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IMPLEMENTATION OF THE MONTREAL PROTOCOL
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Montreal, 15-19 April 2013

STATUS REPORTS AND COMPLIANCE

EXECUTIVE SUMMARY

This document contains six parts. The main issues and conclusions are summarized below:

- There was CFC, CTC and methyl bromide (MB) production in 2011 in China. CFC production was allowed for essential use exemptions. CTC production was for allowed process agent and laboratory use. MB production was below the 20 per cent baseline required for 2011;

- Seven Article 5 countries produced 35,034 ODP tonnes of HCFCs, five produced fewer HCFCs in 2011 than their baselines, and most of the production (32,106 ODP tonnes) was in China;

- Most countries have zero consumption of the remaining substances (excluding HCFCs and exempted uses) and 25 countries are reporting MB consumption above the 2015 control limits;

- No countries appear to be in non-compliance with control measures based on 2011 Article 7 (A7) and/or country programme (CP) data submitted as of 1 March 2013;

- All eligible countries have had HCFC phase-out management plan (HPMP) preparation funding approved except South Sudan; South Sudan has ratified all amendments to the Montreal Protocol and preparation funding was included in the 2013 business plan for UNEP implementation;

- Eight Article 5 countries have not received HPMP funding but an HPMP has been submitted for only one country to the 69th meeting;

- 2011 or 2012 HCFC consumption for seventy-nine countries was below their baseline consumption;

- Seven countries will submit (Libya, Mauritania, South Sudan and Tunisia) or resubmit (Democratic People's Republic of Korea (the), Botswana and Syrian Arab Republic) their HPMPs after the 69th meeting;

- Of the three compliance-related issues in 2012, two have already been resolved as per A7 data; based on information from implementing agencies and the Ozone Secretariat, one issue has not been reported as achieved;

- Data on the implementation of CPs indicate that:

    - Of the 143 countries required to report CP data, 138 reported 2011 data and 81 countries submitted data using the web-based system;
    - All of the 830.3 ODP tonnes of remaining consumption is of MB;
    - Prices for HCFC-22 and HCFC-142b are lower than those of alternatives included in CP data. HCFC-141b prices are lower than alternatives HCFC-245fa and HFC-356mfc, but higher than cyclopentane and pentane based on 2011 prices;
    - The Executive Committee has addressed 24 per cent of the HCFC consumption baseline through approved projects;
    - For the 147 countries reporting 2010 and 2011 data, HCFC consumption increased by 0.05 per cent;
    - Of the countries reporting information on licensing systems, 135 out of 144 countries reported them as being operational (130 of the 138 countries that reported 2011 data had operational licensing systems and six indicated that their licensing systems were functioning 'not so well' and provided reasons for this in their response at the 68th meeting);

  - 71 countries indicated that they had quota systems in place for HCFC control measures;

- Of the 25 projects with implementation delays, there are eleven that are recommended for continued monitoring;

- Additional reports are recommended for 47 projects for which status reports were presented to the current meeting, and an additional report is recommended for one HPMP preparation activity.

Introduction

1. This document consists of six parts:

   (a) Part I has been prepared in response to decisions 32/76(b), 46/4 and 67/6(c), which requested the Secretariat to prepare an update for each Meeting of the Executive Committee on the status of compliance of A5 countries that are subject to the Montreal Protocol's control measures and as a guide for business planning for HCFC compliance.

   (b) Part II contains information on those A5 countries that are subject to decisions of the Parties on compliance.

   (c) Part III presents data on the implementation of CPs, including an analysis of the ozone-depleting substances (ODS) consumption data, by sector. It also contains a section that addresses the characteristics of national ODS phase-out programmes.

   (d) Part IV presents the result information on projects with implementation delays and for which special status or specific detailed reports were requested.

   (e) Part V presents UNIDO's report on the CTC phase-out plan in the Democratic People's Republic of Korea in response to decision 68/34(b).

   (f) Part VI contains reports on resource mobilization.

2. Part V will be issued as an addendum to the present document in limited edition.

3. The analysis performed and the conclusions reached in this document are without prejudice to the status of compliance determined by the Meeting of the Parties, which is the only body empowered to assess such status. Data reported pursuant to A7 of the Protocol are used exclusively to determine a country's status of compliance on an annual basis. The analysis in this document uses a mix of data reported to the Fund Secretariat on CP implementation for various compliance periods and A7 data. Therefore, this document does not determine compliance per se. Rather, it assesses the prospects of A5 countries in their efforts to comply with one or more of the control measures in the Montreal Protocol. Its main purpose is to identify ODS yet to be addressed by actions supported by the Multilateral Fund.

PART I: STATUS OF, AND PROSPECTS FOR, COMPLIANCE (BASED ON LATEST AVAILABLE DATA)

4. This section presents the results of the analysis of the status of compliance with control measures for the final phase-out of CFCs, halon, and carbon tetrachloride (CTC) by 2010, 2015 for MB and TCA[1], and the 2013 freeze for HCFCs. The analysis assumes that the latest consumption reported under A7 or in CP data has taken into account the phase-out from completed projects approved by the Executive Committee. Since the inception of the Multilateral Fund, up to December 2011, 242,954 ODP tonnes of consumption and 191,936 ODP tonnes of production had been phased out from completed projects. The completed projects were valued at US $2.06 billion out of an approved total of approximately US $2.61 billion. A detailed description of the methodology used in the analysis is provided in document UNEP/OzL.Pro/ExCom/37/18, which was presented at the 37th meeting of the Executive Committee.

[1] No projects have been identified that address Annex B-I substances; the Executive Committee has neither considered nor funded projects that address these substances that are subject to the 85 per cent baseline reduction starting in 2007.

5. The analysis uses the latest available data. As of 1 March 2013, one A5 countries had reported 2012 data pursuant to A7 and 145 countries had reported 2011 data (compared to 141 in March 2012). One additional country reported to the Fund Secretariat 2012 data only on progress in the implementation of the country programmes (decision 17/34). The analysis assumes that the latest reported levels of ODS consumption excluding HCFCs have not increased.

6. The bilateral and multilateral implementing agencies submitted annual progress reports to the 67th meeting of the Executive Committee, which contained data on the status of implementation of all activities and projects approved by the Committee up to the end of 2011. Data on potential approvals in 2013 have been taken from the *Consolidated 2013-2015 Business Plan of the Multilateral Fund* (UNEP/OzL.Pro/ExCom/69/6), which will be addressed at the 69th meeting.

7. The Fund Secretariat will continue to synthesize all of the data that were included in previous versions of the reports on the status of, and prospects for, compliance, which have been used by the Fund Secretariat for analytical purposes. These data are available upon request.

LICENSING SYSTEMS AND MONTREAL AND BEIJING AMENDMENTS

8. An update of the data on the establishment of licensing systems has been provided by the Ozone Secretariat as at 8 March 2013. It indicates that only Botswana, the Gambia and South Sudan have outstanding issues regarding the establishment of licensing systems. It should be noted that Botswana and South Sudan ratified the Montreal Amendment to the Montreal Protocol on 21 February 2013 and 16 October 2012 respectively and that these countries have six months from the date of ratification of the Amendment to establish licensing systems. In the case of the Gambia, the Executive Committee may wish to note that based on a report by UNEP, the revised ODS regulation of the Gambia is in accordance with Article 4B of the Protocol and it provides for the licensing of exports. However, the latest information received from the Ozone Secretariat revealed that this achievement had not been reported as requested by decision XXIV/17.

9. As at 21 February 2013, the following Article 5 Parties had not ratified the Beijing Amendment: Libya, Mauritania, Papua New Guinea and Saudi Arabia but have provided A7 data for 2011.

PRODUCTION SECTOR

10. Table 1 shows the latest production data, excluding HCFCs, in Article 5 countries.

Table 1

ODS PRODUCTION BY COUNTRY (2011) AND BASELINE

Country	Chemical	Source	Baseline	Latest Production
China	CFC	A7	47,003.9	339.0
China	CTC	A7	32,479.7	258.7
China	Methyl Bromide	A7	776.3	174.8

11. Of the seven[2] A5 countries with CFC production facilities, the Governments of Argentina, China, the Democratic People's Republic of Korea, India, Mexico and Venezuela (Bolivarian Republic of) have agreements in place for scheduled reductions. All CFC production sector projects have been completed

[2] Although Romania received funding for CFC, CTC and MBR production and total consumption phase-out, it is not included since it has been reclassified as a non-Article 5 country as of 1 January 2008.

but reporting continues for China in line with the amended agreement to allow for the production of CFCs for essential uses outside of China, and for part of the remaining tranche for India that has been submitted to the present meeting for approval. The Government of Brazil indicated that it phased out its production of CFCs on its own. For halon production, the Government of China has an agreement in place and the Government of India received a one-time grant for the closure of its halon production facilities. China was the only country with CFC production in 2011 that amounted to 339 ODP tonnes. China has an essential use exemption for 741.15 ODP tonnes for metered-dose inhalers (MDIs) per decision XXII/4.

12. Four countries (Brazil, China, Democratic People's Republic of Korea (the) and India) have a CTC production baseline. Projects for the complete phase-out of CTC in the production and consumption sectors in three countries (China, Democratic People's Republic of Korea (the) and India) have been approved by the Executive Committee. A CTC process agent sector project was approved for Brazil at the 54th meeting. In 2011, 258.7 ODP tonnes of CTC were produced in China. The Ozone Secretariat indicated that 179.92 ODP tonnes were used for process agents (allowed under decision XXII/8) and 235.14 ODP tonnes were for laboratory use (allowed by decision XXII/7). Two of the four plants are still operating producing CFC for feedstock and process agents. Brazil phased out without Multilateral Fund assistance. The CFC plant in Democratic People's Republic of Korea (the) was closed.

13. TCA production closure projects were only approved for China. There is no 2011 production of TCA in Article 5 countries.

14. MB production closure projects were approved for China, which is now the only one of two A5 countries with MB production facilities. The second is the Republic of Korea, which does not seek Fund assistance. In 2011, 174.8 ODP tonnes of methyl bromide were produced in China that is within the control limit of 80 per cent of the baseline (776.3 ODP tonnes) and the limit of 176 ODP tonnes in its agreement for the production sector (decision 47/54).

15. There are seven countries that produced HCFCs in 2011: Argentina, China, Democratic People's Republic of Korea (the), India, Mexico, Republic of Korea (the) and Venezuela (Bolivarian Republic of).

Table 2

HCFC PRODUCTION BY COUNTRY (2011) AND BASELINE (ODP TONNES)

Party	Source	2011 Production	Baseline	Latest Production minus Baseline
Argentina	A7	221.0	224.6	(3.6)
China	A7	32,106.1	29,122.0	2,984.1
Democratic People's Republic of Korea (the)	A7	26.4	27.6	(1.2)
India	A7	1,504.0	2,399.5	(895.5)
Mexico	A7	649.7	697.0	(47.3)
Republic of Korea (the)	A7	392.4	395.1	(2.7)
Venezuela (Bolivarian Republic of)	A7	134.3	123.1	11.2
Total		**35,033.9**	**32,988.9**	**2,045.0**

16. Overall, 2011 production of HCFCs in Article 5 countries (35,033.9 ODP tonnes) exceeds those countries' total production baseline (32,988.9 ODP tonnes) by 2,045 ODP tonnes. Most of this is due to the production in China that exceeds the baseline by 2,984.1 ODP tonnes, while five producing countries (Argentina, Democratic People's Republic of Korea (the), India, Mexico, and the Republic of Korea) produced less than their baseline in 2011.

17. The Sub-Group on the Production Sector is considering guidelines for the HCFC production sector. Swing plants previously funded for CFC phase-out are currently not eligible for additional funding for HCFC closure under their CFC phase-out agreements with the Executive Committee. This applies to Argentina, India, Mexico and Venezuela (Bolivarian Republic of). The Republic of Korea has not sought funding as an Article 5 country.

18. The Executive Committee received a request for stage I of the HCFC production phase-out management plan from the World Bank on behalf of the Government of China. The Sub-group on the Production Sector is considering the proposal.

CONSUMPTION SECTOR

19. This section presents a summary of the results of a detailed analysis of the extent to which countries appear to be in non-compliance or where their latest consumption exceeds the control measures. The summary tables below show that all Article 5 countries appear to be in compliance with the 2010 control measures using 2012 data for CFCs, halons, CTC and TCA. It also shows consumption data for the next control measures for MB and HCFCs, including 2011 data. The summary is based on data included in Annex I, which contains detailed information, presented by substance.

20. Appendices addressing the status of all countries for all six substances were provided in the past in Annex I to this document. Starting with this report, information is provided only for those countries with consumption of CFCs, CTC and TCA. Appendices including all countries continue to be provided for MB and HCFC where total phase-out is not yet required. No appendix is provided for halon since all Article 5 countries' latest consumption is zero.

21. Information has been included in the assessment of compliance in Annex I on when the activity enabling compliance was approved. This information should further assist the Executive Committee to assess the prospects of compliance for countries because the approval date indicates how long the project or agreement has been under implementation. The information on project approval is taken from the Inventory of Approved Projects.

CFCs

22. A summary of the status of countries with respect to compliance with controls on CFCs is presented in Table 3.

Table 3

CFC CONTROL MEASURES:
SUMMARY OF COUNTRIES WHOSE LATEST CONSUMPTION DATA
EXCEEDS THE 2010 CONTROL MEASURE

Data	Countries whose latest consumption exceeds the 2010 100% phase-out target
2012 data (A7 or CP)	0 countries*
Latest consumption	0 countries*

*Excluding those countries with exemptions.

23. Appendix I of Annex I presents information on those countries with CFC consumption. It indicates that those countries with consumption had exemptions for essential use of CFCs or emergency essential use of CFC-113.

Halons

24. A summary of the status of countries with respect to compliance with controls on halons is presented in Table 4. Sixty-one countries have received support for halon banking activities or phase-out agreements, which includes countries participating in regional halon banks. No country has reported halon consumption in their latest data report.

Table 4

**HALON CONTROL MEASURES:
SUMMARY OF COUNTRIES WHOSE LATEST CONSUMPTION DATA
EXCEEDS THE 2010 CONTROL MEASURE**

Data	Countries whose latest consumption exceeds the 2010 100% phase-out target
2012 data (A7 or CP)	0 countries
Latest consumption	0 countries

Methyl bromide

25. Table 5 presents a summary of countries' compliance with MB control measures (excluding quarantine and pre-shipment). Of the 147 A5 countries that have ratified the Copenhagen Amendment, 145 have reported complete baseline data; 58 reported zero for both the baseline consumption and the latest consumption. One hundred A5 countries have received support from the Multilateral Fund for MB phase-out activities and/or projects.

Table 5

**METHYL BROMIDE CONTROL MEASURES:
SUMMARY OF COUNTRIES WHOSE LATEST CONSUMPTION DATA
EXCEEDS THE NEXT CONTROL MEASURES***

Data	Countries whose latest consumption exceeds the 20 per cent MB reduction target of 2005	Countries whose latest consumption is above the 2015 100% phase-out target
2012 data (A7 or CP)	0 countries	0 countries
Latest consumption	0 countries	25 countries

* This table refers to 145 A5 countries with baseline and latest consumption data reported.

26. Appendix II of Annex I presents information on those countries with MB consumption.

- 9 countries (Algeria, Argentina, China, Congo (the), Democratic Republic of the Congo (the), Nigeria, Sudan (the), Swaziland and Turkey) have partial[3] methyl bromide phase-out projects already approved by the Executive Committee and one country (Tunisia) has only received funding for a demonstration project. These countries have a remaining eligible consumption amounting to 823.7 ODP tonnes;

- 5 of the 9 countries have reported zero consumption for more than one year (Congo (the), Democratic Republic of the Congo (the), Nigeria, Swaziland and Turkey);

- There are investment projects in 18 countries that are still under implementation;

[3] China has total MB phase-out project with possibility of ginseng project if allowed in future.

- Project preparation to develop projects for the treatment of high moisture-content dates in Algeria and Tunisia currently exempted for use per decision XV/12 will be made available when alternatives become available.

27. The Executive Committee may wish to request the implementing agencies to consider the need for additional methyl bromide projects in the following countries that either have partial methyl bromide phase-out projects or fall under decision XV/12: Algeria, Argentina, China, Congo (the), Democratic Republic of the Congo (the), Nigeria, Sudan (the), Swaziland, Tunisia and Turkey.

Countries that have exceeded methyl bromide (MB) consumption targets set in their Agreements

28. The Secretariat reviewed the MB consumption data reported under Article 7 of the Montreal Protocol and noted that countries that have received assistance to phase-out controlled uses of MB met the next control measures. However, it appeared that four countries, namely Argentina, Egypt, Kenya and Morocco, exceeded the maximum allowable consumption level established in their Agreements with the Executive Committee for the year 2011, as shown in the table below:

Use of methyl bromide in 2011

Countries	**Consumption (ODP tonnes)**	
	Allowable as per Agreement	**Reported (Article 7)**
Argentina	184.4	291.3
Egypt	116.4	133.2
Kenya	6.6	8.5
Morocco	28.0	50.9

29. Based on these facts, the Secretariat requested UNIDO, as the lead implementing agency, to provide the estimated MB consumption level in 2012 for the above-mentioned countries, along with an explanation for the higher level of consumption of MB as compared to that in the agreements, and the proposed action plans to meet the targets set in the respective Agreements.

