flexibility was particularly emphasised by one member who pointed out that, due to the COVID-19 pandemic, the economic activity of many developing countries had been suspended for two years, translating into artificially low consumption in the baseline years that were to become a reference for the starting point for sustained reductions in HFC consumption. A member recognized that the graduated levels of funding proposed in the document would ensure tailored assistance options to different types of non-LVC countries. Other views expressed included consideration of the flammability of low-GWP refrigerants in funding proposals; the need for capacity building throughout the complete refrigerant supply chain; and a suggestion to address HFC emissions in terms of CO<sub>2</sub>-equivalent.<sup>11</sup> The Executive Committee agreed to establish a contact group to continue the discussions on the item. As the group did not reach agreement, the Executive Committee agreed to continue the discussions at the following meeting.

#### 90<sup>th</sup> meeting

5. The contact group convened again at the 90<sup>th</sup> meeting to examine the potential impact of graduated funding levels accorded to different groups of non-LVC countries, in comparison to a unique cost-effectiveness rate. The following options were discussed: adopting a flat rate for all non-LVC countries of US \$3.20 per kg; adopting a flat rate for all non-LVC countries of US \$7.00 per kg; or adopting a graduated approach with the lowest cost-effectiveness set at US \$5.00 per kg. It was also proposed to create a new category of non-LVC countries at the lower-consuming end of the range that could be eligible for additional funding. There were also three proposals considered for the LVC countries without any agreement reached. For ease of reference, funding options to assist both non-LVC and LVC countries in reaching the 10 per cent reduction step of HFC phase-down in the servicing sector, as considered by the contact group, can be found at the in-session site of the 91<sup>st</sup> meeting of the Executive Committee.

6. As the discussions in the contact group were inconclusive, the Executive Committee agreed to pursue consideration of the analysis of the level and modalities of funding for HFC phase-down in the refrigeration servicing sector at its 91<sup>st</sup> meeting.<sup>12</sup>

#### **Update on the use of HCFC baselines as a proxy**

7. The analysis of the level and modalities of funding for HFC phase-down in the refrigeration servicing sector was first prepared and submitted to the 86<sup>th</sup> meeting<sup>13</sup> when no HFC consumption data was available yet for any of the baseline years for group 1 and 2 countries. At the time, in the absence of either estimated or established HFC baselines, LVC countries were classified into eight groups according to their HCFC consumption during the HCFC baseline years, and non-LVC countries were divided into two groups (consuming below or above 25,000 mt of HCFCs), and subsequently four groups, based on levels of HCFC consumption in the refrigeration servicing sector. For both LVC and non-LVC countries, the consumption in the servicing sector was based on the consumption of HCFC-22.

8. While this approach returned accurate results for both LVC and most non-LVC countries, the Secretariat undertook further analysis based on the country programme implementation report data and

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<sup>11</sup> The suggestion was to group countries based on their HFC use up to 2021 in terms of CO<sub>2</sub>-equivalent and provide funding based on the emissions avoided.

<sup>12</sup> Paragraph 180 of document UNEP/OzL.Pro/ExCom/90/40.

<sup>13</sup> UNEP/OzL.Pro/ExCom/86/89 (reissued as document UNEP/OzL.Pro/ExCom/87/47)

HCFC phase-out management plans (HPMPs), noting that the consumption of HCFCs for servicing in several countries with substantial refrigeration and air-conditioning manufacturing sectors was lower than initially estimated. Based on this additional analysis, three countries from group 2 (Egypt, the Islamic Republic of Iran and Viet Nam) have been moved to group 1, and three countries from group 3 (India, Mexico and Thailand) have been moved to group 2. The updated table of countries in each category is presented in Annex I to this note.

9. The Secretariat also undertook a comparison of HCFC baselines against HFC consumption levels reported in 2020 and 2021 by, respectively, 101 and 103 Article 5 countries. So far, HFC consumption in 2020 and/or 2021 was found to be below 360 mt<sup>14</sup> in around five non-LVC countries, and above 360 mt in around 10 LVC countries. It should be noted that HFC consumption patterns in some countries are still unclear, and that the data is not sufficient yet to reach conclusions on how HCFC baselines compare to HFC consumption in baseline years. HCFC consumption levels could still be used as reference to determine funding for Article 5 countries, on the understanding that, as suggested by some members of the contact group, once the HFC consumption baselines are known, funding levels would be accordingly adjusted.

### **Updates to the recommendation**

10. The initial analysis of the level and modalities of funding for HFC phase-down in the refrigeration servicing sector, submitted to the 86<sup>th</sup> meeting, put forward a recommendation drafted in line with previous policies for the preparation of HPMPs, including a distinction between LVC and non-LVC countries with regard to funding activities in the sector.<sup>15</sup> While this recommendation has not been modified from its original version, the following developments have taken place:

- (a) At the 87<sup>th</sup> meeting, the Executive Committee agreed on the draft guidelines for the preparation of the Kigali HFC implementation plans for Article 5 countries, including assistance for the refrigeration servicing sector in addressing the freeze and the 10 per cent reduction in consumption, without making a distinction between LVC and non-LVC countries. Accordingly, the text of the decision was updated; and
- (b) At the 88<sup>th</sup> meeting, the contact group agreed to remove from the servicing sector the discussion on ways to operationalize paragraph 16 of decision XXVIII/2. Therefore, paragraph (e) of the recommendation was deleted.

11. Accordingly, the original recommendation contained in document UNEP/OzL.Pro/ExCom/86/89 has been updated and the full text of the updated recommendation is shown below. For information purposes, updates made to the original recommendation since the 86<sup>th</sup> meeting can be found in Annex II to the note, with all changes in bold and/or strikethrough.

### **RECOMMENDATION**

12. The Executive Committee may wish to consider:

- (a) Noting the analysis of the level and modalities of funding for HFC phase-down in the refrigeration servicing sector, contained in document UNEP/OzL.Pro/ExCom/91/61;

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<sup>14</sup> Annual consumption level of 360 mt is the cut-off point below which a country is considered to be LVC for the purpose of determining funding eligibility for projects.

<sup>15</sup> Decision 60/44(f)(xv) indicates that non-LVC countries should first address consumption in the manufacturing sector to meet the stage I reduction steps. However, if such countries clearly demonstrated that they required assistance in the refrigeration servicing sector to comply with these targets, funding would be provided at US \$4.50/kg, and deducted from their starting point for aggregate reductions in HCFC consumption.

(b) Applying the following principles with regard to the eligible incremental costs in the refrigeration servicing sector for stage I of the Kigali HFC implementation plans (KIPs), on the understanding that the funding levels specified below would be revised for activities submitted for future KIP stages when activities under HCFC phase-out management plans were completed:

(i) Article 5 countries must include in their KIPs, at a minimum:

- a. A commitment to meeting, without further requests for funding, at least the 10 per cent reduction step in HFC consumption in line with the compliance schedule of the Montreal Protocol, and restricting imports of HFC-based equipment if necessary to achieve the compliance schedule and to support relevant phase-out activities;
- b. Mandatory reporting, by the time funding tranches for the KIPs are requested, on the implementation of activities undertaken in the refrigeration servicing sector and in the manufacturing sector, when applicable, in the previous tranche, as well as a comprehensive annual work plan for the implementation of the activities associated with the next tranche; and
- c. A description of the roles and responsibilities of major stakeholders, as well as the lead implementing agency and the cooperating agencies, where applicable;

(ii) Article 5 countries that have a total HCFC consumption baseline of up to 360 metric tonnes (mt) will be provided funding consistent with the level of consumption in the refrigeration servicing sector, as shown in the table below, on the understanding that project proposals will still need to demonstrate that the funding level is necessary to achieve at least the 10 per cent HFC reduction target;

HCFC consumption in servicing in baseline years (mt)	Funding (US \$)
>0 <15	88,125
15 <40	112,500
40 <80	120,000
80 <120	135,000
120 <160	142,500
160 <200	150,000
200 <320	240,000
320 <360	270,000

(iii) Article 5 countries with a HCFC consumption baseline above 360 mt and below 25,000 mt will be provided funding, which will be deducted from their starting point for aggregate reductions in HFC consumption, [at a level up to US \$3.20/metric kg,]/[consistent with the levels shown in the table below,] on the understanding that project proposals will still need to demonstrate that the funding level is necessary to achieve at least the 10 per cent HFC reduction target;

[HCFC consumption in servicing in baseline years (mt)]	Level of funding per country
360 to 1,800	US \$4.80/kg. If this value is lower than that agreed for the largest group in paragraph (b)(ii) above, the country can opt to be funded based on paragraph (b)(ii)
1,800 to 8,000	US \$4.80/kg for the first 1,800 mt US \$4.00/kg for every mt above 1,800
8,000 to 25,000	US \$4.80/kg for the first 1,800 mt US \$4.00/kg for every mt above 1,800 and below 8,000 US \$3.20/kg for every mt above 8,000
Above 25,000	Case-by-case]

- (iv) Funding for Article 5 countries that have a total HCFC consumption baseline above 25,000 mt will be considered on a case-by-case basis;
- (c) Reviewing the level of funding approved for each country on the basis of their relevant HFC baseline information once the HFC baselines are known; and
- (d) Including the principles referred to in sub-paragraphs (b) and (c) in the draft cost guidelines for the phase-down of HFCs and revising these principles in 2028 for the funding of future stages of the KIPs.