30. In the case of Kenya, UNIDO advised that it had received a letter dated 15 February 2013 from the Government indicating that the estimated consumption of MB was zero. Furthermore, the project will be completed by the end of 2013 and the project completion report (PCR) will be submitted in 2014. UNIDO also advised that the banning of MB imports will be addressed through the country's regulations.

31. In the case of Egypt, UNIDO advised that due to the unique political and social situation experienced in the country in 2011, implementation of the project was delayed; import controls were not fully applied thus resulting in a higher amount of MB imported into the country; and there was a delay in the registration process of alternative fumigants. Accordingly, the phase-out targets proposed in the agreement could not be reached. Based on these facts, the Government of Egypt informed UNIDO about its intention to request an extension of the project for one year with no additional funding from the Multilateral Fund. Consultations between the Government and UNIDO on this matter are still on-going.

32. In the case of Morocco, UNIDO reported that all the project components included in the Agreement between the Government and the Executive Committee have been implemented successfully and are almost completed. In the case of cucurbits (i.e., melon and water melons), representing the most recently approved project, all the activities have been carried out and farmers are currently producing without MB. Accordingly, UNIDO expected that MB consumption for 2012 would be at a lower than that allowed under the Agreement. However, this was not the case as the data reported under Article 7 of the Protocol was about 22 ODP tonnes above the allowable consumption. Consultations between the Government and UNIDO on this matter are still on-going.

33. In the case of Argentina, UNIDO indicated that the project is still under implementation; the majority of MB is currently used for the production of strawberries (nurseries and fruit). UNIDO advised that ODS consumption data (including MB) based on the licensing system is reported by the National Ozone Unit to the Ozone Secretariat (under Article 7 of the Protocol), and to the Fund Secretariat (under the progress report on the implementation of the country programme). The reported MB consumption data included the imported amounts for controlled uses and for quarantine and pre-shipment (QPS) applications. However, the MB project in Argentina is being implemented under the Ministry of Agriculture by the National Institute of Farming Technology (INTA in Spanish). The Ministry is responsible for controlling the actual consumption of MB used by farmers in relation to the project. UNIDO also explained that there appear to be some discrepancies between the amounts of MB officially reported with actual uses (for both controlled and QPS applications) and stocks, and that the issue is currently being further analysed with relevant authorities.

34. The Executive Committee may wish to request UNIDO to submit a progress report to the 70th meeting on the current status of implementation of the methyl bromide projects in Argentina, Egypt and Morocco, including a detailed explanation as to why the consumption levels reported under Article 7 of the Montreal Protocol in 2011 are above those allowed under their respective Agreements with the Executive Committee, and the proposed action plans to meet the targets as required in the Agreements.

Carbon tetrachloride

35. Table 6 presents a summary of countries' compliance with the CTC control measure. The data summarized exclude feedstock and do not differentiate between specific end use (such as solvents and process agents). Of the 146 countries with reported baseline data, 90 reported zero both for the baseline and the latest consumption.

Table 6

**CARBON TETRACHLORIDE CONTROL MEASURES:
SUMMARY OF COUNTRIES WHOSE LATEST CONSUMPTION DATA
EXCEEDS THE 2010 CONTROL MEASURE**

Data	Countries whose latest consumption exceeds the 2010 100% phase-out target
2012 data (A7 or CP)	0 countries*
Latest consumption	0 countries*

* Excluding those countries with exemptions and those that do not seek Multilateral Fund support.

36. Appendix III of Annex I presents information on those countries with CTC consumption. It indicates that those countries with consumption had exemptions for process use or laboratory and analytical uses.

Methyl chloroform

37. Table 7 presents a summary of countries' compliance with the TCA control measures. Of the 146 countries that have reported baseline data, 103 reported zero both for the baseline and the latest consumption.

Table 7

METHYL CHLOROFORM CONTROL MEASURES: SUMMARY OF COUNTRIES WHOSE LATEST CONSUMPTION DATA EXCEEDS THE NEXT CONTROL MEASURES

Data	Countries whose latest consumption exceeds the 70 per cent TCA reduction target of 2010	Countries whose latest consumption is above the 100 per cent TCA reduction target of 2015
2012 data (A7 or CP)	0 countries	0 countries
Latest consumption	0 countries	Republic of Korea (the)

38. The Republic of Korea, the only country whose latest consumption data exceeds its next control measures has agreed not to receive funding from the Multilateral Fund.

39. Appendix IV of Annex I presents information on those countries with TCA consumption.

HCFC consumption

40. Appendix V of Annex I includes an analysis of the latest consumption data on HCFCs and approvals by country. Additional information has been provided to indicate those HPMPs approved to-date, those submitted to the 69th meeting, and the duration covered by the HPMP (such as, HPMPs approved to meet the 10 per cent reduction in 2015 or the 35 per cent reduction in 2020).

41. All countries have received HPMP project preparation funds except the Republic of Korea, Singapore, South Sudan and the United Arab Emirates. HPMP preparation funding includes funding for a licensing system to address HCFC control measures. The Republic of Korea, Singapore and the United Arab Emirates have agreed not to seek funding from the Multilateral Fund.

42. All countries have ratified the Copenhagen Amendment. Ratification of the Copenhagen Amendment is a pre-requisite for funding HCFC phase-out as per decision 53/37. The Executive Committee has approved HPMPs for 137 countries to-date valued at US $556.3 million (US $308.1 million of which has been released).

43. Stage I HPMP has durations of implementation as a minimum to meet the 10 per cent reduction in 2015 and longer:

- 27 countries (7 low-volume-consuming (LVC) countries, 20 non-LVC countries) address compliance for the period 2011 to 2015;

- 101 countries (57 LVC countries and 32 non-LVC countries, plus the 12 Pacific Island Countries (PICs)) address compliance for 2011 to 2020;

- Nine LVC countries (Bhutan, Cambodia, Croatia, Maldives, Mauritius, Namibia, Papua New Guinea, Saint Vincent and the Grenadines, and Seychelles) have received funding for the complete phase-out of HCFCs well in advance of the 2040 phase-out, e.g. Croatia by 2014 and the others by 2020 or 2025.

44. Seven of the 8 remaining countries have not received HPMP funding other than for project preparation funds. The other country is South Sudan that has ratified all of the amendments to the Montreal Protocol and has not submitted data that would enable it to be eligible for HPMP funding. However, South Sudan has a project approved at the 68th meeting for National Ozone Unit (NOU) start-up. An HPMP for Barbados was submitted to the 69th meeting.

Table 8

ARTICLE 5 COUNTRIES WITHOUT AN APPROVED HPMP (ODP TONNES)

Country	Baseline	Starting point	All Approved Projects	Remaining	% approved
Barbados*	3.7			3.7	
Botswana	11.0			11.0	
Democratic People's Republic of Korea (the)	78.0			78.0	
Libya	114.7			114.7	
Mauritania	20.5			20.5	
South Sudan	NDR			NDR	
Syrian Arab Republic	135.0	135.0	12.9	122.1	9.56%
Tunisia	40.7			40.7	
Total	**3,865.2**	**2,452.9**	**526.0**	**3,372.0**	

* Countries for which HPMPs were submitted to the 69th meeting.
NDR = No data reported.

45. Stage I HPMPs are included in the 2013-2015 business plans for all of the countries that have not yet submitted their HPMPs (Democratic People's Republic of Korea (the), Libya, Mauritania, South Sudan, Syrian Arab Republic and Tunisia) except Botswana. The bilateral agencies business plans for the years 2013-2015 (UNEP/OzL.Pro/ExCom/69/7) includes a recommendation urging bilateral and implementing agencies to include a stage I HPMP in their business plans for Botswana.

46. As shown in Table 9, one country already has approved investment projects for HCFC phase-out that achieve 10 per cent of its baseline reduction without an approved stage I HPMP.

Table 9

COUNTRIES WITH SUBSTANTIAL PHASE-OUT FROM APPROVED HCFC INVESTMENT PROJECTS WITHOUT APPROVED STAGE I HPMPs

Country	Funds Approved (US $)	ODP Phase-out in Approved Investment Projects	Baseline	Percent of Baseline Approved
Syrian Arab Republic	1,465,361	12.9	135.0	10%

47. One-hundred and forty-seven A5 countries have reported both the baseline and the latest consumption as of 1 March 2013. 2011 or 2012 consumption data for seventy-nine countries is below their baseline.

48. Table 10 presents a summary of countries' compliance with the HCFC control measures.

Table 10

**HCFC CONTROL MEASURES:
SUMMARY OF COUNTRIES WHOSE LATEST CONSUMPTION DATA
EXCEEDS THE NEXT CONTROL MEASURES**

Data	Countries whose latest consumption exceeds the freeze reduction target of 2013
2012 data (A7 or CP)	One country
Latest consumption	68 countries

49. Sixty-three of the 68 countries have received funding for HCFC phase-out agreements from the Multilateral Fund.

PART II: STATUS OF IMPLEMENTATION IN COUNTRIES SUBJECT TO DECISIONS OF THE PARTIES

50. This section addresses A5 countries that are subject to decisions on compliance.

51. There are 3 compliance-related decisions applying to 3 countries. Two compliance-related issues have already been resolved as per A7 data; based on information from implementing agencies and the Ozone Secretariat, one issue related to licensing systems has not been reported as met. Table 11 indicates the extent to which progress has been made with regard to the decisions of the Meetings of the Parties to the Montreal Protocol based on information provided to the Ozone Secretariat and agencies.

Table 11

REPORTED COMPLIANCE WITH COMPLIANCE-RELATED DECISIONS OF THE PARTIES

Compliance issues	Achieved based on A7 data	Reported as achieved to IA and/or Ozone Secretariat	Not achieved or achievement not reported to IA and/or Ozone Secretariat	Total
Licensing system			1	1
Data reporting	2			2
Total	**2**		**1**	**3**

Information in Annex II

52. Annex II presents information on countries subject to decisions of the Parties on compliance in 2013. It is arranged by compliance issue and by country. Annex II also includes two columns entitled "Implementing Agency Comments for the 69th meeting" and "MLF assessment based on agencies preliminary comments, A7 data and information from Ozone Secretariat".

PART III: DATA ON THE IMPLEMENTATION OF COUNTRY PROGRAMMES

53. Part III contains data on the implementation of CPs, which are submitted to the Fund Secretariat by 1 May of each year and include ODS consumption, by sector. This section also presents additional information on the characteristics of a country's ODS phase-out programme. The format for country programme data reporting was approved at the 35th meeting of the Executive Committee in decision 35/58(e) and was modified pursuant to decisions 46/39 and 60/4(b)(iv).

ODS CONSUMPTION DATA BY SECTOR EXCEPT HCFCs

54. As of 1 March 2013, reports on the implementation of CPs were required from 143[4] Article 5 countries. The latest reports were received by the Fund Secretariat for two countries for 2012, 136 countries for 2011, 2 countries for 2010 and 3 countries for 2009. It should be noted that renewal of institutional strengthening (IS) projects is contingent upon receiving CP data. Moreover CP implementation data must be submitted in advance of the last meeting of the year and subsequent meetings as a pre-condition for the approval and release of funding for projects. All countries that submitted requests for funding to the 69th meeting also submitted 2011 CP data.

55. Although the consumption levels recorded are from different years and may not necessarily correspond to the A7 data reported, the CP data provides the most recent sectoral assessment by country, and on a global basis. These data should assist the A5 countries concerned and the Executive Committee to assess what remains to be phased out on a sectoral basis.

56. Table 12 presents the total remaining ODS consumption (excluding HCFCs) to be phased out by sector, taking into account projects that have been approved but are not yet implemented. It also includes total consumption phase-out from approved projects that have not been completed.

Table 12

TOTAL REMAINING ODS CONSUMPTION (EXCLUDING HCFCs) BY SECTOR

Sector	Total latest consumption	Percentage of total latest consumption	Total phase-out approved but not completed	Balance to be phased out
Aerosol	0.0	0.0%	240.4	*
Foam	0.0	0.0%	20.0	*
Fumigant	1,874.3	59.7%	1,769.4	104.9
Halon	0.1	0.0%	0.0	0.1
Lab Use	259.6	8.3%	0.0	259.6
MDI	661.4	21.1%	546.0	115.4
Process agent	199.4	6.4%	0.0	199.4
Refrigeration	141.1	4.5%	1,364.7	*
Solvent	3.7	0.1%	0.0	3.7
Sterilant	0.0	0.0%	0.0	0.0
Tobacco	0.0	0.0%	0.0	0.0
Total	**3,139.6**	**100.0%**	**3,940.5**	**683.0**

***** More phase-out approved than latest consumption.

57. The total ODS reductions (excluding HCFCs) approved but not implemented (Table 12) do not include those approved in principle for multi-year agreements (MYAs) or the reduction level that is expected to result from halon banking activities. In addition to the reductions already being funded, the Executive Committee has approved, in principle, sectoral and national phase-out projects for which annual tranches are released on the basis of achieved scheduled reductions.

58. The reductions from future annual tranches will address a significant amount of the remaining consumption identified in Table 12. Moreover, terminal phase-out management plans (TPMPs) account for all remaining baseline requirements for LVC countries for CFC, halon and CTC. However, the data in

[4] South Africa is not included but will begin to provide HCFC data starting next year in line with decision 67/5(d)(ii).

the projects that have been approved but are not yet implemented do not account for all of this tonnage. In addition, the approved but unimplemented ODS reductions in Table 12 do not include some halon consumption for countries that already have a halon banking project.

59. The total amount of remaining ODS consumption (excluding HCFCs) still to be addressed (taking into account the phase-out represented by TPMPs for LVC countries, halon banking, total phase-out projects, and MYAs that are approved in principle) appears to be 830.3 ODP tonnes (Table 13). This is the same figure of 830.3 ODP tonnes that had been reported to the 66th meeting.

Table 13

TOTAL REMAINING ODS CONSUMPTION (EXCLUDING HCFCs) BY SUBSTANCE BASED ON CP AND A7 DATA (AFTER TAKING INTO ACCOUNT THE REDUCTIONS REPRESENTED BY TPMPs AND RMPs FOR LVC COUNTRIES, HALON BANKING, TOTAL PHASE-OUT PROJECTS, AND MYAs THAT ARE APPROVED IN PRINCIPLE)

Chemical	Remaining ODS consumption (ODP tonnes)
CFC	0.0*
CTC	0.0
Halons	0.0
MB	830.3
TCA	0.0
Total	**830.3**

* According to decision 60/5(d).

HCFC CONSUMPTION DATA

60. Table 14 presents the levels of HCFC consumption based on the latest data available. It shows that there are 530,062 mt (35,502 ODP tonnes) of HCFC consumption consisting primarily of HCFC-22 (59.3 per cent of the total) and HCFC-141b (33.8 per cent of the total). The 530,062 mt of HCFCs represent an increase of 23,452 mt over the amount (506,610 mt) reported to the 66th meeting. The level in this report is based on data from 2012 for 2 countries, 2011 for 136 countries, 2010 for 2 countries and from 2009 for 3 countries. For those countries reporting both 2010 and 2011 data, HCFC consumption has increased by 0.05 per cent.

Table 14

LEVELS OF LATEST HCFC CONSUMPTION DATA BY CHEMICAL

Chemical	Metric tonnes	ODP tonnes	Percentage of total
HCFC-123	3,012.3	60.2	0.2%
HCFC-124	2,161.3	47.5	0.1%
HCFC-141b	109,132.4	12,004.6	33.8%
HCFC-141b in Imported Pre-blended Polyol	4,647.9	511.3	1.4%
HCFC-142b	28,149.0	1,829.7	5.2%
HCFC-21	3.1	0.1	0.0%
HCFC-22	382,544.4	21,039.9	59.3%
HCFC-225	53.5	3.7	0.0%
HCFC-225ca	73.3	1.8	0.0%

Chemical	Metric tonnes	ODP tonnes	Percentage of total
HCFC-225cb	16.7	0.6	0.0%
HCFC-415b	268.0	2.7	0.0%
Total	**530,062.0**	**35,502.2**	**100.0%**

61. By comparison, the Fund has reduced 239,282 mt (255,642 ODP tonnes) of ODS consumption as at 31 December 2011.

62. The amount of remaining HCFC consumption to be addressed depends on the HPMP baseline and the amount of pre-blended polyol addressed by the HPMP. Information on the amount of pre-blended polyol is only available for approved HPMPs as the polyol data is not provided in country programme or Article 7 data reporting. Table 15 shows the amount of HCFCs to be addressed for those countries that have approved HPMPs.

Table 15

TOTAL REMAINING HCFC CONSUMPTION BY SUBSTANCE (ODP tonnes)

HCFC	Baseline	Starting point	Approved	Remaining	% approved
HCFC-123	33.1	30.3	0.4	29.9	1.45%
HCFC-124	26.6	26.1	1.0	25.1	3.75%
HCFC-141	1.9	0.9	0.0	0.9	0.00%
HCFC-141b	10,705.5	10,761.5	4,289.0	6,472.5	39.86%
HCFC-142b	1,997.3	2,001.2	606.1	1,395.1	30.29%
HCFC-21	1.5	0.7	0.0	0.7	0.00%
HCFC-22	20,358.1	19,968.5	2,941.1	17,027.4	14.73%
HCFC-225	3.1	1.6	0.0	1.6	0.00%
HCFC-225ca	1.8	1.6	0.0	1.6	0.00%
HCFC-225cb	0.7	0.7	0.0	0.7	0.00%
HCFC-141b in imported pre-blended polyol	-	562.0	289.7	272.3	51.55%
Total	**33,129.5**	**33,355.2**	**8,127.3**	**25,227.9**	**24.37%**

CHARACTERISTICS OF COUNTRY PROGRAMMES

63. The CP reporting format adopted in decision 46/39 and revised at the 60th meeting (decision 60/4(b)(iv)) provides an opportunity for NOUs to assess the prospects for compliance from both a quantitative and qualitative perspective.