Annex I

**UPDATED CATEGORIES OF NON-LOW-VOLUME-CONSUMING COUNTRIES  
ACCORDING TO THE PROPOSED LEVELS OF FUNDING  
ALLOCATED TO THE REFRIGERATION SERVICING SECTOR  
UNDER STAGE I OF THE KIGALI HFC IMPLEMENTATION PLANS**

<b>HCFC consumption in servicing</b>	<b>Number of countries</b>	<b>Countries</b>
<b>Group 1</b> 360-1,800 mt  No manufacturing or some manufacturing	38	Afghanistan, Algeria, Bahrain, Bangladesh, Benin, Burkina Faso, Cameroon, Chile, Colombia, Côte d'Ivoire, Democratic People's Republic of Korea, Democratic Republic of the Congo, Dominican Republic, Ecuador, Egypt, Gabon, Ghana, Guinea, Iran (Islamic Republic of), Jordan, Kenya, Lebanon, Libya, Madagascar, Mauritania, Morocco, Oman, Panama, Peru, Qatar, Senegal, Somalia, Syrian Arab Republic, Togo, Trinidad and Tobago, Tunisia, Uruguay, Viet Nam
<b>Group 2</b> 1,800-8,000 mt  With manufacturing	15	Argentina, India, Indonesia, Iraq, Kuwait, Malaysia, Mexico, Nigeria, Pakistan, Philippines, South Africa, Thailand, Türkiye, Venezuela (Bolivarian Republic of), Yemen
<b>Group 3</b> 8,000-25,000 mt  With manufacturing	2	Brazil, Saudi Arabia
<b>Group 4</b> Above 25,000  With manufacturing	1	China





## Annex II

### UPDATES TO THE RECOMMENDATION CONTAINED IN DOCUMENT UNEP/OzL.Pro/ExCom/86/89 (all updates are presented in bold and/or strikethrough)

#### RECOMMENDATION

1. The Executive Committee may wish to consider:
  - (a) Noting the analysis of the level and modalities of funding for HFC phase-down in the refrigeration servicing sector, contained in document UNEP/OzL.Pro/ExCom/~~86/89~~**91/61**;
  - (b) Applying the following principles with regard to the eligible incremental costs ~~for stage I of the HFC phase-down~~ in the refrigeration servicing sector for ~~the period 2021–2029 for Article 5 group 1 countries, and 2021–2032 for Article 5 group 2 countries, all of which are non-low-volume-consuming (LVC) countries~~ **stage I of the Kigali HFC implementation plans (KIPs)**, on the understanding that the funding levels specified below would be revised for activities submitted for future ~~HFC phase-down KIP~~ stages when activities under HCFC phase-out management plans (~~HPMPs~~) were completed:
    - (i) Article 5 countries ~~with total HCFC consumption baseline of up to 360 metric tonnes (mt)~~ must include in their ~~HFC phase-down plans, as KIPs~~, at a minimum:
      - a. A commitment to meeting, without further requests for funding, at least the 10 per cent reduction step in HFC consumption in line with the compliance schedule of the Montreal Protocol, and restricting imports of HFC-based equipment if necessary to achieve the compliance schedule and to support relevant phase-out activities;
      - b. Mandatory reporting, by the time funding tranches for the ~~HFC phase-down plans were~~ **KIPs are** requested, on the implementation of activities undertaken in the refrigeration servicing sector and in the manufacturing sector, when applicable, in the previous tranche, as well as a comprehensive annual work plan for the implementation of the activities associated with the next tranche; and
      - c. A description of the roles and responsibilities of major stakeholders, as well as the lead implementing agency and the cooperating agencies, where applicable;
    - (ii) Article 5 countries that have a total HCFC consumption ~~as specified in sub-paragraph (b)(i) above~~ **baseline of up to 360 metric tonnes (mt)** will be provided funding consistent with the level of consumption in the refrigeration servicing sector, as shown in the table below, on the understanding that project proposals will still need to demonstrate that the funding level is necessary to achieve at least the ~~HFC~~**10 per cent HFC** reduction target;

<b>Baseline HCFC consumption in servicing in baseline years (mt)</b>	<b>Funding (US \$)</b>
>0 <15	88,125
15 <40	112,500
40 <80	120,000
80 <120	135,000
120 <160	142,500
160 <200	150,000
200 <320	240,000
320 <360	270,000

- (iii) Article 5 countries ~~that have total with a HCFC consumption baseline above 360 mt and below 25,000 mt that clearly demonstrate that they require assistance in the refrigeration servicing sector to comply at least with the 10 per cent reduction step in HFC consumption in line with the compliance schedule of the Montreal Protocol,~~ will be provided funding ~~at a level up to US \$3.20/ metric kg,~~ which will be deducted from their starting point for aggregate reductions in HFC consumption, ~~[at a level up to US \$3.20/ metric kg,]/[consistent with the levels shown in the table below,]~~ on the understanding that project proposals will still need to demonstrate that the funding level is necessary to achieve at least the 10 per cent HFC reduction target;

<b>[HCFC consumption in servicing in baseline years (mt)]</b>	<b>Level of funding per country</b>
<b>360 to 1,800</b>	US \$4.80/kg. If this value is lower than that agreed for the largest group in paragraph (b)(ii) above, the country can opt to be funded based on paragraph (b)(ii)
<b>1,800 to 8,000</b>	US \$4.80/kg for the first 1,800 mt US \$4.00/kg for every mt above 1,800
<b>8,000 to 25,000</b>	US \$4.80/kg for the first 1,800 mt US \$4.00/kg for every mt above 1,800 and below 8,000 US \$3.20/kg for every mt above 8,000
<b>Above 25,000</b>	Case-by-case]

- ~~(iv) Article 5 countries referred to in paragraph (b)(iii) above that could achieve the 10 per cent reduction step in HFC consumption in line with the compliance schedule of the Montreal Protocol, only through activities in the refrigeration servicing sector, could receive funding up to the level determined for LVC countries with HCFC baseline between 320 and 360 mt as specified in sub-paragraph (b)(ii) above, on the understanding that they must include in their HFC phase-down plans, as a minimum the requirements described in sub-paragraph (b)(i) above; and~~
- (iv) Funding for Article 5 countries that have a total HCFC consumption baseline above 25,000 mt will be considered on a case-by-case basis;
- (c) **Reviewing the level of funding approved for each country on the basis of their relevant HFC baseline information once the HFC baselines are known; and**

- (d) Including the principles referred to in sub-paragraphs (b) and (c) in the draft cost guidelines for the phase-down of HFCs and revising these principles in 2028 for the funding of future stages of ~~HFC phase-down plans the KIPs.; and~~
- (d) ~~Whether to add the increase of funds agreed in the discussion of document UNEP/OzL.Pro/ExCom/86/92 on ways to operationalize paragraph 16 of decision XXVIII/2, and paragraph 2 of decision XXX/5, to the approval of stage I of the HFC phase-down instead of the HPMP, noting that the activities proposed for such increase of funds will benefit both HCFC phase-out and HFC phase-down through introduction of alternatives with low and zero GWP to HFC and maintain energy efficiency also in the servicing/end-user sector for LVC countries.~~





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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Eighty-ninth Meeting  
Montreal, 7-11 March 2022  
Postponed to 16, 18 and 20 May 2022 (part I) and  
16-18 June 2022 (part II)<sup>1</sup>

**Addendum**

**ANALYSIS OF THE LEVEL AND MODALITIES OF FUNDING FOR HFC PHASE-DOWN  
IN THE REFRIGERATION SERVICING SECTOR (DECISION 88/76)**

**Introduction**

1. This addendum, presenting adjustments to the third modality of funding proposed in document UNEP/OzL.Pro/ExCom/89/8, is issued in response to the request made by the Executive Committee at part I of its 89<sup>th</sup> meeting,<sup>2</sup> to assist in the ongoing discussion on the level and modalities of funding for HFC phase-down in the refrigeration servicing sector.

2. In line with this request, the Secretariat has further developed the third modality presented in document UNEP/OzL.Pro/ExCom/89/8, with the following adjustments:

- (a) Non-low-volume-consuming (LVC) countries have been categorized into four groups on the basis of their consumption and needs;
- (b) Different levels of funding have been proposed for each of the non-LVC country groups;
- (c) Special cases have been identified, and
- (d) The overall level of funding for the servicing sector for all Article 5 countries has been calculated based on the levels of funding proposed for each group of countries.