Data reporting

64. The Secretariat has put the newly revised CP report format (Excel version) online and updated the CP web portal as per decision 63/4(b)(ii) that required the removal of CFC, CTC and halon from the CP report format starting with the report on 2012 data due on 1 May 2013. Consequently, CFC, CTC and halon will no longer be part of status report and compliance starting from the 70th meeting.

Completeness of the data

65. This is the sixth year of use of the new format for reporting CP data. Ten countries provided 2011 data still using the format that was approved at the 46th meeting and 128 countries used the revised format approved at the 60th meeting. Nevertheless, most of the data provided in the new format were incomplete for the three main sections: qualitative, quantitative and regulatory. Only sixteen countries,

Bahamas (the), Belize, Bolivia (Plurinational State of), Botswana, Central African Republic (the), Cote d'Ivoire, El Salvador, Lesotho, Malaysia, Niger, Paraguay, Serbia, Togo, Venezuela (Bolivarian Republic of), Zambia and Zimbabwe provided all the information for all three sections (without any data with blanks).

66. In line with decision 59/4(b)(iv), the Secretariat reviewed the web-based country programme implementation data. The Secretariat noted that 81 countries (of the 138 that submitted data) submitted 2011 data using the web-based system that had been initiated on 25 April 2007. Only 2 of the required 143 countries provided 2012 CP data, 136 countries for 2011, 2 countries for 2010 and 3 countries for 2009 data in time for analysis in this document.

Summary of data

All ODS except HCFCs

67. One-hundred and twenty of the 138 reporting countries with refrigerant management plans (RMPs)/national phase-out plans (NPPs)/TPMPs either indicated progress or had completed the implementation of their RMPs/NPPs/TPMPs. Including those countries that reported data prior to 2011, 124 out of 143 countries showed progress or completed the implementation of their RMPs/NPPs/TPMPs.

68. Including those countries that reported data prior to 2011, a total of 13,550 recovery machines and 4,984 recycling machines are operational. Of those countries employing recovery and recycling (R&R) machines, 74 per cent reported that the machines had been functioning 'satisfactorily' or 'very well'. A total of 227.9 ODP tonnes of CFC-11 has been recovered of which 153.2 ODP tonnes were reused, and a total of 18,097.4 ODP tonnes of CFC-12 have been recovered of which 1,991.8 ODP tonnes were reused. Data are not collected for the other ODS. Latest data reported for 2006-2011, taken together with that from previous years' reports, indicate that a total of 63,410 refrigeration servicing technicians have been trained, 55,235 have been certified, and 1,965 refrigeration technician trainers have been trained.

69. One-hundred and eight of the 143 countries that reported data (including data from previous years' reports) indicated that they had quota systems in place. In addition, 124 countries advised that importer registration was a requirement. A total of 15,092 customs officers have been reported as having been trained. It is not clear whether this is annual or cumulative data.

70. One-hundred and thirty-five of the 144 countries to which reporting requirements apply have reported operational licensing systems (130 of the 138 countries that reported 2011 data had operational licensing systems with six indicating that their licensing systems were operating 'not so well' (Afghanistan, Benin, Botswana, Cook Islands (the), Haiti, and Micronesia (Federated States of)). At the 68th meeting, the Secretariat requested concerned countries to explain why their licensing systems were not operating well. Based on information received by the Secretariat, the reasons for classifying their licensing systems as operating 'not so well' included: the need for additional legislation (Afghanistan, Cook Islands (the) and Haiti), information on licensing system still being disseminated (Benin), ODS regulations not yet approved by the cabinet (Botswana) and the need for endorsement by the Government (Micronesia (Federated States of)). Information on the status of licensing systems in 2012 will be submitted on 1 May 2013.

71. Six of these 138 countries (Guinea-Bissau, Kenya, Mozambique, Panama, Papua New Guinea and Timor-Leste) did not provide information on whether or not their licensing system is functioning 'satisfactorily', 'very well' or 'not so well'. The Executive Committee may wish to request the Governments of Guinea-Bissau, Kenya, Mozambique, Panama, Papua New Guinea and Timor-Leste, for the second consecutive meeting except for Guinea-Bissau, to report to the Secretariat, as a matter of urgency, on whether their licensing systems are functioning 'satisfactorily', 'very well' or 'not so well'.

Price data for CFCs and HCFCs and their alternatives

72. The costs of some ODS and substitutes have been summarized in Table 16.

Table 16

AVERAGE PRICE OF CFCs AND HCFCs AND THEIR ALTERNATIVES

ODS	Average price/ kilogram (US$/kg) (2005 per Report to 50th meeting)	Average Price/ kilogram (US$/kg) (2006 per Report to 54th meeting)	Average Price/ kilogram (US$/kg) (2007 per Report to 57th meeting)	Average Price/ kilogram (US$/kg) (2008 per Report to 60th meeting)	Average Price/ kilogram (US$/kg) (2009 Report to 63rd meeting)	Average Price/ kilogram (US$/kg) (2010 Report to the 66th meeting)	Average Price/ kilogram (US$/kg) (2011 Report)	Number of countries where prices increased	Number of countries where prices decreased	Range (US$/kg) (2011 Report)	Number of countries reporting non-zero data for 2011	Data excluded* from the calculation of the average (US$/kg.) (2011 Report)
CFC-11	$7.09	$9.67	$10.65	$11.42	$12.30	$13.55	$10.80	4	1	$4.36 (China) to $25.00 (Mexico)	9	$40.40 (Brazil)
CFC-12	$8.98	$10.95	$12.81	$11.52	$10.84	$12.08	$15.82	11	3	$4.50 (Cambodia) to $46.70 (Brazil)	23	$4.04 (Madagascar), $165.00 (Timor-Leste)
CFC-113	$9.02	$19.41	$19.00	$16.52	$9.91	$5.94	$8.26	N/A	1	$4.47 (China) to $13.00 (Malaysia)	4	$347.80 (Bosnia and Herzegovina)
CFC-114	$9.98	$17.37	$18.92	$16.31	$6.35	$15.25	$10.79	N/A	1	$8.57 (China) to $13.00 (Malaysia)	2	None
CFC-115	$10.94	$12.41	$11.97	$8.82	$11.62	$11.51	$10.29	N/A	1	$7.58 (China) to $13.00 (Malaysia)	2	None
Cyclopentane	N/A	N/A	$4.03	$1.91	$3.74	$4.68	$4.66	2	N/A	$2.14 (China) to $7.50 (Cameroon)	5	None
HCFC-123	N/A	N/A	N/A	N/A	$9.09	$15.23	$11.13	5	1	$5.71 (China) to $20.24 (Paraguay)	13	$1.50 (Bolivia (Plurinational State of)), $32.00 (Venezuela (Bolivarian Republic of))
HCFC-124	N/A	N/A	N/A	N/A	$12.73	$9.14	$9.83	2	N/A	$7.65 (China) to $12.85 (Indonesia)	3	None
HCFC-133	N/A	N/A	N/A	N/A	$19.25	N/A	$4.85	N/A	N/A	$4.85 (China)	1	None
HCFC-141b	N/A	N/A	$3.87	$6.66	$5.00	$6.02	$6.73	16	8	$2.40 (Iran (Islamic Republic of)) to $19.00 (Venezuela (Bolivarian Republic of))	40	$2.12 (China), $25.00 (Zimbabwe)
HCFC-141b in Imported Pre-blended Polyol	N/A	N/A	N/A	N/A	$3.99	$3.81	$4.77	4	3	$2.40 (Bosnia and Herzegovina) to $16.67 (Gambia (the))	15	$0.70 (Swaziland), $32.00 (Zimbabwe)
HCFC-142b	N/A	N/A	$5.46	$6.59	$7.75	$7.09	$6.00	1	N/A	$3.10 (Chile) to $9.30 (Kyrgyzstan)	8	$30.00 (Georgia)
HCFC-22	$5.41	$6.52	$7.21	$7.75	$7.35	$8.61	$9.28	55	32	$2.40 (Saudi Arabia) to $41.30 (Botswana)	121	$69.00 (Jamaica), $85.00 (Timor-Leste), $130.45 (Marshall Islands), $146.29 (Saint Vincent and the Grenadines), $160.92 (Nauru), $180.00 (Turkmenistan), $215.00 (Angola)
HCFC-225	N/A	N/A	N/A	N/A	$9.00	$10.00	$10.00	N/A	N/A	$10.00 (Malaysia)	1	None
HCFC-225ca	N/A	N/A	N/A	N/A	$32.22	$37.10	$42.86	1	N/A	$42.86 (Philippines (the))	1	None
HCFC-225cb	N/A	N/A	N/A	N/A	$19.11	$37.10	$42.86	1	N/A	$42.86 (Philippines (the))	1	None

ODS	Average price/ kilogram (US$/kg) (2005 per Report to 50th meeting)	Average Price/ kilogram (US$/kg) (2006 per Report to 54th meeting)	Average Price/ kilogram (US$/kg) (2007 per Report to 57th meeting)	Average Price/ kilogram (US$/kg) (2008 per Report to 60th meeting)	Average Price/ kilogram (US$/kg) (2009 Report to 63rd meeting)	Average Price/ kilogram (US$/kg) (2010 Report to the 66th meeting)	Average Price/ kilogram (US$/kg) (2011 Report)	Number of countries where prices increased	Number of countries where prices decreased	Range (US$/kg) (2011 Report)	Number of countries reporting non-zero data for 2011	Data excluded* from the calculation of the average (US$/kg.) (2011 Report)
HFC-134a	$12.21	$13.16	$12.44	$11.37	$12.52	$15.14	$16.64	49	29	$0.93 (Zambia) to $48.00 (Central African Republic (the))	116	$110.00 (Angola), $135.00 (Timor-Leste), $208.90 (Nauru), $245.00 (Turkmenistan), $355.55 (Saint Vincent and the Grenadines)
HCFC-227ea	N/A	N/A	$9.32	$12.97	$18.03	$28.30	$16.40	1	3	$2.20 (Seychelles) to $35.00 (Indonesia)	7	$95.24 (Philippines (the))
HCFC-245fa	N/A	N/A	$7.44	$10.38	$10.11	$12.26	$10.83	N/A	2	$7.82 (China) to $14.67 (Indonesia)	3	None
HFC-356mfc	N/A	N/A	$15.52	$10.38	$9.63	$11.00	$14.00	N/A	N/A	$10.00 (Malaysia) to $18.00 (Indonesia)	2	None
Isobutane (HC-600a)	N/A	N/A	$14.24	$22.53	$24.36	$21.08	$20.97	11	10	$2.45 (China) to $66.66 (Philippines (the))	38	$0.30 (Chile), $85.00 (Turkmenistan), $105.00 (Angola), $120.21 (Lesotho)
MDI (foam production)	N/A	N/A	$3.83	$3.34	$2.91	$3.15	$3.09	2	1	$2.54 (China) to $4.00 (Cameroon)	6	None
Methyl formate	N/A	N/A	N/A	N/A	$5.02	$3.62	N/A	N/A	N/A	None	0	None
Pentane	N/A	N/A	$1.40	$6.00	$2.20	$3.30	$4.00	N/A	N/A	$4.00 (Armenia)	1	None
Propane (HC-290)	N/A	N/A	$6.49	$7.88	$20.53	$21.79	$22.23	7	2	$6.50 (Indonesia) to $52.38 (Philippines (the))	13	$3.00 (Argentina) $175.00 (Senegal)
R-404A	N/A	N/A	$12.44	$16.46	$16.13	$18.67	$20.68	34	32	$1.42 (Zambia) to $90.00 (Turkmenistan)	104	$0.02 (Dominica), $140.00 (Angola), $175.00 (Timor-Leste), $250.00 (Haiti), $259.89 (Nauru) $370.37 (Saint Vincent and the Grenadines)
R-407C	N/A	N/A	$14.21	$17.42	$16.95	$20.80	$21.36	27	22	$2.50 (Iran (Islamic Republic of)) to $86.05 (Solomon Islands)	80	$1.42 (Zambia), $140.00 (Angola), $300.00 (Turkmenistan)
R-410A	N/A	N/A	$14.21	$15.43	$16.44	$20.26	$21.70	29	28	$2.50 (Iran (Islamic Republic of)) to $95.00 (Turkmenistan)	91	$140.00 (Angola), $213.99 (Nauru), $250.00 (Haiti), $300.00 (Timor-Leste), $399.00 (Antigua and Barbuda), $442.59 (Saint Vincent and the Grenadines)
R-502	$14.20	$16.74	$21.44	$16.97	$16.20	$13.50	$18.15	10	1	$6.00 (Iran (Islamic Republic of)) to $30.10 (Croatia)	19	$105.00 (Turkmenistan), $250.00 (Haiti)

ODS	Average price/ kilogram (US$/kg) (2005 per Report to 50th meeting)	Average Price/ kilogram (US$/kg) (2006 per Report to 54th meeting)	Average Price/ kilogram (US$/kg) (2007 per Report to 57th meeting)	Average Price/ kilogram (US$/kg) (2008 per Report to 60th meeting)	Average Price/ kilogram (US$/kg) (2009 Report to 63rd meeting)	Average Price/ kilogram (US$/kg) (2010 Report to the 66th meeting)	Average Price/ kilogram (US$/kg) (2011 Report)	Number of countries where prices increased	Number of countries where prices decreased	Range (US$/kg) (2011 Report)	Number of countries reporting non-zero data for 2011	Data excluded* from the calculation of the average (US$/kg.) (2011 Report)
R-507A	N/A	N/A	$12.47	$17.69	$17.48	$17.55	$20.78	17	6	$7.54 (Indonesia) to $72.95 (Solomon Islands)	46	$130.00 (Angola), $227.50 (Turkmenistan), $250.67 (Nauru)

* All zero $ entries were excluded.

73. No such data have been provided for halons, MB or CTC.

74. Only 9 countries provided CFC-11 price data and 23 countries provided CFC-12 price data and it is not clear whether there is any CFC for sale in most countries since such CFCs would come from stockpiled quantities. Prices for HCFC-22 and HCFC-142b are lower than the prices of alternatives included in CP data. HCFC-141b prices are lower than alternatives HCFC-245fa and HFC-356mfc, but higher than cyclopentane and pentane based on 2011 prices.

HCFCs

75. This is the fourth year of use of the revised format to include relevant information on HCFC phase-out approved at the 60th meeting (decision 60/4(b)(iv)). 128 of the 138 countries provided 2011 data using the revised format with information on HCFCs.

76. Seventy-one of the 143 countries that reported data indicated that they had quota systems in place and 108 countries advised that importer registration was a requirement. A total of 395.3 ODP tonnes of HCFC-22 have been recovered of which 249.3 ODP tonnes were reused. A total of 5,507 customs officers have been reported as having been trained. A total of 1,451 recovery machines and 508 recycling machines are operational; 11,343 technicians have been certified, 14,252 technicians have been trained and 1,640 trainers for technicians have been trained to recover and recycle HCFCs.

PART IV: PROJECTS WITH IMPLEMENTATION DELAYS AND FOR WHICH SPECIAL STATUS REPORTS WERE REQUESTED

77. There are 25 ongoing projects that have been classified as projects with implementation delays and are subject to the Committee's procedures for project cancellation. Projects with implementation delays are those: (i) that are expected to be completed more than 12 months late, and/or, (ii) where no disbursement has been made within 18 months of the project's approval. The breakdown of projects with implementation delays, by implementing and bilateral agency, is presented in Table 17 as follows: UNIDO (eight); UNDP (five); UNEP (four); the World Bank (one); the Czech Republic (two); Italy (one); Japan (one); and Spain (one). Reports have not been received from France (one) and Israel (one); Delays are most commonly caused by the external factors and followed by technical reasons and enterprise.

Table 17

SUMMARY OF PROGRESS FOR PROJECTS WITH IMPLEMENTATION DELAYS

	Czech Republic (the)	IBRD	Italy	Japan	Spain	UNDP	UNEP	UNIDO	Total
Number of projects reported	2	1	1	1	1	5	4	8	23
Number of projects completed	2		1	1		3	3	1	11
Number of projects with progress							1		1
Number of projects with some progress		1			1	2		7	11

Progress in resolving causes of delays

78. In their reports, the implementing and bilateral agencies advised that there have been varying degrees of progress in overcoming delays. Eleven of the projects listed with delays at the 68th meeting have now been completed (Annex III). One project where there has been either progress from one milestone to another or a resolution of the implementation delay may be removed from future reporting of projects with implementation delays (Annex IV).

Projects with some progress

79. Eleven projects have been classified as showing "some progress", and the implementing and bilateral agencies indicated that these would continue to be monitored (Annex V). Notwithstanding progress, it should be noted that projects approved over three years ago must continue to be monitored pursuant to decision 32/4. These projects cannot, therefore, be removed from the list for monitoring prior to final completion irrespective of the progress that may have been made. They are thus recommended for continued monitoring.

Projects for which additional status reports were requested

80. IS, halon banking, customs training, R&R, and demonstration projects are not subject to procedures for project cancellation. Nevertheless, the Executive Committee has decided to continue to monitor them as appropriate (decision 36/14(b)). At its 68th meeting, the Executive Committee requested 70 additional status reports. Such status reports are needed when there has been no indication of any progress since the last report and/or where additional impediments to implementation have been reported. There has been progress on 23 projects. Additional status reports are requested for submission to the 70th meeting for 47 projects (Annex VI) with the specific reasons for which additional status reports were requested.

HPMP development/project document signature

81. To-date, the Executive Committee has approved 295 HPMP and HCFC phase-out project preparation activities in 144 countries resulting in approved HPMP activities in 137 countries. Based on the number of HPMPs already approved, seven HPMPs will be submitted after the 69th meeting.

82. At its 68th meeting, the Executive Committee requested two additional status reports for HPMP development projects. Such status reports are needed when there has been no indication of any progress since the last report and/or where additional impediments to implementation have been reported. The concerned HPMP preparation activities are at different stages of completion with one country having not started (Mauritania) and one having its HPMP submitted to the 69th meeting (Barbados). An additional status report is requested for submission to the 70th meeting for Mauritania (Annex VII).

Projects with specific reporting requirements

83. There are 41 projects/activities for which specific reports were due to the 69th meeting including the following detailed specific reports on: one project related to supercritical CO_2 in spray foam in Colombia (COL/FOA/60/DEM/75) implemented by Japan; four projects related to the National CFC phase-out plan in Brazil (BRA/PHA/50/INV/278 - BRA/PHA/53/INV/280 - BRA/PHA/56/INV/284 - BRA/PHA/59/INV/293) implemented by UNDP; action taken by UNEP for projects in Haiti to improve training components and fund transfer and to provide sufficient technical advice for technology decision-making; UNIDO's report on Democratic People's Republic of Korea (the) demonstrating that imports of equipment into the country under the CTC phase-out plan were in accordance with the United Nations Security Council resolutions adopted from 2006 onwards; reports on resource mobilization activities. No additional reports are required for two projects implemented by UNDP, three projects implemented by UNEP and five implemented by UNIDO. For one CTC project in Democratic People's Republic of Korea (the) and one resource mobilization activity, the need for additional specific reporting is pending Executive Committee decision at the 69th meeting. The reasons for requesting these reports are mainly related to the following decisions:

- Decision 55/43(b) that requires reporting on individual HCFC demonstration and investment projects approval clause to report on incremental capital cost, incremental operating cost and technology application;
- Decisions from the 67th meeting with respect to progress reporting on TPMPs/NPPs if project completion reports are not submitted;

84. The Executive Committee may wish to request the submission of additional specific reports to the 70th meeting on the 29 projects with issues listed in Annex VIII.

85. In the particular case of the TPMP for Zambia, UNEP, as the lead implementing agency, has submitted to the 69th meeting of the Executive Committee the consumption verification report for the years 2007 to 2009. The TPMP had been approved at the 53rd meeting with UNEP as lead agency and UNDP as the cooperating agency. When the second tranche was approved at the 57th meeting, the Executive Committee also approved additional funding of US $20,000 plus agency support costs for the verification that the consumption in Zambia adhered to the consumption limits specified in the TPMP agreement. The verification report had originally been submitted to the 68th meeting, subsequently withdrawn and resubmitted to the 69th meeting. The comments below refer to a revision of the submission to the 69th meeting.

86. The TPMP agreement specified for the years 2007 to 2009 a maximum consumption of 4.11 ODP tonnes. The Government of Zambia reported under Article 7 consumption of 4.1 ODP tonnes in 2007, 2.0 ODP tonnes in 2008 and 0 ODP tonnes in 2009 and beyond. The verification report established consistency of that number in the information of customs, the central statistical office and the NOU. However, data provided by importers as part of the report indicate higher consumption than reported for 2008 and 2009, although well within the limits of the maximum allowable consumption under the TPMP agreement. In this regard, the revised verification report advised that the figures obtained from importers reflect their sales, some of which were using stockpiled CFCs imported in previous years.

87. The Secretariat has entered into a dialogue with UNEP, who in turn clarified a number of points with the verifiers. The clarifications provided did not fully answer all of the issues raised by the Secretariat regarding the consistency of actual consumption and Article 7 data. Nevertheless, the findings are sufficient to demonstrate clearly that the actual consumption in the years 2007 to 2009 remained below the consumption limits prescribed in the agreement, and thus fulfilled the condition stipulated in the agreement.

88. The Executive Committee may wish to take note of the 2007 to 2009 consumption verification report of the terminal phase-out management plan (TPMP) in Zambia, demonstrating that the consumption remained below the maximum allowable consumption specified for 2007 to 2009 as approved in the TPMP agreement.

Action taken for projects in Haiti to improve training components and fund transfer and to provide sufficient technical advice for technology decision-making (decision 68/3(b)(i))

89. The implementation of projects in Haiti namely, the institutional strengthening project (IS), the refrigerant management plan (RMP) and the terminal phase-out management plan (TPMP), faced difficulties because of political unrest, frequent changes in the Government of Haiti and natural disasters. In line with decision 68/3(b)(i), UNEP has submitted to the 69th meeting a report on the actions taken for projects in Haiti to improve training components and fund transfer and to provide sufficient technical advice for technology decision-making.

90. With respect to the actions carried out by UNEP to facilitate fund transfer, the agency advised that three official missions were conducted to Haiti from August 2011 to October 2012 to meet with high level authorities including the new Minister of Environment and to provide updated information to the newly appointed National Ozone Officers (NOOs). The Haitian officials were informed by UNEP that the agreement to implement the IS project had expired. Consequently, a new agreement would need to be signed upon receipt of the financial and activity report for the expired agreement to enable the country to have access to the funds balance. Since the financial and activity report has not been received as of 21 February 2013, UNEP's Regional Director is sending an official letter to the newly appointed Minister of Environment on this issue.

91. UNEP indicated that Haitian technicians participated in the Caribbean region workshop for air-conditioning and refrigeration technicians and another technician attended a training workshop in Cuba on long-term alternatives for air-conditioning and refrigeration. UNEP also reported that the training on alternative technologies will be conducted, but recognized the challenge to link and to cooperate with other technical schools outside of Port-au-Prince that could be used to formally train new refrigeration technicians. UNEP explained that in moving the training components forward, the relationship already built with Mission des Nations Unies pour la stabilisation en Haiti (MINUSTAH) has been maintained as the rebuilding effort continued to respond to the needs of the country and the requirements of the Montreal Protocol. It is anticipated that the NOOs through the HPMP will continue to work with MINUSTAH to ensure that their technicians receive the necessary training to support the phase-out of HCFCs.

92. The actions carried out by UNEP to provide sufficient technical advice for technology decision-making included the exchange of information by means of the clearinghouse mechanisms, documentation sources and experiences during Regional Network Meetings, direct guidance to the NOO through discussions during missions, etc. In addition, the relationship built with the refrigeration association was also useful in guiding technicians to the available technologies and pointing out those that are most beneficial to ozone layer protection, climate and energy.

93. Unfortunately, all the efforts envisaged to allow for more rapid integration of the new NOO, have not had an impact due to frequent turnover of government officers without a due procedure for transferring background information to new officers. However, the HPMP preparation process itself was used to conduct national discussion on alternative technology and awareness to lead the international assistance being received. The main message conveyed was to avoid the installation of obsolete technology in refrigeration and air conditioning equipment and promote energy efficient equipment as a convenient cost/benefit combination for country development as well as Montreal Protocol's compliance.

94. The Executive Committee may wish:

(a) To note with appreciation the report on actions taken for projects in Haiti to improve training components and fund transfer and to provide sufficient technical advice for technology decision-making; and

(b) To request UNEP to provide an update on the production and submission of the financial and activity report and the signature of the new IS agreement for Haiti that will enable the release of funds balance.

Brazil: National CFC phase-out plan (independent audit report for 2011/2012 and 2012 progress report) (UNDP)

95. On behalf of the Government of Brazil UNDP, as the designated implementing agency, has submitted to the 69th meeting of the Executive Committee a consumption verification report for the years 2011 and 2012 as well as a report on the implementation of the national CFC phase-out plan (NPP). The NPP for Brazil was approved by the Executive Committee at its 37th meeting to completely phase out CFC consumption in the country by 31 December 2009. Funding of US $26.7 million plus agency support costs has been approved in eight tranches, with the final tranche approval at the 59th meeting in 2009.

96. The verification report confirms the Article 7 data submitted by Brazil for the year 2011, showing a consumption of zero ODP tonnes. For 2012, the verification report confirms compliance with the Montreal Protocol, since a consumption of zero ODP tonnes could be verified. The Article 7 data for 2012 has not yet been submitted to the Ozone Secretariat, thus the verification could not relate to that data reporting.

97. The progress report covers the activities implemented as per the plan approved at the 66th meeting of the Executive Committee, as well as their completion status, and any activities still to be implemented to achieve completion:

(a) Activities which have since the 66th meeting been completed are the distribution of recovery tool sets and monitoring of related activities at the end-user level; the establishment of recycling centres and provision of laboratory test kits, as well as the associated commissioning, training and guidelines preparation; a demonstration project in the commercial refrigeration sector, with 18 conversions of end-user refrigeration equipment, including commissioning and documentation of energy savings; and the publishing of technical standards for reduction of refrigerant emissions as the final step in the participation and discussions of technical standard proposals; and

(b) Other activities are currently still on-going, such as: the recovery and recycling of chillers with two CFC-free chillers procured and delivered, where installation is planned for March of the current year. Performance information about the chillers delivered under this project is being carried out until mid-year 2013, and will complete this activity. Another activity is the introduction of a software-based system to reduce the illegal use and trade of ODS, in particular CFCs. This system, meant to monitor ODS imports, exports, recovery, reclamation, and recycling, has been programmed, its beta version is currently being tested and optimized, with the system being expected to be fully operative by June 2013. Finally, the Project Management Unit continues to provide technical and operational support to the different sub-projects, and will complete the remaining activities as well as close the project.

98. UNDP expects all of the activities to be concluded by mid-year 2013, with a project completion report to be submitted during the second half of 2013. The remaining balance as of March 2013 is US $400,000, of which US $390,000 have been already committed.

99. The Executive Committee may wish to consider:

(a) Noting the 2011 and 2012 consumption verification report and the 2011 and 2012 annual implementation report of the national CFC phase-out plan (NPP) in Brazil; and

(b) Requesting UNDP:

(i) To complete the remaining activities as outlined in the report on implementation of the NPP;

(ii) On completion of the NPP, to submit a project completion report, during 2013, in accordance with the format noted at the 65th meeting and as proposed by UNDP; and

(iii) To return any balance to the Multilateral Fund after completion of the remaining activities.

Colombia: Demonstration project to validate the use of super-critical CO_2 in the manufacture of sprayed polyurethane rigid foam

Background

100. The Government of Japan has submitted to the 69th meeting an interim report on the demonstration project to validate the use of super-critical CO_2 in the manufacture of sprayed polyurethane rigid foam. At its 60th meeting, the Executive Committee approved the project on an exceptional basis and on the understanding that the project would be the final and only validation project for supercritical CO_2 technology in the manufacture of sprayed polyurethane rigid foams.

101. The foam injection equipment modified to use the supercritical CO_2 technology and polyurethane formulations were purchased and delivered into Colombia in September 2012 and the testing of the foam samples to evaluate their physical properties took place between October 2012 and March 2013. The final results and conclusions of the demonstration project will be presented in an international seminar during the Latin American Ozone Network Meeting scheduled in May-June 2013. The final report of the demonstration project is proposed for the 70th meeting.

Secretariat's comments

102. The Secretariat noted the thorough analysis undertaken to demonstrate the technical feasibility of this technology in different foams and under different climatic conditions (i.e., high altitude, with moderate temperature and relative humidity; and low altitude, with high temperature and relative humidity).

103. In reviewing the interim report, the Secretariat requested the Government of Japan to include the following additional information in the final report:

(a) The economic assessment on the use of the supercritical CO_2 technology patented and used by Achilles, for the application of spray foam;

(b) A description of the polyurethane material required for the supercritical CO_2 technology and whether it is provided only by Achilles (the company that holds the patent for the technology), and the royalty fees for foam enterprises who selected the supercritical CO_2 technology;

(c) A description of any modifications that would need to be made to spray equipment in the baseline (i.e., using HCFC-141b) for using the supercritical CO_2 technology, as well as an indication of the minimum requirements, level of training and skills required by spray foam operators in Article 5 countries to successfully use the technology; and

(d) The main challenges encountered so far in applying the technology under the specific conditions in the country, and how they were addressed.

104. The Government of Japan confirmed that the information requested by the Secretariat will be included in the final report of the demonstration project.

105. The Executive Committee may wish:

(a) To note with appreciation the interim report on the demonstration project to validate the use of super-critical CO_2 in the manufacture of sprayed polyurethane rigid foam, as submitted by the Government of Japan; and

(b) To request the Government of Japan to submit the final report of the demonstration project taking into consideration the additional information requested in document UNEP/OzL.Pro/ExCom/69/5 to the 70th meeting.

PART VI: REPORTS ON RESOURCE MOBILIZATION ACTIVITIES

106. At its 63rd meeting the Executive Committee approved funding of US $680,000 for four individual global resource mobilization projects to be implemented by UNDP (US $200,000), UNEP (US $100,000), UNIDO (US $200,000) and the World Bank (US $180,000). These projects aim to mobilize resources to achieve climate benefits beyond those that could be secured through HCFC phase-out alone. Interim reports were submitted by UNDP, UNEP, UNIDO and the World Bank to the 66th meeting. At the 67th meeting, further reports on progress were prepared by UNDP and UNIDO, while the World Bank provided its progress report to the 68th meeting, in line with decision 66/15 (l),(m),(n) and (o). UNEP, however, did not provide a report which was due at the 68th meeting.

107. In reviewing the reports submitted to the 68th meeting and considering those submitted earlier by the implementing agencies, the Executive Committee, in decision 68/4, decided, *inter alia*:

(c) With respect to resource mobilization for climate co-benefits:

(i) To take note of the important information on resource mobilization provided in the desk study on the evaluation of chiller projects as presented in document UNEP/OzL.Pro/ExCom/68/10 and noted in paragraphs 48 to 54 of the present report;

(ii) To request that UNDP, UNEP, UNIDO and the World Bank take into account the information provided in the desk study, where relevant, and incorporate such information in the final reports on resource mobilization for climate co-benefits to be presented to the 69th meeting in the context of the terms of reference set out in decisions 63/20, 63/22, 63/23 and 63/24;

(iii) To request the Secretariat, in its review and summary of the final reports, to include an elaboration of the elements called for in the decisions of the 63rd meeting of the Executive Committee, in consultation with the respective implementing agency, and to provide its recommendations to the 69th meeting on criteria identified in those final reports that could facilitate consideration of whether to engage in a short-term pilot scheme for mobilization of financing for non-eligible projects.

108. In line with decisions 63/20, 63/22, 63/23 and 63/24, the final reports for these resource mobilization projects are to be submitted at the 69th meeting. The Secretariat received the final reports from UNDP and UNIDO, an interim report from UNEP, and information from the World Bank that its report would be available only at the 70th meeting.

Global: Resource mobilization for climate co-benefits (UNEP)

Progress report

109. UNEP has provided a short interim report on its resource mobilization project, highlighting that the approval was for UNEP to undertake a study on financing options, regional workshops on co-financing, and/or one or more pilot applications on co-financing for one or more LVC countries with an approved HPMP, to be funded as resource mobilization activities. The report indicated that some progress had been made on the implementation of the study on financing options, and provided the following update:

(a) US $20,000 of the project funds have been programmed for the study component;

(b) A Terms of Reference for the study has been prepared;

(c) A consultant with appropriate international experience related to multilateral environmental agreements, LVC countries and resource mobilization has been identified and administrative procedures are being finalized for getting this consultant on board;

(d) UNEP is in the process of identifying the members of the quality review team; and

(e) Compliance Assistance Programme (CAP) staff have conducted initial background research on co-financing issues, including existing documentation on the experiences of other agencies' resource mobilization activities. CAP's internal learning process in this area is on-going.

110. With regard to the regional workshop component, UNEP has reported the following:

(a) Project funds have been allocated for the workshop component and provided to the regional CAP teams;

(b) Internal discussions are underway within CAP to identify common agenda elements, workshop methodology, and key participants to be invited to ensure a certain level of standardization and comparability across regions;

(c) The CAP teams are scheduling the regional workshops on co-financing in the context of the regional network meetings planned for 2013; and

(d) An initial roster of potential invitees/partners for the workshops has been developed, drawing on multilateral and regional financing mechanisms, carbon finance experts in the

private sector, and other private sector organizations. UNEP is continuing to expand this list.

111. UNEP's report is attached as Annex IX.

Secretariat's comments

112. The Secretariat noted that the report provided by UNEP was very preliminary and did not address any substantive activities completed during this period. UNEP acknowledged that there were some delays in the project implementation, but assured that the work on the study is now well underway. It also noted that the Executive Committee, in its decision approving these funds, requested UNEP to hold the regional workshops in the context of the network meetings under the CAP so as to ensure cost-effectiveness, and that the timing of the workshops would be such to allow the experiences of other agencies' resource mobilization activities to be incorporated. In view of the fact that the other agencies' resource mobilization activities have just been recently completed, UNEP believed it could organize the workshops in a more cost-effective and relevant manner only in 2013.

Secretariat's recommendation

113. The Executive Committee may wish:

(a) To note the report on resource mobilization submitted by UNEP;

(b) To urge UNEP:

(i) To submit a final report on the study for the financing options for LVC by the 70th meeting taking into account decisions made by the Executive Committee on specific information that the final report should contain; and

(ii) To complete the regional workshops on co-financing by December 2013 with a view to providing a report on conclusions of these workshops to the first meeting in 2014.