<sup>1</sup> Due to coronavirus disease (COVID-19), part I of the 89<sup>th</sup> meeting was held online while part II will be held in-person.

<sup>2</sup> Paragraphs 43 and 44 of document UNEP/OzL.Pro/ExCom/89/15.

### Categorization of non-LVC countries into groups and levels of funding per group

3. The Secretariat divided non-LVC countries into four groups based on their level of HCFC consumption, whether they have HCFC consumption in the manufacturing sectors, and precedents for grouping non-LVC countries. As an initial step, the Secretariat referred to the categorization of non-LVC countries in “brackets” made by the Technology and Economic Assessment Panel’s (TEAP) Replenishment Task Force<sup>3</sup> and applied some adjustments. Instead of grouping the countries based on their overall HCFC consumption, the Secretariat classified them based on their HCFC consumption for the baseline years in the refrigeration servicing sector. In addition, based on the level of HCFC consumption in the manufacturing sector, the Secretariat slightly adjusted the limits between the categories from the TEAP brackets, to ensure that countries with comparable levels of manufacturing would be grouped together to the extent possible.<sup>4</sup> The resulting groups are presented in table 1.

**Table 1. Categories of non-LVC countries proposed for allocating funding for HFC phase-down in the refrigeration servicing sector for stage I of the Kigali HFC Implementation Plans (KIPs)**

HCFC consumption in servicing in metric tonnes (mt)	Number of countries	Countries
<b>Group 1</b> 360 to 1,800  No manufacturing or some manufacturing	35	Afghanistan, Algeria, Bahrain, Bangladesh, Benin, Burkina Faso, Cameroon, Chile, Colombia, Côte d'Ivoire, Democratic People's Republic of Korea, Democratic Republic of the Congo, Dominican Republic, Ecuador, Gabon, Ghana, Guinea, Jordan, Kenya, Lebanon, Libya, Madagascar, Mauritania, Morocco, Oman, Panama, Peru, Qatar, Senegal, Somalia, Syrian Arab Republic, Togo, Trinidad and Tobago, Tunisia, Uruguay
<b>Group 2</b> 1,800 to 8,000  With manufacturing	15	Argentina, Egypt, Indonesia, Iran (Islamic Republic of), Iraq, Kuwait, Malaysia, Nigeria, Pakistan, Philippines, South Africa, Türkiye, Venezuela (Bolivarian Republic of), Viet Nam, Yemen
<b>Group 3</b> 8,000 to 25,000  With manufacturing	5	Brazil, India, Mexico, Saudi Arabia, Thailand
<b>Group 4</b> Above 25,000  With manufacturing	1	China

4. With the division of non-LVC countries into these four groups, instead of applying one cost-effectiveness level for all countries, it would be possible to consider differentiated levels of funding that may be better suited to the characteristics of countries in each category.

5. For estimating the level of funding for stage I of the KIPs, the Secretariat took as a starting point the level of funding approved for the HCFC phase-out management plans (HPMPs), noting that the categories of eligible incremental costs for HFC phase-down are similar to those for activities being implemented under the HPMPs. The additional efforts required for HFC phase-down would result in an increase of this funding, while the opportunities to capitalize on the existing infrastructure and ongoing activities in the sector would result in a decrease, as follows:

- (a) A factor to increase the level of funding agreed for HPMPs has been applied to reflect the wider set of substances and blends to be recorded, reported and monitored, as well as

<sup>3</sup> Assessment of the funding requirement for the replenishment of the Multilateral Fund for the 2021-2023 period.

<sup>4</sup> The first group includes countries with consumption between 360 and 1,800 mt (instead of 2,000 mt in the TEAP report) and the second group includes countries with consumption between 1,800 and 8,000 mt (instead of 10,000 mt in the TEAP report).

recovered, recycled and reclaimed; the larger set of applications using HFCs; and the need to provide capacity building and technical assistance to address safety issues associated with the introduction of low-global-warming-potential (GWP) alternatives, including *inter alia* the expansion of technician training and certification programmes, further strengthening of training institutes, the provision of relevant tools, and the adoption of additional standards and regulatory measures;