Global: Resource mobilization for climate co-benefits (UNDP)

Final report

114. UNDP has provided its final report on the resource mobilization project for climate benefits in line with the decisions of the Executive Committee. UNDP's final report reiterated what had already been reported so far:

(a) That US $1.7 million had been transferred to UNDP from the United States of America for demonstration and application of low-global warming potential (GWP) and energy-efficient technologies in India, Indonesia and Malaysia covering the polyurethane (PU) foam and commercial air-conditioning and refrigeration sectors. In addition to technology demonstrations, these projects are expected to provide options for policies and regulations for sustaining technical interventions, recommend approaches for accounting of climate benefits, and establish benchmarks for costs and implementation timeframes.

(b) That in collaboration with UNDP's GEF-Climate Mitigation team, a proposal was developed for funding by the Global Environment Facility (GEF) for Indonesia focusing

on financing of energy-efficiency improvements in the air-conditioning and refrigeration sectors.

115. UNDP has also provided information on the additionality of the projects proposed; transparency and good governance; assurance that these projects would avoid perverse incentives for countries; exploring possibilities of profit-sharing, including return of funds to the Multilateral Fund; ensuring sustainability of the projects proposed; avoidance of duplication of similar projects; information on transaction costs, as required by decision 63/20(a)(ii). This is summarised in Table 18.

116. In response to decision 68/4(c)(ii), UNDP reported two main lessons learned from the desk study that could be relevant to its efforts in resource mobilization as follows:

(a) The ability to mobilize external resources: According to UNDP, the approach to mobilizing resources in this project was similar to that for the chillers demonstration projects, where counterpart and Official Development Aid (ODA) funds could be pursued. This allowed UNDP to engage with private sector, the GEF and bilateral sources as partners for the four pilots being undertaken under this project.

(b) The potential to replicate the model used for other countries: In examining the extent to which the current projects could be replicated in the absence of additional resources from the Multilateral Fund, UNDP indicated that, while there are common denominators, the interventions required would need to be adjusted depending on the partners who will be engaged in the process. For instance, looking at HCFC phase-out in sector plans in manufacturing sectors are quite different from companies and building owners dealing with chiller related demonstration projects. UNDP also believed that bilateral assistance has proven to be faster and more reliable, with fewer interventions from external bodies. It also indicated that the co-financing option through innovative funding arrangements had a better potential to generate significant additional funding. While this approach offered better chances for replication, the complexity of institutional arrangements might cause delays within the time-bound deadlines for compliance by countries.

117. The report provided by UNDP is attached as Annex X.

Secretariat's comments

118. In reviewing this report, the Secretariat noted that this was similar to that submitted to the 67th meeting, and that the new information contained therein related only to additional information required in compliance with decision 68/4(c)(ii). It noted that there was very little analysis of the approach that had been undertaken and, when considering the projects already funded, no report on the progress of implementation had been provided.

119. The Secretariat made substantive comments and observations to UNDP, focusing on specific areas expected in the final report, in addition to those already provided. Specifically, the Secretariat sought clarification on the following:

(a) How the funds provided in this project allowed UNDP to mobilize the additional resources, and how these funds were used; and

(b) What new approaches were applied to gather the current resources indicated by UNDP, and the decision making process/criteria taken to decide on potential partners as well as target countries.

120. In reviewing the material provided by UNDP on the elements required under decision 63/20, the Secretariat noted that only very general information was given. The Secretariat asked UNDP to further explain their views on some aspects of these elements, as follows:

(a) Whether UNDP looked at the additionality of the proposed projects, taking into account specific mandates of specific funding bodies (i.e. GEF and Multilateral Fund), and whether the funds provided under the GEF could be considered as additional to existing resources despite the fact that it does not reach the Fund directly;

(b) Whether UNDP looked at the concept of perverse incentives not only in the context of technology, but also the aspect of funding similar projects in future;

(c) How UNDP considered the sustainability not just of the specific projects where resources had been mobilized, but the overall approach of resource mobilization; and

(d) In considering transaction costs, how this approach (with specific funding for resource mobilization) differed from the usual project preparation exercise carried out by UNDP where project preparation funds are provided through the Fund, and whether funds provided for this purpose would assist in mobilizing more resources in future.

121. The Secretariat also asked UNDP to provide conclusions at the end of the report, taking into account that the Executive Committee had asked for a submission of a final report, and not merely an update.

122. In its response, UNDP gave the following information:

(a) Funds were used in the same way as project preparation funding, however for a specific purpose (i.e. energy efficiency enhancements which are not eligible under the Multilateral Fund) and covered incremental costs of technical experts, staff time, travel, workshops and meetings necessary for UNDP to undertake this exercise.

(b) With regard to new approaches, UNDP added further that the key common denominator between past and present approaches would be to ensure that project beneficiaries are financially stable and sustainable, which is true for any grant-funded project.

(c) In discussing decision making criteria, UNDP indicated that in the case of the funds from the Government of the United States, UNDP was selected through a government procurement process. Concerning the GEF, as the lead agency for the HPMP for Indonesia, it was the choice for considering areas on energy efficiency linked to its HPMP implementation.

(d) UNDP also indicated that the resource mobilization exercise would not have been possible without the funding provided by the Executive Committee, and more institutional funding would be needed for the continuation of this approach. In its view this exercise should always be considered as above and beyond the agency's current mandate and therefore should be viewed as such.

123. The Secretariat reviewed the responses provided by UNDP and is of the view that the current final report, while it provides information on the progress of the resource mobilization exercise, did not provide substantive analysis of the overall project, or conclusions that could be used in future. UNDP's view was that these conclusions could only be reached after the Executive Committee has reviewed the results described.

Secretariat's recommendation

124. The Executive Committee may wish to note the final report on the resource mobilization for climate co-benefits submitted by UNDP, and request UNDP to prepare a final comprehensive analysis of the results indicated therein, for submission to the Executive Committee no later than the 71st meeting.

Global: Resource mobilization for HCFC phase-out and climate co-benefits (UNIDO)

Final report

125. UNIDO has provided its final report on the resource mobilization project for climate benefits in line with the decisions of the Executive Committee. It focused on the GEF as a potential funding source and partner for these activities, and identified the Gambia, Morocco and Viet Nam for projects in the fishery and food processing sectors. In its final report, UNIDO explained the status of the three projects that had been identified in its earlier interim report. For the Gambia and Viet Nam, the project concept included three main components required to promote the development of a market for low-GWP refrigerants in industrial refrigeration (the Gambia) and cold storage sector (Viet Nam), as listed below:

(a) Policy and regulatory support

(b) Technology transfer; and

(c) Capacity building and awareness raising.

126. The project for Morocco envisaged the demonstration of a cascade system of CO_2 and HFO-1234ze, to eliminate the use of ODS, reduce greenhouse gas emissions and improve energy efficiency for deep sea fishing vessels.

127. UNIDO indicated that for the projects in both the Gambia and Viet Nam, the medium-sized proposals had been endorsed by the national ozone units of both countries, and are expected to be submitted to the GEF Secretariat for approval soon. The full-sized project for Morocco, on the other hand is planned for submission and approval under the 6th cycle of the GEF commencing 2014.

128. UNIDO also provided detailed information on additionality of the projects proposed; transparency and good governance; assurance that these projects would avoid perverse incentives for countries; exploring possibilities of profit-sharing, including return of funds to the Multilateral Fund; ensuring sustainability of the projects proposed; avoidance of duplication of similar projects; information on transaction costs, as required by decision 63/23(a)(ii). This is summarised in Table 18.

129. UNIDO also took into account decision 68/4(c)(ii), and provided lessons learned with the chiller project, focusing in particular on the regional African chiller project which had similarities to the countries currently targeted for the resource mobilization efforts. UNIDO reported that with the African chiller project, different financial mechanisms were established for the various participating countries mainly because a number of beneficiary countries did not have the financial means to provide the up-front payments required for new chillers. UNIDO mentioned that a similar approach could be applied for projects replacing HCFC-based systems. Currently, the project in the Gambia will explore the use of a revolving fund, while that for Viet Nam will consider the use of soft loans.

130. The report also indicated that the chiller project in Africa had provided valuable experience in building trust between the different stakeholders and partners, a positive outcome that benefits similar projects in future. UNIDO mentioned that it will consider the approach for the chiller projects when developing similar ones for the replacement of HCFC-systems.

131. The report provided by UNIDO is attached as Annex XI.

Secretariat's comments

132. The Secretariat provided substantive comments and observations to UNIDO, and requested UNIDO to provide further information on the same elements asked from UNDP (paragraphs 119 and 120 above). The Secretariat also asked UNIDO to provide conclusions at the end of the report.

133. In view of the above, UNIDO had provided a revised and updated report taking into account the comments and observations made by the Secretariat. All the elements that had been requested were fully integrated into the revised submission provided by UNIDO.

134. The report concluded that given its pioneer nature, this resource mobilization project had been a challenge for UNIDO despite the fact that, from an institutional perspective, the organization has always taken into account energy efficiency elements in the selection of non-ODS alternatives. The process of exploring co-financing sources, designing new ideas, selection of target countries and ensuring synergies with the projects already approved under the Multilateral Fund helped UNIDO to better understand the complex issues of generating climate co-benefits for HCFC phase-out projects. It has also allowed UNIDO to further progress in developing mechanisms to strengthen synergies within and outside the organization, an experience allowing for better opportunities for resource mobilization in the future.

Secretariat's recommendation

135. The Executive Committee may wish to note the final report on the resource mobilization for climate co-benefits study submitted by UNIDO.

Global: Resource mobilization for HCFC phase-out co-benefits study (World Bank)

Progress

136. The World Bank informed the Secretariat in a communication dated 20 February 2013 that it was unable to submit a final report to this meeting. The World Bank mentioned that the report still requires further inputs and an internal peer review process before it can be finalized. It also indicated that it would provide in advance the section of its experience with the chiller investment projects, in line with decision 68/4(c)(ii).

137. The World Bank advised that the final report would be submitted for the consideration of the Executive Committee at the 70th meeting.

Secretariat's comments

138. In discussions with the World Bank, the Secretariat was informed that work on the study was on-going; however, this is expected to be concluded shortly. While the World Bank had provided a draft of the section in the study that discussed the chillers project, the Secretariat had not included a review of this section as it was not yet in its final form. This review would be done once the final report is received.

Secretariat`s recommendation

139. The Executive Committee may wish to urge the World Bank to submit a final report of the study for climate co-benefits by the 70th meeting.

Table 18

Summary of the elements in decisions 63/20(a) and 63/23(a) submitted by UNDP and UNIDO

	UNDP	**UNIDO**
Additionality of the projects proposed	The proposed projects specifically target outcomes that are additional to the HCFC phase-out objectives, either through use of further/emerging low-GWP alternatives or through achieving energy-efficiency enhancements or both, which are not normally eligible or funded by MLF.	The proposed projects in the Gambia, Morocco and Viet Nam could comply with the definition of additionality, as it would not only eliminate ODS but identify and provide solutions to barriers for energy efficiency in these conversions as well.
Transparency and good governance, as well as covering the cash flow;	The funds mobilized would be managed and utilized in accordance with UNDP's rules and procedures and consistent with the agreements with the relevant donors. These funds would be accounted for and reported distinctly from MLF funds. It is not expected that the funding mobilized would be adequate to cover all costs, and therefore co-financing commitments from the participating enterprises to the extent necessary would be obtained.	UNIDO has developed an Enterprise Resource Planning (ERP) system to improve transparency, information flow, efficiency and effectiveness. ERP facilitates the flow of information between all business functions inside an organization and manage the connections to outside stakeholders. UNIDO has also developed a primer that provides information on good organization, management and governance practices. Both of these will be used as guiding principles in UNIDO's implementation of the projects.
Assurance that these projects would avoid perverse incentives for countries;	The technical and other outcomes for the sub-projects are clearly defined. The funds mobilized would be disbursed to the participating enterprises and/or other beneficiaries through performance-based agreements, with clear milestones, indicators and targets. The diligence as required in the agreements with donors will be duly carried out.	There are concerns that carbon payments for ODS destruction may result in virgin ODS being deliberately contaminated for destruction, which could result in perverse incentives. However, none of the current proposals for resource mobilization target ODS destruction, so this is unlikely to happen. UNIDO also believes that there are policies under the Fund that guard against perverse incentives (i.e technical review of projects, HPMP agreements, cut-off date, etc).
Exploring possibilities of profit-sharing, including return of funds to the Multilateral Fund;	The purpose of these resource mobilization efforts is to provide a guide/template on how such projects with multiple objectives and sources of financing can be developed and implemented. None of these projects envisage any revenue generation or profits. None of the external resources mobilized as a result of this effort, can be returned to the MLF. If there are any unutilized funds from the original US$ 200,000 provided by MLF, then these could be returned to MLF under the normal terms of agreement between UNDP and MLF.	The brainstorming, the process of exploring the potential co-financing sources, the selection of the target countries, the information and knowledge sharing with the other technical branches of UNIDO all helped our team to have a better understanding on the complex issue of generating climate co-benefits. Furthermore, UNIDO has been working out mechanisms to strengthen the synergies and cooperation with other branches in-house dealing with climate change and energy efficiency, which promises interesting opportunities for the future.

Ensuring sustainability of the projects proposed;	Due diligence has been and will be carried out to ensure that the selected beneficiaries are technically and financially sound. It is also expected that co-financing from beneficiaries would be needed for most of the interventions planned. This will ensure sustainability.	The projects aim at identifying the best technology options for replacing HCFC-22-based industrial refrigeration facilities in different sectors, climates and environments. Pilot conversions will enable generating experiences on the adoption of low-environmental impact technologies in the conversion of existing industrial refrigeration installations, including cost for conversion and assessment of climate benefits. The projects will provide information on most suitable financial mechanisms to leverage additional funds to promote the conversion of the remaining similar industrial refrigeration installations, including fishing vessels.
Avoidance of duplication of similar projects;	UNDP has taken care to ensure that the sub-projects and beneficiaries are selected where UNDP already has a clear mandate to work in the specific sectors/sub-sectors in context of the HPMP Stage-I in the relevant countries. UNDP will also ensure that overlaps with other similar initiatives from different sources of financing are avoided. UNDP will however be ready to coordinate with other agencies to avoid any duplication of efforts.	The term double counting can refer to Double Monetization which occurs when a singular GHG emission reduction or removal is monetized once as a GHG credit and a second time as a GHG allowance15. Rules have been developed to guard against both eventualities in all reputable protocol standards that have been developed to track carbon offsets16. Similar rules could be adopted in the MLF's resource mobilization projects to guard against programme participants making multiple claims for financial support for the same project. GHG programmes can address this through oversight procedures such as a registry that could be developed for resource mobilization projects.
Information on transaction costs.	Information on transaction costs would be available only upon completion of the sub-projects. The expected completion of these projects would be by end-2014.	UNIDO does not plan to apply for carbon finance for the resource mobilization projects that achieve energy reductions as a result of upgrading the technology. Therefore, UNIDO does not believe that transaction costs are applicable at this time.

RECOMMENDATIONS

140. The Executive Committee may wish to consider:

(a) Noting:

(i) With appreciation, the status reports and reports on projects with implementation delays submitted to the Secretariat by the implementing agencies and the Governments of the Czech Republic, Italy, Japan and Spain addressed in UNEP/OzL.Pro/ExCom/69/5;

(ii) That 81 country programme (CP) implementation reports for the year 2011 were submitted through the web-based system, which was initiated on 25 April 2007;

(iii) That the Secretariat and the implementing agencies would take established actions according to the Secretariat's assessments and report to notify governments and implementing agencies as required;

(iv) The 2007 to 2009 consumption verification report of the terminal phase-out management plan (TPMP) in Zambia, demonstrating that the consumption remained below the maximum allowable consumption specified for 2007 to 2009 as approved in the TPMP agreement;

(v) With appreciation the report on actions taken for projects in Haiti to improve training components and fund transfer and to provide sufficient technical advice for technology decision-making;

(vi) The 2011 and 2012 consumption verification report and the 2011 and 2012 annual implementation report of the national CFC phase-out plan (NPP) in Brazil;

(vii) With appreciation the interim report on the demonstration project to validate the use of super-critical CO_2 in the manufacture of sprayed polyurethane rigid foam, as submitted by the Government of Japan;

(viii) The report on resource mobilization submitted by UNEP;

(ix) The final reports on the resource mobilization for climate co-benefits submitted by UNDP and by UNIDO;

(b) Requesting:

(i) Additional status reports on the projects listed in Annexes VI and VII to the present document;

(ii) The submission of additional specific status reports to the 70th meeting on the 29 projects with issues listed in Annex VIII;

(iii) The Governments of France and Israel to provide their implementation delay reports to the 70th meeting of the Executive Committee;

(iv) The implementing agencies to consider the need for additional methyl bromide projects in the following countries that have partial methyl bromide phase-out projects or are exempted from compliance per decision XV/12: Algeria, Argentina, China, Congo (the), Democratic Republic of the Congo (the), Nigeria, Sudan (the), Swaziland, Tunisia and Turkey;

(v) UNIDO to submit a progress report to the 70th meeting on the current status of implementation of the methyl bromide projects in Argentina, Egypt and Morocco, including a detailed explanation as to why the consumption levels reported under Article 7 of the Montreal Protocol in 2001 are above those allowed under their respective Agreements with the Executive Committee, and the proposed action plans to meet the targets as required in these Agreements;

(vi) The Governments of Guinea-Bissau, Kenya, Mozambique, Panama, Papua New Guinea and Timor-Leste, for the second consecutive meeting except for Guinea-Bissau, to report to the Secretariat, as a matter of urgency, on whether

their licensing systems are functioning 'satisfactorily', 'very well' or 'not so well';

(vii) UNEP to provide an update on the production and submission of the financial and activity report and the signature of the new institutional strengthening (IS) agreement for Haiti that will enable the release of funds balance;

(viii) UNDP to complete the remaining activities as outlined in the report on implementation of the NPP in Brazil; to submit a project completion report once the NPP has been completed during 2013, in accordance with the format noted at the 65th meeting and as proposed by UNDP; and to return any balance to the Multilateral Fund after completion of the remaining activities;

(ix) The Government of Japan to submit the final report of the demonstration project to validate the use of super-critical CO_2 in the manufacture of sprayed polyurethane rigid foam in Colombia taking into consideration the additional information requested in document UNEP/OzL.Pro/ExCom/69/5 to the 70th meeting;

(x) UNDP to prepare a final comprehensive analysis of the results indicated in the final report on the resource mobilization for climate co-benefits submitted by UNDP, for submission to the Executive Committee no later than the 71st meeting;

(c) Urging UNEP:

(i) To submit a final report on the study for the financing options for low-volume consuming countries (LVC) by the 70th meeting taking into account decisions made by the Executive Committee on specific information that the final report should contain; and

(ii) To complete the regional workshops on co-financing by December 2013 with a view to providing a report on conclusions of these workshops to the first meeting in 2014; and

(d) Urging the World Bank to submit a final report of the study for climate co-benefits by the 70th meeting.

Annex I

DETAILED ANALYSIS OF THE STATUS OF IMPLEMENTATION IN COUNTRIES SUBJECT TO DECISIONS OF THE PARTIES ON COMPLIANCE AND THOSE WHOSE LATEST CONSUMPTION DATA EXCEEDS THE CONTROL MEASURES

1. Annex I presents the detailed analysis of the status of implementation in countries subject to decisions of the Parties on compliance and those whose latest consumption data exceeds the next control measures. The data tables in Appendices I-V indicate whether a country has received a total phase-out agreement for a specific controlled substance. The analysis of halons indicates whether a halon banking activity has been approved. Halon banking guidelines require that regulations facilitating production and import bans are established within six months of the establishment of a reclamation centre (decision 18/22). The methyl bromide analysis (Appendix II) indicates further whether a country has received funding for a phase-out to meet the 2005 control measures. Appendices III and IV present information on the carbon tetrachloride (CTC) and methyl chloroform (TCA) phase-out, respectively. Appendix V provides information on HCFC consumption only.

ANALYSIS OF COMPLIANCE FOR CFCs (Appendix I)

2. Countries have been grouped into one category: (a) those whose latest consumption exceeds the 2010 100 per cent phase-out target.

(a) Countries whose latest consumption exceeds the 2010 phase-out target

3. This category consists of 4 countries which have a reported consumption of CFC amounting to 203.7 ODP tonnes.

4. The Executive Committee has approved national CFC phase-out agreements for all of these countries.

5. All of these 4 countries that have latest consumption that exceeded zero consumption either have essential use authorizations for CFC consumption (Argentina, Bangladesh and China,) as per decision XXII/4 or emergency essential use for CFC-113 2010-2011 consumption as per decision XXII/4 para. 7 (Dominican Republic (the)).

ANALYSIS OF COMPLIANCE FOR HALONS

6. Seventy-five countries have reported no consumption of halons between 1995 and 2011.

7. Sixty-one countries have received support for halon banking activities or phase-out agreements. This includes those countries participating in regional halon banks. Halon banking is presumed to be the last funded activity in the halon consumption sector for most countries but there are some halon phase-out activities that are part of multi-sectoral phase-out agreements.

8. Countries have been grouped into the following one category: (a) those whose latest consumption exceeds the 2010 100 per cent phase-out target.

(a) Countries whose latest consumption exceeds the 2010 phase-out target

9. All countries are in compliance with the 100 per cent halon baseline reduction target.

ANALYSIS OF COMPLIANCE FOR METHYL BROMIDE (Appendix II)

10. This section presents the analysis for compliance with methyl bromide control measures. It should be noted that all data reported and used in this analysis relate to controlled use only, which means that the data exclude quarantine and pre-shipment (QPS). 145 of the 147 Article 5 countries that have ratified the Copenhagen Amendment have reported complete baseline data. Of these 147 countries, 58 reported zero for both the baseline consumption and the latest consumption.

11. One-hundred Article 5 countries have received support from the Multilateral Fund for methyl bromide activities and/or projects. This includes projects that will lead to a complete phase-out of methyl bromide in 62 of these countries, partial phase-out in an additional 9, and other forms of assistance received by 29.

12. Countries have been grouped into the following two categories: (a) those whose latest consumption exceeds the 20 per cent reduction target of 2005 that applies until December 2014; and (b) those whose latest consumption exceeds the 2015 100 per cent phase-out target. Appendix II identifies those countries that have not ratified the Copenhagen Amendment.

(a) Countries whose latest consumption exceeds the 20 per cent MB baseline reduction target

13. All countries are in compliance with the 20 per cent methyl bromide baseline reduction target.

(b) Countries whose latest consumption exceeds the 2015 phase-out target

14. This category consists of 25 countries that may need to meet additional combined reduction amounting to 1,898.5 ODP tonnes by 2015 in order to comply with the 100 per cent reduction targets. Of the 25 countries, 19 countries have approved projects that will lead to complete phase-out of methyl bromide. Five countries may need additional assistance from the Multilateral Fund to achieve the phase-out of methyl bromide by 2015. The remaining country (Singapore) is currently not eligible to receive funding from the Multilateral Fund.

CARBON TETRACHLORIDE (CTC) (Appendix III)

15. This section presents the analysis of compliance with CTC control measures. All data reported and used in this analysis are those related to controlled use only, which excludes feedstock. Reported CTC consumption was not differentiated by specific end use, such as solvents, process agents and laboratory use.

16. Of the 146 countries with reported baseline data, 90 reported zero both for the baseline and the latest consumption.

17. Countries have been grouped into the following one category: (a) those whose latest consumption exceeds the 2010 100 per cent phase-out target. Appendix III specifies that all countries have ratified the London Amendment.

(a) Countries whose latest consumption exceeds the 2010 phase-out target

18. This category consists of 4 countries that may need to phase out additional CTC amounting to 259.8 ODP tonnes to meet the 100 per cent reduction by 2010. Three of the 4 countries have received funding for CTC phase-out agreements or projects from the Multilateral Fund. The Republic of Korea has agreed not to receive CTC funding from the Multilateral Fund.

19. Countries with latest CTC consumption that exceeded zero consumption have process agent use exemptions for CTC consumption as per decision XXII/8 (China) or CTC consumption for laboratory and analytical uses (Croatia, Nepal), except Republic of Korea (the).

METHYL CHLOROFORM (TCA) (Appendix IV)

20. This section presents the analysis for compliance with TCA control measures. Of the 146 countries that have reported baseline data, 103 reported zero both for the baseline and the latest consumption.

21. Countries have been grouped into two categories: (a) those whose latest consumption exceeds the 70 per cent reduction target of 2010; and (b) those whose latest consumption exceeds the 2015 100 per cent phase-out target. Appendix IV specifies that all countries have ratified the London Amendment.

(a) Countries whose latest consumption exceeds the 70 per cent TCA baseline reduction target

22. All countries are in compliance with the 70 per cent TCA baseline reduction target.

(b) Countries whose latest consumption exceeds the 100 per cent TCA baseline reduction target

23. This category consists of one country (Republic of Korea (the)) that may need to meet additional combined reduction amounting to 10 ODP tonnes by 2015 in order to comply with the 100 per cent reduction target. The Republic of Korea is not eligible to receive TCA funding from the Multilateral Fund.

HCFCs (Appendix V)

24. Appendix V also includes an analysis of the latest consumption and baseline data on HCFCs and indicates whether the country had received HPMP preparation funding, the number of investment projects approved, the number of demonstration projects approved, total phase-out approved in ODP tonnes and activities planned in the 2013 business plans. All of the 148 countries already reported both the baseline and the latest consumption except South Sudan.

25. All countries have received HPMP project preparation funds except the Republic of Korea, Singapore, South Sudan and the United Arab Emirates. The Republic of Korea and Singapore had agreed not to receive funding from the Multilateral Fund.

(a) Countries whose latest consumption exceeds the freeze reduction target

26. This category consists of 68 countries that may need to phase out additional HCFC amounting to 2,547.3 ODP tonnes to meet the freeze reduction target by 2013.

27. Sixty-three of the 68 countries have received funding for HCFC phase-out agreements from the Multilateral Fund. Of the 5 remaining countries, one country has submitted HCFC phase-out projects to the 69th meeting.

Appendix I

CFC ANALYSIS

Country	Source	Year of Latest Consumption	Baseline	Latest Consumption	Compliance Decision	2011 Action Plan Target	2012 Action Plan Target	Percentage Over 85% Reduction	Percentage Over 100% Reduction	Ongoing Phase-Out (As of March 2013)	Phase-Out in 2013 Business Plans	Remarks	Date Approved
Argentina	A7	2011	4,697.2	28.3				0%	*	Yes	No	Non-LVC country with an approved terminal CFC phase-out plan	Apr-04
Bangladesh	A7	2011	581.6	48.0	Decision XXI/17			0%	*	No	No	Non-LVC country with an approved terminal CFC phase-out plan	Apr-04
China	A7	2011	57,818.7	126.9				0%	*	Yes	No	Non-LVC country with an approved terminal CFC phase-out plan	Apr-2005 (Last agreement approved by the ExCom for CFC)
Dominican Republic (the)	A7	2011	539.8	0.5				0%	**	No	No	Non-LVC country with an approved terminal CFC phase-out plan	Apr-05

*For essential use authorizations for CFC consumption.
** For emergency essential use for CFC-113 2010-2011 consumption per decision XXII/4 para. 7.

Appendix II

METHYL BROMIDE ANALYSIS

Country	Source	Year of Latest Consumption	Baseline	Latest Consumption	Compliance Decision	2011 Action Plan Target	2012 Action Plan Target	Percentage Over 20% Reduction	Percentage Over 100% Reduction	Ongoing Phase-Out (As of March 2013)	Phase-Out in 2013 Business Plans	Remarks	Date Approved	Ratified Copenhagen Amendment
Algeria	A7	2011	4.7	1.8				0%	Over	No	No	Country with approved projects that would as a minimum enable compliance with the 2005 MB limit	Nov-06	Yes
Angola	A7	2011	NDR	0.0						No	No			Yes
Argentina	A7	2011	411.3	291.3				0%	Over	Yes	No	Country with approved projects that would as a minimum enable compliance with the 2005 MB limit	Mar-02	Yes
Chile	A7	2011	212.5	166.3	Decision XVII/29			0%	Over	No	Yes	Country with approved projects for complete phase-out of MB	Apr-10	Yes
China	A7	2011	1,102.1	174.8				0%	Over	Yes	Yes	Country with approved projects for complete phase-out of MB (Possible additional funding for 100 ODP tonnes of MB used as a soil fumigant in ginsen crop).	Dec-03	Yes
Costa Rica	A7	2011	342.5	106.1				0%	Over	Yes	No	Country with approved projects for complete phase-out of MB	Dec-01	Yes
Egypt	A7	2011	238.1	133.2				0%	Over	Yes	No	Country with approved projects for complete phase-out of MB	Nov-08	Yes
Guatemala	A7	2011	400.7	211.1	Decision XVIII/26			0%	Over	Yes	No	Country with approved projects for complete phase-out of MB	Nov-09	Yes
Guinea	A7	2011	NDR	0.0						No	No			Yes
Honduras	A7	2011	259.4	86.8	Decision XVII/34			0%	Over	No	No	Country with approved projects for complete phase-out of MB	Nov-06	Yes

Country	Source	Year of Latest Consumption	Baseline	Latest Consumption	Compliance Decision	2011 Action Plan Target	2012 Action Plan Target	Percentage Over 20% Reduction	Percentage Over 100% Reduction	Ongoing Phase-Out (As of March 2013)	Phase-Out in 2013 Business Plans	Remarks	Date Approved	Ratified Copenhagen Amendment
Iran (Islamic Republic of)	A7	2011	26.7	0.7				0%	Over	No	No	Country with approved projects for complete phase-out of MB	Nov-05	Yes
Jamaica	A7	2011	4.9	1.2				0%	Over	No	No	Country with approved projects for complete phase-out of MB	Nov-05	Yes
Jordan	A7	2011	176.3	19.2				0%	Over	Yes	No	Country with approved projects for complete phase-out of MB	Nov-99	Yes
Kenya	A7	2011	217.5	8.5				0%	Over	Yes	No	Country with approved projects for complete phase-out of MB	Nov-2002 and Nov-2011	Yes
Malaysia	A7	2011	14.6	3.5				0%	Over	No	No	Country with approved projects for complete phase-out of MB	Jul-04	Yes
Mexico	A7	2011	1,130.8	488.2				0%	Over	Yes	Yes	Country with approved projects for complete phase-out of MB	Apr-08	Yes
Morocco	A7	2011	697.2	50.9				0%	Over	Yes	No	Country with approved projects for complete phase-out of MB	Nov-08	Yes
Saudi Arabia	A7	2011	204.1	29.4				0%	Over	No	No	Country with approved projects for complete phase-out of MB	Nov-07	Yes
Singapore	A7	2011	5.0	0.8				0%	Over	No	No			Yes
Sudan (the)	A7	2011	3.0	1.2				0%	Over	No	No	Country with approved projects that would as a minimum enable compliance with the 2005 MB limit	Nov-02	Yes
Thailand	A7	2011	183.0	20.7				0%	Over	Yes	No	Country with approved projects for complete phase-out of MB	Dec-04	Yes
Trinidad and Tobago	A7	2011	1.7	0.1				0%	Over	Yes	No	Country with approved projects for complete phase-out of MB	Nov-11	Yes

Country	Source	Year of Latest Consumption	Baseline	Latest Consumption	Compliance Decision	2011 Action Plan Target	2012 Action Plan Target	Percentage Over 20% Reduction	Percentage Over 100% Reduction	Ongoing Phase-Out (As of March 2013)	Phase-Out in 2013 Business Plans	Remarks	Date Approved	Ratified Copenhagen Amendment
Tunisia	A7	2011	8.3	6.6				0%	Over	No	No	Country that has not received assistance to achieve the 2005 MB phase-out target (Decision XV/12)		Yes
Uruguay	A7	2011	11.2	6.0	Decision XVII/39	6.00	6.00	0%	Over	No	No	Country with approved projects for complete phase-out of MB	Jul-01	Yes
Viet Nam	A7	2011	136.5	69.6				0%	Over	Yes	Yes	Country with approved projects for complete phase-out of MB	Nov-06	Yes
Yemen	A7	2011	54.5	18.1				0%	Over	Yes	No	Country with approved projects for complete phase-out of MB	Nov-08	Yes
Zimbabwe	A7	2011	557.0	2.4				0%	Over	No	No	Country with approved projects for complete phase-out of MB	Nov-06	Yes

Appendix III

CTC ANALYSIS

Country	Source	Year of Latest Consumption	Baseline	Latest Consumption	Compliance Decision	2011 Action Plan Target	2012 Action Plan Target	Percentage Over 85% Reduction	Percentage Over 100% Reduction	Ongoing Phase-Out (As of March 2013)	Phase-Out in 2013 Business Plans	Remarks	Date Approved	Ratified London Amendment
Angola	A7	2011	NDR	0.0						No	No			Yes
China	A7	2011	49,142.1	258.7				0%	*	No	No	Country with an approved CTC phase-out plan/project	Nov-02	Yes
Croatia	A7	2011	3.9	0.6				3%	**	No	No	Country with an approved CTC phase-out plan/project	Apr-05	Yes
Nepal	A7	2011	0.9	0.1				0%	**	No	No	Country with an approved CTC phase-out plan/project	Nov-05	Yes
Republic of Korea (the)	A7	2011	638.0	0.4				0%	Over	No	No			Yes

* For process use exemptions.
** For laboratory and analytical uses.