- (b) A factor to reflect savings has also been applied to the level of funding agreed for HPMPs to take into account the existing infrastructure and partnerships established through the HPMPs and the fact that many of the initial activities associated with HFC phase-down can build on the basis of ongoing projects. For example, training in handling low-GWP alternatives may need to cover more technicians, but in most HPMPs it is already being imparted to some degree; recovery, recycling and reclaiming infrastructure established through the HPMPs may be expanded; the technician certification schemes already established through HPMPs may be expanded and improved; and
- (c) LVC countries and group 1 of non-LVC countries would require additional efforts during stage I of the KIPs, noting that for the countries with some or no manufacturing, most of the HFC reductions to be achieved in stage I of their KIPs will need to take place in the refrigeration servicing sector, and that the funding available from the implementation of the final stages of HPMPs in these countries is smaller than in countries with a high HCFC consumption.

6. Future stages of KIPs will be implemented at a time when HCFCs will have already been phased out, and there will not be common activities to be implemented. The modalities and levels of funds would need to be revised at that time in accordance with the prevalent circumstances.

7. Based on this analysis, the Secretariat is proposing the funding levels per category as follows and as shown in table 2:

- (a) Group 1: non-LVC countries with a consumption of 360-1,800 mt, with some or no manufacturing. It is expected that a large portion of HFC reductions in stage I of these countries' KIPs may need to take place in the refrigeration servicing sector; therefore, the level of effort and activities required in the sector would be closer to that to be made by LVC countries. The levels of funding that countries in group 1 will receive for the implementation of last stages of their HPMPs are higher than those for LVC countries, but not as high as for the other groups of non-LVC countries. Based on the remaining HCFC consumption in the servicing sector, the level of HPMP funds for servicing for countries in this group could be between up to US \$187,000 and up to US \$6.9 million, with an average of US \$1.9 million per country. The level of funding proposed for stage I of the KIPs for this group is US \$4.80/kg, which is similar to the level of funding approved under their HPMPs;
- (b) Group 2: countries with a consumption of 1,800-8,000 mt that have or had HCFC consumption in the manufacturing sectors, and that are expected to also have HFC consumption in these sectors. These countries will have more opportunities than LVC countries and non-LVC countries in group 1 to achieve reductions during stage I of their KIPs with combined strategies that could include activities in the manufacturing and servicing sectors. All countries in this group (with one exception)<sup>5</sup> will be submitting in the next few years the final stages of their HPMPs, which will be almost exclusively in the refrigeration servicing sector. As the levels of funding that countries in group 2 will receive

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<sup>5</sup> Türkiye will achieve total HCFC phase-out by 2025 with the ongoing stage.

for the implementation of the last stages of their HPMPs are substantially higher than those received by countries in group 1, countries in group 2 will have more opportunities to take advantage of the infrastructure and activities being delivered under their HPMPs. Based on the remaining HCFC consumption in the servicing sector, the level of funding still to be approved for the servicing sector under the HPMPs for the countries in this group could be between up to US \$3 million and up to US \$22 million, with an average of US \$10 million per country. The level of funding for stage I of the KIPs for this group is calculated at US \$4.80/kg for the first 1,800 mt, plus US \$4.00/kg for any additional consumption above 1,800 mt;

- (c) Group 3: countries with the consumption of 8,000-25,000 mt that also have or had HCFC consumption in the manufacturing sectors, and that are expected to have substantial HFC consumption in these sectors. These countries will have more opportunities than countries in groups 1 and 2 to achieve reductions during stage I of their KIPs with combined strategies that could include activities in the manufacturing and servicing sectors. All countries in this group will be submitting in the next few years the final stages of their HPMPs, which will be almost exclusively in the refrigeration servicing sector. As the levels of funding that countries in group 3 will receive for the implementation of the last stages of their HPMPs are substantially higher than those received by countries in group 2, countries in group 3 will have more opportunities to take advantage of the infrastructure and activities being delivered under their HPMPs. Based on the HCFC consumption in the servicing sector still to be addressed, the level of funding still to be approved for the servicing sector under the HPMPs for the countries in this group could be between up to US \$22 million and up to US \$46 million per country, with an average of US \$36 million per country. Given the large number of activities that will be implemented in the servicing sector in these countries for HCFC phase-out during the time of stage I of the KIPs, and the economies of scale that can be achieved as the funding is associated with large levels of consumption, the level of funding for stage I of the KIPs for this group is calculated at US \$4.80/kg for the first 1,800 mt, plus US \$4.00/kg for the tonnage of 1,800-8,000 mt, plus US \$3.20/kg for any additional consumption above 8,000 mt; and
- (d) Group 4: countries in this group will be considered on a case-by-case basis.