Appendix IV

TCA ANALYSIS

Country	Source	Year of Latest Consumption	Baseline	Latest Consumption	Compliance Decision	2011 Action Plan Target	2012 Action Plan Target	Percentage Over 30% Reduction	Percentage Over 70% Reduction	Percentage Over 100% Reduction	Ongoing Phase-Out (As of March 2013)	Phase-Out in 2013 Business Plans	Remarks	Date Approved	Ratified London Amendment
Angola	A7	2011	NDR	0.0							No	No			Yes
Republic of Korea (the)	A7	2011	513.3	10.0				0%	0%	Over	No	No			Yes

Appendix V

HCFC ANALYSIS

Country	Source	Year of Latest Consumption	Baseline	Latest Consumption	Percentage Over Freeze	Ongoing Phase-Out (As of March 2013)	HPMP Project Preparation Approved	Number of Individual Investment Projects Approved	Number of Demonstration Projects Approved	Activities in 2013 Business Plan	HPMP/ Individual Projects Approved	Date of Approval	HPMPs or Individual Projects Submitted to the 69th Meeting for Consideration	Control Measures Addressed by HPMPs (Approval/ Submission)	Additional Percent of Starting Point/BP Baseline Addressed by Individual Projects (Approval/ Submission)
Afghanistan	A7	2011	23.8	24.0	1%	0.0	Yes			No	HPMP	Apr-11		35% by 2020	
Albania	A7	2011	6.0	6.5	8%	0.0	Yes			Yes	HPMP	Jul-11		35% by 2020	
Algeria	A7	2011	62.1	67.3	8%	13.5	Yes			No	HPMP	Dec-10		20% by 2017	
Angola	A7	2011	16.0	11.6	0%	0.0	Yes			Yes	HPMP	Nov-11		10% by 2015	
Antigua and Barbuda	A7	2011	0.3	0.4	27%	0.0	Yes			No	HPMP	Apr-12		10% by 2015	
Argentina	A7	2011	400.7	511.6	28%	79.0	Yes			No	HPMP	Jul-10		17.5% by 2017	
Armenia	A7	2011	7.0	7.5	7%	2.2	Yes			Yes	HPMP	Dec-10		10% by 2015	
Bahamas (the)	A7	2011	4.8	3.1	0%	0.0	Yes			Yes	HPMP	Nov-11		35% by 2020	
Bahrain	A7	2011	51.9	57.3	10%	3.7	Yes			No	HPMP	Dec-12		39% by 2020	
Bangladesh	A7	2011	72.6	88.4	22%	20.8	Yes			Yes	HPMP	Nov-11		30% by 2018	
Barbados	A7	2011	3.7	2.7	0%	0.0	Yes			Yes			HPMP	35% by 2020	
Belize	A7	2011	2.8	1.9	0%	0.0	Yes			No	HPMP	Dec-10		35% by 2020	
Benin	A7	2011	23.8	23.8	0%	0.0	Yes			Yes	HPMP	Apr-11		35% by 2020	
Bhutan	A7	2011	0.3	0.3	0%	0.0	Yes			Yes	HPMP	Apr-11		100% by 2025	
Bolivia (Plurinational State of)	A7	2011	6.1	7.5	23%	0.0	Yes			Yes	HPMP	Jul-11		35% by 2020	
Bosnia and Herzegovina	A7	2011	4.7	3.4	0%	5.3	Yes			No	HPMP	Apr-12		35% by 2020	
Botswana	A7	2011	11.0	2.7	0%	0.0	Yes			No					
Brazil	A7	2011	1,327.3	1,046.4	0%	63.5	Yes		2	Yes	HPMP	Jul-11		10% by 2015	
Brunei Darussalam	A7	2011	6.1	8.1	32%	0.6	Yes			No	HPMP	Apr-12		35% by 2020	
Burkina Faso	A7	2011	28.9	27.9	0%	0.0	Yes			Yes	HPMP	Dec-10		35% by 2020	
Burundi	A7	2011	7.2	7.0	0%	0.4	Yes			Yes	HPMP	Nov-11		35% by 2020	

Country	Source	Year of Latest Consumption	Baseline	Latest Consumption	Percentage Over Freeze	Ongoing Phase-Out (As of March 2013)	HPMP Project Preparation Approved	Number of Individual Investment Projects Approved	Number of Demonstra-tion Projects Approved	Activities in 2013 Business Plan	HPMP/ Individual Projects Approved	Date of Approval	HPMPs or Individual Projects Submitted to the 69th Meeting for Considera-tion	Control Measures Addressed by HPMPs (Approval/ Submission)	Additional Percent of Starting Point/BP Baseline Addressed by Individual Projects (Approval/ Submission)
Cambodia	A7	2011	15.0	13.7	0%	0.0	Yes			Yes	HPMP	Jul-10		100% by 2035	
Cameroon	A7	2011	88.8	73.8	0%	22.1	Yes			Yes	HPMP	Jul-11		20% by 2017	
Cape Verde	A7	2011	1.1	0.3	0%	0.0	Yes			Yes	HPMP	Jul-11		35% by 2020	
Central African Republic (the)	A7	2011	12.0	12.0	0%	0.5	Yes			Yes	HPMP	Jul-11		35% by 2020	
Chad	A7	2011	16.1	17.0	6%	0.0	Yes			Yes	HPMP	Dec-10		35% by 2020	
Chile	A7	2011	87.5	109.0	25%	7.6	Yes			Yes	HPMP	Apr-11		10% by 2015	
China	A7	2011	19,269.0	20,739.0	8%	411.1	Yes	1	9	Yes	HPMP	Jul-11		10% by 2015	
Colombia	A7	2011	225.6	217.4	0%	65.2	Yes		1	Yes	HPMP	Dec-10		10% by 2015	
Comoros (the)	A7	2011	0.1	0.1	20%	0.0	Yes			Yes	HPMP	Jul-11		35% by 2020	
Congo (the)	A7	2011	8.9	10.6	19%	0.0	Yes			Yes	HPMP	Apr-11		35% by 2020	
Cook Islands (the)	A7	2011	0.1	0.1	0%	0.0	Yes			No	HPMP	Apr-11		35% by 2020	
Costa Rica	A7	2011	14.1	21.8	54%	14.0	Yes			Yes	HPMP	Jul-11		35% by 2020	
Cote d'Ivoire	A7	2011	63.8	59.3	0%	3.3	Yes			No	HPMP	Apr-12		35% by 2020	
Croatia	A7	2011	4.0	4.2	4%	8.1	Yes			Yes	HPMP	Jul-10		100% by 2016	
Cuba	A7	2011	16.9	14.3	0%	15.0	Yes			Yes	HPMP	Nov-11		35% by 2020	
Democratic People's Republic of Korea (the)	A7	2011	78.0	90.0	15%	0.0	Yes			Yes					
Democratic Republic of the Congo (the)	A7	2011	81.2	56.9	0%	0.0	Yes			Yes	HPMP	Apr-11		10% by 2015	
Djibouti	A7	2011	0.7	0.7	0%	0.0	Yes			No	HPMP	Apr-12		35% by 2020	
Dominica	A7	2011	0.4	0.2	0%	0.0	Yes			No	HPMP	Dec-10		35% by 2020	
Dominican Republic (the)	A7	2011	51.2	50.1	0%	12.5	Yes			Yes	HPMP	Nov-11		10% by 2015	
Ecuador	A7	2011	23.5	32.3	37%	15.0	Yes			Yes	HPMP	Nov-11		35% by 2020	
Egypt	A7	2011	386.3	355.6	0%	160.5	Yes	1	1	Yes	HPMP	Nov-11		25% by 2018	
El Salvador	A7	2011	11.7	9.6	0%	6.5	Yes			No	HPMP	Nov-11		35% by 2020	
Equatorial Guinea	A7	2011	6.3	5.7	0%	0.3	Yes			Yes	HPMP	Nov-11		35% by 2020	

Country	Source	Year of Latest Consumption	Baseline	Latest Consumption	Percentage Over Freeze	Ongoing Phase-Out (As of March 2013)	HPMP Project Preparation Approved	Number of Individual Investment Projects Approved	Number of Demonstra-tion Projects Approved	Activities in 2013 Business Plan	HPMP/ Individual Projects Approved	Date of Approval	HPMPs or Individual Projects Submitted to the 69th Meeting for Considera-tion	Control Measures Addressed by HPMPs (Approval/ Submission)	Additional Percent of Starting Point/BP Baseline Addressed by Individual Projects (Approval/ Submission)
Eritrea	A7	2011	1.1	1.0	0%	0.0	Yes			No	HPMP	Jul-11		35% by 2020	
Ethiopia	A7	2011	5.5	11.3	105%	0.5	Yes			No	HPMP	Dec-12		35% by 2020	
Fiji	A7	2011	8.5	14.5	70%	0.0	Yes			No	HPMP	Nov-11		35% by 2020	
Gabon	A7	2011	30.2	46.0	52%	0.0	Yes			Yes	HPMP	Dec-10		35% by 2020	
Gambia (the)	A7	2011	1.5	1.0	0%	0.1	Yes			Yes	HPMP	Nov-11		35% by 2020	
Georgia	A7	2011	5.3	4.3	0%	0.7	Yes			No	HPMP	Apr-11		35% by 2020	
Ghana	A7	2011	57.3	30.7	0%	0.0	Yes			No	HPMP	Jul-10		35% by 2020	
Grenada	A7	2011	0.8	0.2	0%	0.0	Yes			No	HPMP	Dec-10		35% by 2020	
Guatemala	A7	2011	8.3	9.9	19%	2.3	Yes			No	HPMP	Jul-11		35% by 2020	
Guinea	A7	2011	22.6	24.5	9%	1.2	Yes			No	HPMP	Apr-12		35% by 2020	
Guinea-Bissau	A7	2011	1.5	2.9	91%	0.1	Yes			Yes	HPMP	Nov-11		35% by 2020	
Guyana	A7	2011	1.8	2.4	34%	0.0	Yes			No	HPMP	Apr-11		10% by 2015	
Haiti	A7	2011	3.6	4.2	17%	0.0	Yes			No	HPMP	Dec-12		35% by 2020	
Honduras	A7	2011	19.9	22.6	13%	0.0	Yes			Yes	HPMP	Apr-11		35% by 2020	
India	A7	2011	1,608.2	1,484.6	0%	145.4	Yes			Yes	HPMP	Apr-12		10% by 2015	
Indonesia	A7	2011	403.9	337.5	0%	71.9	Yes			Yes	HPMP	Jul-11		20% by 2018	
Iran (Islamic Republic of)	A7	2011	380.5	376.9	0%	73.4	Yes			Yes	HPMP	Apr-11		10% by 2015	
Iraq	A7	2011	108.4	110.4	2%	0.0	Yes			Yes	HPMP	Nov-11		13.82% by 2015	
Jamaica	A7	2011	16.3	4.5	0%	3.6	Yes			Yes	HPMP	Jul-11		35% by 2020	
Jordan	A7	2011	83.0	101.3	22%	15.9	Yes			Yes	HPMP	Nov-11		20% by 2017	
Kenya	A7	2011	52.2	48.6	0%	3.1	Yes			No	HPMP	Apr-12		21.1% by 2017	
Kiribati	A7	2011	0.1	0.0	0%	0.0	Yes			No	HPMP	Apr-11		35% by 2020	
Kuwait	A7	2011	418.6	397.8	0%	60.7	Yes			Yes	HPMP	Apr-12		39.2% by 2018	
Kyrgyzstan	A7	2011	4.1	3.0	0%	0.0	Yes			Yes	HPMP	Apr-11		10% by 2015	
Lao People's Democratic Republic (the)	A7	2011	2.3	2.7	16%	0.0	Yes			No	HPMP	Apr-11		35% by 2020	

Country	Source	Year of Latest Consumption	Baseline	Latest Consumption	Percentage Over Freeze	Ongoing Phase-Out (As of March 2013)	HPMP Project Preparation Approved	Number of Individual Investment Projects Approved	Number of Demonstra-tion Projects Approved	Activities in 2013 Business Plan	HPMP/ Individual Projects Approved	Date of Approval	HPMPs or Individual Projects Submitted to the 69th Meeting for Considera-tion	Control Measures Addressed by HPMPs (Approval/ Submission)	Additional Percent of Starting Point/BP Baseline Addressed by Individual Projects (Approval/ Submission)
Lebanon	A7	2011	73.5	92.3	26%	12.1	Yes			Yes	HPMP	Jul-11		17.5% by 2017	
Lesotho	A7	2011	3.5	2.5	0%	0.0	Yes			No	HPMP	Jul-11		35% by 2020	
Liberia	A7	2011	5.3	5.4	2%	0.6	Yes			No	HPMP	Apr-11		35% by 2020	
Libya	A7	2011	114.7	131.9	15%	0.0	Yes			Yes					
Madagascar	A7	2011	24.9	16.5	0%	0.0	Yes			Yes	HPMP	Dec-10		35% by 2020	
Malawi	A7	2011	10.8	12.7	18%	0.0	Yes			Yes	HPMP	Dec-10		35% by 2020	
Malaysia	A7	2011	515.8	482.3	0%	53.7	Yes			Yes	HPMP	Nov-11		15% by 2016	
Maldives	A7	2011	4.6	3.7	0%	0.0	Yes			Yes	HPMP	Apr-10		100% by 2020	
Mali	CP	2012	15.0	17.6	17%	0.0	Yes			Yes	HPMP	Apr-11		35% by 2020	
Marshall Islands (the)	A7	2011	0.2	0.2	20%	0.0	Yes			No	HPMP	Apr-11		35% by 2020	
Mauritania	A7	2011	20.5	20.5	0%	0.0	Yes			Yes					
Mauritius	A7	2011	8.0	8.8	10%	0.0	Yes			No	HPMP	Apr-11		100% by 2030	
Mexico	A7	2011	1,148.8	1,083.4	0%	274.9	Yes		1	Yes	HPMP	Jul-11		30% by 2018	
Micronesia (Federated States of)	A7	2011	0.2	0.1	0%	0.0	Yes			No	HPMP	Apr-11		35% by 2020	
Mongolia	A7	2011	1.4	1.2	0%	0.5	Yes			Yes	HPMP	Apr-11		35% by 2020	
Montenegro	A7	2011	0.8	0.7	0%	0.0	Yes			Yes	HPMP	Apr-11		35% by 2020	
Morocco	A7	2011	59.7	78.8	32%	11.0	Yes			No	HPMP	Nov-11		20% by 2017	
Mozambique	A7	2011	6.5	8.4	29%	0.3	Yes			No	HPMP	Apr-12		35% by 2020	
Myanmar	A7	2011	4.3	5.8	34%	0.4	Yes			No	HPMP	Dec-12		35% by 2020	
Namibia	A7	2011	8.4	10.0	18%	0.9	Yes			Yes	HPMP	Apr-11		100% by 2025	
Nauru	A7	2011	0.0	0.0	Over	0.0	Yes			No	HPMP	Apr-11		35% by 2020	
Nepal	A7	2011	1.1	1.1	0%	0.3	Yes			No	HPMP	Apr-12		35% by 2020	
Nicaragua	A7	2011	6.8	5.4	0%	0.7	Yes			No	HPMP	Apr-12		35% by 2020	
Niger (the)	A7	2011	16.0	15.9	0%	2.7	Yes			No	HPMP	Apr-12		35% by 2020	
Nigeria	A7	2011	398.2	461.8	16%	0.0	Yes			Yes	HPMP	Dec-10		10% by 2015	

Country	Source	Year of Latest Consumption	Baseline	Latest Consumption	Percentage Over Freeze	Ongoing Phase-Out (As of March 2013)	HPMP Project Preparation Approved	Number of Individual Investment Projects Approved	Number of Demonstra-tion Projects Approved	Activities in 2013 Business Plan	HPMP/ Individual Projects Approved	Date of Approval	HPMPs or Individual Projects Submitted to the 69th Meeting for Considera-tion	Control Measures Addressed by HPMPs (Approval/ Submission)	Additional Percent of Starting Point/BP Baseline Addressed by Individual Projects (Approval/ Submission)
Niue	A7	2011	0.0	0.0	0%	0.0	Yes			No	HPMP	Apr-11		35% by 2020	
Oman	A7	2011	31.5	34.8	11%	5.2	Yes			Yes	HPMP	Nov-11		10% by 2015	
Pakistan	A7	2011	247.4	276.1	12%	71.6	Yes			Yes	HPMP	Dec-10		10% by 2015	
Palau	A7	2011	0.2	0.2	0%	0.0	Yes			No	HPMP	Apr-11		35% by 2020	
Panama	A7	2011	24.8	23.8	0%	0.0	Yes			Yes	HPMP	Nov-11		10% by 2015	
Papua New Guinea	A7	2011	3.3	1.7	0%	0.2	Yes			Yes	HPMP	Apr-11		100% by 2025	
Paraguay	A7	2011	18.0	16.8	0%	1.8	Yes			No	HPMP	Apr-11		35% by 2020	
Peru	A7	2011	26.9	32.5	21%	0.0	Yes			Yes	HPMP	Dec-12		10% by 2015	
Philippines (the)	A7	2011	208.4	164.9	0%	40.0	Yes			No	HPMP	Dec-12		10% by 2015	
Qatar	A7	2011	86.9	96.6	11%	22.0	Yes			Yes	HPMP	Nov-11		20% by 2015	
Republic of Korea (the)	A7	2011	1,908.0	2,108.9	11%	0.0	No			No					
Republic of Moldova (the)	A7	2011	1.0	1.3	31%	0.0	Yes			Yes	HPMP	Apr-11		10% by 2015	
Rwanda	A7	2011	4.1	5.5	34%	0.2	Yes			Yes	HPMP	Jul-11		35% by 2020	
Saint Kitts and Nevis	A7	2011	0.5	0.5	0%	0.2	Yes			No	HPMP	Jul-11		35% by 2020	
Saint Lucia	A7	2011	0.2	1.1	435%	0.1	Yes			No	HPMP	Jul-11		35% by 2020	
Saint Vincent and the Grenadines	A7	2012	0.3	0.3	0%	0.2	Yes			No	HPMP	Jul-11		100% by 2025	
Samoa	A7	2011	0.3	0.3	0%	0.0	Yes			No	HPMP	Apr-11		35% by 2020	
Sao Tome and Principe	A7	2011	2.2	0.1	0%	0.0	Yes			Yes	HPMP	Apr-11		35% by 2020	
Saudi Arabia	A7	2011	1,468.7	1,750.8	19%	107.1	Yes			Yes	HPMP	Dec-12		40% by 2020	
Senegal	A7	2011	36.2	36.1	0%	3.6	Yes			No	HPMP	Nov-11		35% by 2020	
Serbia	A7	2011	8.4	12.5	49%	2.3	Yes			Yes	HPMP	Dec-10		35% by 2020	
Seychelles	A7	2011	1.4	0.9	0%	0.4	Yes			Yes	HPMP	Apr-11		100% by 2025	
Sierra Leone	A7	2011	1.7	1.9	10%	0.1	Yes			Yes	HPMP	Nov-11		35% by 2020	
Singapore	A7	2011	216.1	110.8	0%	0.0	No			No					
Solomon Islands	A7	2011	2.0	2.0	2%	0.0	Yes			No	HPMP	Apr-11		35% by 2020	