8. The above model avoids large drops in funding that would take place among groups if the funding levels were based on a unique cost-effectiveness value per group. For example, if the level of funding for a country in group 2 with a consumption of 1,810 mt was calculated simply at US \$4.00/kg, the country would receive US \$724,000, while a country in group 1 with a lower consumption of 1,790 mt would receive a higher value of US \$859,200 at US \$4.80/kg. The levels of funding proposed for different groups of non-LVC countries are summarized in table 2.

**Table 2. Levels of funding proposed for non-LVC countries**

Groups/ HCFC consumption in servicing (mt)	Number of countries	Level of funding per country
<b>Group 1</b> 360 to 1,800	35	US \$4.80/kg. If this value is lower than that agreed for the largest group of LVC countries, the country can opt to be funded as a LVC country.*
<b>Group 2</b> 1,800 to 8,000	15	US \$4.80/kg for the first 1,800 mt US \$4.00/kg for every mt above 1,800
<b>Group 3</b> 8,000 to 25,000	5	US \$4.80/kg for the first 1,800 mt US \$4.00/kg for every mt above 1,800 mt and below 8000 mt US \$3.20/kg for every mt above 8,000 mt
<b>Group 4</b> Above 25,000	1	Case-by-case

\* Discussed in paragraph 11



### **An alternative modality: Allocation of specific funding levels per group of non-LVC countries**

9. During the contact group discussion at part I of the 89<sup>th</sup> meeting, members enquired whether it would be possible, after categorizing non-LVC countries, to allocate a funding level to each group, in an approach similar to that used with LVC countries. Accordingly, the Secretariat calculated funding levels for each of the proposed groups, as shown in table 3.

**Table 3. Allocation of a unique funding level per group of non-LVC countries**

<b>Groups / HCFC consumption in servicing (mt)</b>	<b>Number of countries</b>	<b>Level of funding per country</b>
<b>Group 1:</b> 360 to 1,800	35	365,114
<b>Group 2:</b> 1,800 to 8,000	15	1,636,013
<b>Group 3:</b> 8,000 to 25,000	5	4,961,466
<b>Group 4:</b> Above 25,000	1	Case-by-case

10. The level of funding for each group in table 3 was calculated as the average funding for all countries in the group using the proposed cost-effectiveness level (US \$4.80/kg for group 1, US \$4.80/4.00/kg for group 2, and US \$4.80/4.00/3.20/kg for group 3). A disadvantage of using this option would be that, given the large size of the groups, proposing one level of funding per group would not be equitable across countries in the group. In particular, Article 5 countries in the same group would receive the same amount of funding irrespective of the fact that countries with a higher baseline would have to phase out a higher level of consumption. For example, estimating funding based on the cost-effectiveness level in table 2, the country with the lowest consumption in group 2 would receive US \$907,300, and one with the largest consumption would receive US \$2,686,076. A much larger number of groups of non-LVC countries would be required to ensure that the level of funding is better adjusted to the level of consumption (similar to the smaller groups for LVC countries). For this reason, the Secretariat considers that using the combined cost-effectiveness thresholds proposed in the previous section (table 2) would provide funding levels that are appropriate to the existing level of consumption and the level of activities required in each country.

### **Special cases**

#### Special situation of non-LVC countries with consumption levels close to 360 mt

11. In applying the values proposed above to each group of non-LVC countries, the Secretariat noted that for the first 14 countries<sup>6</sup> in group 1, with HCFC consumption levels very close to those of LVC countries (360 mt to 1,800 mt), applying US \$4.80/kg would represent lower funding levels than the US \$270,000 proposed for the largest LVC countries. Those countries could decide whether they would like to be funded as LVC or non-LVC countries. An example of this situation is Panama. HCFC consumption in the servicing sector in Panama is 404.3 mt, which places it in group 1 of non-LVC countries. Accordingly, using HCFC consumption as a proxy, the level of funding that Panama would receive at US \$4.80/kg would be US \$194,074, which is lower than the US \$270,000 received by the largest LVC countries. In this case, Panama could opt to receive US \$270,000. However, it is noted that HFC consumption in the servicing sector in Panama in 2021 was 821.26 mt. Once the HFC baselines are known, if the average HFC consumption in the servicing sector for the baseline years in Panama was found to be at around the 2021 consumption level (821.26 mt), Panama would receive around US \$394,000 at US \$4.80/kg, which is above US \$270,000. The 14 countries with consumption above, but close to 360 mt could opt to be funded as LVC countries (i.e., at US \$270,000), and by the time the HFC baselines are known, if applicable, they could request a funding adjustment in line with their consumption.

<sup>6</sup> Afghanistan, Benin, Burkina Faso, Ecuador, Gabon, Guinea, Madagascar, Mauritania, Oman, Panama, Peru, Somalia, Togo, Uruguay.

Article 5 countries that have already phased out HCFCs or that have already approved HPMPs for total HCFC phase-out before or by 1 January 2025

12. In undertaking the additional work requested to categorize Article 5 countries, the Secretariat identified nine countries that have approved HPMPs to achieve total phase-out of HCFCs before or by 1 January 2025. These countries include eight LVC countries (Bhutan, Kyrgyzstan, Maldives, Montenegro, Namibia, Papua New Guinea, Saint Vincent and the Grenadines, Seychelles) and one non-LVC country (Türkiye).

13. Currently, these countries belong to different groups of LVC and non-LVC countries (e.g., Türkiye belongs to group 2 of non-LVC countries). Noting that one of the factors taken into consideration to estimate the level of funding for stage I of KIPs in the refrigeration servicing sector is the opportunity to take advantage of the existing infrastructure and ongoing activities within the HPMPs, and that these countries may have already established some infrastructure but will not have opportunities to take advantage of ongoing activities in the servicing sector under their HPMPs as they will be finished or about to finish by the time their KIPs start implementation, the Secretariat considers that a higher level of funding would be appropriate and would need to be determined on a case-by-case basis.

**Calculation of the overall level of funding for the servicing sector for all countries**

14. Based on the adjustment made to the third modality, the Secretariat has calculated the overall funding for the refrigeration servicing sector to address stage I of the KIPs in Article 5 countries.

15. The funding estimates in table 4 below are indicative only, as HFC consumption in the baseline years is still unknown. The following assumptions were made:

- (a) The funds were calculated based on HCFC consumption in the refrigeration servicing sector during the HCFC baseline years. These values will change once HFC consumption in the HFC baseline years is known;
- (b) The level of funding calculated for non-LVC countries was based on the assumption that countries reduce their HFC consumption in the servicing sector by 10 per cent. As the sectors where HFC reductions will take place in stage I of the KIPs are still unknown, these values could vary;
- (c) For the purpose of this calculation, table 4 does not classify the nine Article 5 countries referred to in paragraphs 12 and 13 of the present document in a separate category to be considered on a case-by case basis. Instead, these countries are included in the existing groups based on their levels of HCFC consumption; and
- (d) The value for group 4 (to be considered on a case-by-case basis) has not been included in the total.

**Table 4. Overall level of funding allocated for the servicing sector for all Article 5 countries**

HCFC baseline for the servicing sector (mt)	Number of countries	Funding basis (decision 74/50) (US \$ or US \$/kg)	Funding per country (US \$ or US \$/kg)	Total funding (US \$)
Below 15	21	58,750	88,125	1,850,625
15 to 40	17	75,000	112,500	1,912,500
40 to 80	13	80,000	120,000	1,560,000
80 to 120	11	90,000	135,000	1,485,000
120 to 160	9	95,000	142,500	1,282,500

<b>HCFC baseline for the servicing sector (mt)</b>	<b>Number of countries</b>	<b>Funding basis (decision 74/50) (US \$ or US \$/kg)</b>	<b>Funding per country (US \$ or US \$/kg)</b>	<b>Total funding (US \$)</b>
160 to 200	3	100,000	150,000	450,000
200 to 320	12	160,000	240,000	2,880,000
320 to 360	2	180,000	270,000	540,000
360 to 1,800	35	4.80	4.80	12,778,979
1,800 to 8,000	15	4.80	4.80/4.00	24,540,193
8,000 to 25,000	5	4.80	4.80/4.00/3.20	24,807,330
Above 25,000	1	4.80	case-by-case	to be determined
<b>Total</b>	<b>144</b>			<b>*74,087,127</b>

\* This number does not include funding levels for countries with consumption above 25,000 mt, to be determined on a case-by-case basis. For example, if funding for this group were agreed at US \$3.20/kg, the additional value to be added to the total funding in table 4 would be US \$68,883,438; if funding for this group were agreed at US \$2.00/kg, the additional value to be added to the total funding in table 4 would be US \$43,052,148.