Country	Source	Year of Latest Consumption	Baseline	Latest Consumption	Percentage Over Freeze	Ongoing Phase-Out (As of March 2013)	HPMP Project Preparation Approved	Number of Individual Investment Projects Approved	Number of Demonstra-tion Projects Approved	Activities in 2013 Business Plan	HPMP/ Individual Projects Approved	Date of Approval	HPMPs or Individual Projects Submitted to the 69th Meeting for Considera-tion	Control Measures Addressed by HPMPs (Approval/ Submission)	Additional Percent of Starting Point/BP Baseline Addressed by Individual Projects (Approval/ Submission)
Somalia	A7	2011	45.1	45.2	0%	0.5	Yes			No	HPMP	Jul-11		35% by 2020	
South Africa	A7	2011	369.7	379.3	3%	24.9	Yes			Yes	HPMP	Jul-11		35% by 2020	
South Sudan	NDR	NDR	NDR	NDR			No			Yes					
Sri Lanka	A7	2011	13.9	16.3	17%	0.5	Yes			Yes	HPMP	Dec-10		35% by 2020	
Sudan (the)	A7	2011	52.7	55.0	4%	11.9	Yes			No	HPMP	Dec-10		30% by 2017	
Suriname	A7	2011	2.0	4.0	101%	0.1	Yes			Yes	HPMP	Nov-11		35% by 2020	
Swaziland	A7	2011	7.3	3.1	0%	7.7	Yes			Yes	HPMP	Apr-11		35% by 2020	
Syrian Arab Republic	A7	2011	135.0	176.6	31%	12.9	Yes	1		Yes	Individual	Dec-10			10%
Thailand	A7	2011	927.6	811.3	0%	50.3	Yes			Yes	HPMP	Dec-12		15% by 2018	
The Former Yugoslav Republic of Macedonia	A7	2011	1.8	0.9	0%	1.6	Yes			Yes	HPMP	Apr-10		35% by 2020	
Timor-Leste	A7	2011	0.5	0.2	0%	0.0	Yes			Yes	HPMP	Apr-11		10% by 2015	
Togo	A7	2011	20.0	19.1	0%	0.0	Yes			Yes	HPMP	Dec-10		35% by 2020	
Tonga	A7	2011	0.1	0.1	0%	0.0	Yes			No	HPMP	Apr-11		35% by 2020	
Trinidad and Tobago	A7	2011	46.0	34.2	0%	2.5	Yes			Yes	HPMP	Jul-11		35% by 2020	
Tunisia	A7	2011	40.7	33.9	0%	0.0	Yes			Yes					
Turkey	A7	2011	551.5	427.7	0%	160.5	Yes		1	No	HPMP	Dec-12		86.4% by 2017	
Turkmenistan	A7	2011	6.8	5.8	0%	0.0	Yes			Yes	HPMP	Dec-10		35% by 2020	
Tuvalu	A7	2011	0.1	0.0	0%	0.0	Yes			No	HPMP	Apr-11		35% by 2020	
Uganda	A7	2011	0.2	0.1	0%	0.0	Yes			No	HPMP	Dec-12		35% by 2020	
United Arab Emirates (the)	A7	2011	557.1	641.8	15%	0.0	No			No					
United Republic of Tanzania (the)	A7	2011	1.7	10.0	486%	0.2	Yes			No	HPMP	Jul-11		35% by 2020	
Uruguay	A7	2011	23.4	17.6	0%	0.0	Yes			Yes	HPMP	Nov-11		10% by 2015	
Vanuatu	A7	2011	0.3	0.1	0%	0.0	Yes			No	HPMP	Apr-11		35% by 2020	

Country	Source	Year of Latest Consumption	Baseline	Latest Consumption	Percentage Over Freeze	Ongoing Phase-Out (As of March 2013)	HPMP Project Preparation Approved	Number of Individual Investment Projects Approved	Number of Demonstra-tion Projects Approved	Activities in 2013 Business Plan	HPMP/ Individual Projects Approved	Date of Approval	HPMPs or Individual Projects Submitted to the 69th Meeting for Considera-tion	Control Measures Addressed by HPMPs (Approval/ Submission)	Additional Percent of Starting Point/BP Baseline Addressed by Individual Projects (Approval/ Submission)
Venezuela (Bolivarian Republic of)	A7	2011	207.0	165.1	0%	0.0	Yes			Yes	HPMP	Apr-11		10% by 2015	
Viet Nam	A7	2011	221.2	223.3	1%	44.7	Yes			Yes	HPMP	Apr-11		10% by 2015	
Yemen	A7	2011	158.2	71.9	0%	11.6	Yes			No	HPMP	Dec-12		15% by 2015	
Zambia	A7	2011	5.0	9.2	85%	0.4	Yes			Yes	HPMP	Jul-11		35% by 2020	
Zimbabwe	A7	2011	17.8	19.8	11%	6.1	Yes			Yes	HPMP	Nov-11		35% by 2020	

Annex II

INFORMATION ON COUNTRIES SUBJECT TO DECISIONS OF THE PARTIES ON COMPLIANCE

Party	Agency	Decisions	Compliance issue	Actions	Implementing Agency Comments for the 69th meeting	MLF assessment based on agencies preliminary comments, A7 data and information from Ozone Secretariat
Gambia (the)	UNEP	XXIV/17	Licensing system	To ensure that that system is structured in accordance with Article 4 B of the Protocol and that it provides for the licensing of exports and to report thereon to the Secretariat	The Gambia's revised ODS Regulations is structured in accordance with Article 4 B of the Protocol and it provides for the licensing of exports. CAP has advised the Gambia to inform the Ozone Secretariat on the current status of the revised ODS Regulations. High level discussions which will involve Ozone Secretariat and UNEP are planned during the upcoming Network Meeting as the Gambia is hosting the meeting	Not achieved as per Ozone Secretariat / IA
Mali	UNEP	XXIV/13	Data reporting issues	To report the 2011 data to the Secretariat as a matter of urgency	Mali submitted 2011 data to the Ozone Secretariat on 8 December 2012	Achieved as per A7
Sao Tome and Principe	UNEP	XXIV/13	Data reporting issues	To report the 2011 data to the Secretariat as a matter of urgency	The country submitted 2011 data to the Ozone Secretariat on 1 February 2013	Achieved as per IA

Annex III

COMPLETED PROJECTS

Agency	Code	Project Title
Czech Republic (the)	EUR/SEV/57/TAS/07	Initiating regional cooperation to enforce ODS trade controls in Europe and Central Asia network countries (first tranche)
Czech Republic (the)	EUR/SEV/60/TAS/10	Initiating regional cooperation to enforce ODS trade controls in Europe and Central Asia network countries (second tranche)
Italy	IND/ARS/56/INV/424	Plan for phase-out of CFCs in the manufacture of pharmaceutical MDIs
Japan	GLO/SEV/59/TRA/297	Training on alternative technologies to HCFCs
UNDP	AFR/FUM/38/TAS/32	Technical assistance for methyl bromide reductions and formulation of regional phase-out strategies for low-volume consuming countries
UNDP	CHI/REF/48/INV/160	Terminal umbrella project for phase-out of the use of CFC-11, CFC-12 and R-502 (CFC-115) in the manufacture of refrigeration equipment
UNDP	COL/PAG/48/INV/66	Phase-out of CTC as process agent in the elimination of nitrogen trichloride during chlorine production at Prodesal S.A.
UNEP	EUR/SEV/57/TAS/08	Initiating regional cooperation to enforce ODS trade controls in Europe and Central Asia network countries (first tranche)
UNEP	EUR/SEV/60/TAS/09	Initiating regional cooperation to enforce ODS trade controls in Europe and Central Asia network countries (second tranche)
UNEP	GLO/REF/48/TAS/275	Global technical assistance programme in the chiller sector
UNIDO	ALG/REF/44/INV/62	Conversion of CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the last group of commercial refrigerator manufactures (refrigeration sector terminal project)

Annex IV

PROJECTS THAT ARE CLASSIFIED AS "PROGRESS"

Agency	Code	Project Title
UNEP	KUW/PHA/57/TAS/15	TPMP verification

Annex V

PROJECTS THAT ARE CLASSIFIED AS "SOME PROGRESS" THAT ARE RECOMMENDED FOR CONTINUED MONITORING

Agency	Code	Project Title
UNIDO	ARG/SOL/41/INV/137	Plan for phase-out of ODS in the solvent sector
UNDP	BGD/ARS/52/INV/26	Phase-out of CFC consumption in the manufacture of aerosol MDIs (Beximco, Square Pharmaceutical and Acme Pharmaceutical)
IBRD	CPR/ARS/51/INV/447	Phase-out of CFC consumption in the pharmaceutical aerosol sector (2007-2008 biennial programme)
UNIDO	EGY/ARS/50/INV/92	Phase-out of CFC consumption in the manufacture of aerosol metered dose inhalers (MDIs)
UNIDO	IRQ/FOA/57/INV/06	Conversion from CFC-11 to methylene chloride in the production of flexible slabstock foam at Al Hadi Co.
UNIDO	IRQ/REF/57/INV/07	Replacement of refrigerant CFC-12 with isobutane and foam blowing agent CFC-11 with cyclopentane in the manufacture of domestic refrigerators and chest freezers at Light Industries Company
UNIDO	IVC/REF/57/INV/32	ODS phase out in 50 existing centrifugal chillers units
Spain	LAC/FUM/54/TAS/40	Technical assistance to introduce chemical alternatives in countries which have rescheduled methyl bromide phase out plan (Argentina and Uruguay)
UNIDO	MOZ/FUM/60/TAS/20	Technical assistance for the elimination of controlled uses of methyl bromide in soil fumigation
UNDP	PAK/ARS/56/INV/71	Plan for phase-out of CFCs in the manufacture of pharmaceutical MDIs
UNIDO	SYR/FUM/49/TAS/95	Methyl bromide national phase-out plan (soil fumigation)

Annex VI

PROJECTS FOR WHICH ADDITIONAL STATUS REPORTS WERE REQUESTED

Agency	Code	Project Title	Reasons
France	AFR/REF/48/DEM/36	Strategic demonstration project for accelerated conversion of CFC chillers in 5 African Countries (Cameroon, Egypt, Namibia, Nigeria and Sudan)	To request the submission of additional status reports to the 70th meeting to monitor the resolution of the financial mechanism and co-financing issues for Nigeria, Senegal and the Sudan by the 70th meeting as a milestone for achievement in order to avoid consideration of possible cancellation in those countries.
France	AFR/SEV/53/TAS/39	African customs enforcement networks for preventing illegal trade of ODS in the African sub-regional trade organizations (CEMAC, COMESA, SACU and UEMOA)	To request the submission of additional status reports to the 70th meeting to monitor the initiation of the action plan in order to avoid consideration of possible cancellation of the project.
IBRD	ARG/FUM/29/DEM/93	Demonstration project for testing methyl bromide alternatives in post-harvest disinfestation for cotton and citrus (phase I)	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting in order to monitor the preparation of the report.
IBRD	IDS/DES/57/PRP/187	Preparation for pilot demonstration project on ODS waste management and disposal	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting on the status of completion of the report on ODS destruction and ODS disposal preparatory activities.
IBRD	PHI/DES/57/PRP/85	Preparation for pilot demonstration project on ODS waste management and disposal	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting on the status of completion of the report on ODS destruction and ODS disposal preparatory activities.
Japan	AFR/REF/48/DEM/35	Strategic demonstration project for accelerated conversion of CFC chillers in 5 African Countries (Cameroon, Egypt, Namibia, Nigeria and Sudan)	To request the submission of additional status reports to the 70th meeting to monitor the resolution of the financial mechanism and co-financing issues for Sudan by the 70th meeting as a milestone for achievement in order to avoid consideration of possible cancellation in those countries.
Japan	ASP/DES/54/PRP/53	Project preparation for a demonstration project on ODS disposal	To request the submission of additional status reports to the 70th meeting to monitor the preparation of a demonstration project on ODS disposal in the Asia and Pacific Region, if the request for funding is not submitted to the 70th meeting.
Japan	COL/FOA/60/DEM/75	Demonstration project to validate the use of super-critical CO_2 in the manufacture of sprayed polyurethane rigid foam	To request the submission of additional status report to the 70th meeting to monitor the completion of this project if it had not been completed by the 70th meeting.
UNDP	BHU/PHA/63/INV/17	HCFC phase-out management plan (first tranche)	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor: (a) progress in implementing the HPMP, which had been approved over one year previously and for which no disbursement had been recorded; (b) delays in signing project documents/letters of agreement.

Agency	Code	Project Title	Reasons
UNDP	BRA/REF/47/DEM/275	Demonstration project for integrated management of the centrifugal chiller sub-sector, focusing on application of energy-efficient CFC-free technologies for replacement of CFC-based chillers	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor projects due to low rates of disbursement of approved funds.
UNDP	CUB/DES/62/DEM/46	Pilot demonstration project on ODS waste management and disposal	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor projects due to low rates of disbursement of approved funds.
UNDP	DOM/HAL/51/TAS/39	National halon bank management plan update	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor projects due to low rates of disbursement of approved funds.
UNDP	IND/DES/61/PRP/437	Preparation of a project for demonstration of a sustainable technological, financial and management model for disposal of ODS	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor projects due to low rates of disbursement of approved funds.
UNDP	IRA/PHA/63/INV/204	HCFC phase-out management plan (stage I, first tranche) (foam sector plan: one foam systems house)	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor progress in implementing the HPMP, which had been approved over one year previously.
UNDP	STK/PHA/56/INV/13	Terminal CFC phase-out management plan (second and third tranches)	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting on project progress.
UNEP	ALG/SEV/57/INS/69	Extension of the institutional strengthening project (phase V)	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor the signature of the new agreement for the IS project and implementation progress.
UNEP	ECU/PHA/61/TAS/48	National CFC phase-out plan (third tranche)	To request the submission of additional status report to the 70th meeting to monitor the project progress and the disbursement rates of approved funds.
UNEP	ECU/PHA/61/TAS/50	National CFC phase-out plan (fourth tranche)	To request the submission of additional status report to the 70th meeting to monitor the project progress and the disbursement rates of approved funds.
UNEP	ECU/PHA/61/TAS/52	National CFC phase-out plan (fifth tranche)	To request the submission of additional status report to the 70th meeting to monitor the project progress and the disbursement rates of approved funds.
UNEP	GAB/PHA/62/TAS/26	HCFC phase-out management plan (stage I, first tranche)	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor HPMP implementation progress.
UNEP	GUA/FUM/59/TAS/39	National phase-out of methyl bromide (phase II, first tranche)	To request the submission of additional status report to the 70th meeting to monitor the project progress and the disbursement rates of approved funds.
UNEP	HAI/SEV/59/INS/16	Extension of the institutional strengthening project (phase III)	To request the submission of additional status report to the 70th meeting to monitor the Implementation of the revised plan of activities for the IS project.
UNEP	MAU/PHA/55/PRP/20	Preparation of a HCFC phase-out management plan	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor HPMP project preparation activity, if the project was not submitted to the 70th meeting.

Agency	Code	Project Title	Reasons
UNEP	MAU/SEV/49/INS/17	Renewal of institutional strengthening project (phase IV)	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting in order to monitor this institutional strengthening project implementation
UNEP	MOR/SEV/59/INS/63	Renewal of the institutional strengthening project (phase IV)	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting on project document signature for institutional strengthening.
UNIDO	CPR/REF/53/INV/453	Refrigeration servicing sector CFC phase-out plan (fourth tranche)	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor the delivery and distribution of equipment.
UNIDO	CPR/REF/59/INV/490	Refrigeration servicing sector CFC phase-out plan (sixth tranche)	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor the delivery and distribution of equipment.
UNIDO	ERI/PHA/63/INV/09	Terminal phase-out management plan for CFCs (second tranche)	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor the delivery and distribution of equipment.
UNIDO	ETH/FUM/54/PRP/18	Project preparation in the fumigant sector (flowers)	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting in order to monitor the project preparation in case the project is not submitted to the 70th meeting.
UNIDO	LIB/FOA/63/PRP/33	Preparation for HCFC phase-out investment activities (polyurethane foam component)	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor project document preparation, if not submitted to the 70th meeting.
UNIDO	LIB/PHA/45/INV/25	National ODS phase-out plan: 2nd tranche	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor project with issues related to delays in the implementation of the TPMP due to the political and/or security situation in this country.
UNIDO	LIB/PHA/54/INV/28	National ODS phase-out plan: 3rd tranche	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor project with issues related to delays in the implementation of the TPMP due to the political and/or security situation in this country.
UNIDO	LIB/PHA/55/PRP/29	Preparation of a HCFC phase-out management plan	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor project preparation of projects, if not submitted to the 70th meeting.
UNIDO	LIB/PHA/63/PRP/32	Preparation of a HCFC phase-out management plan (additional funding)	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor project preparation of projects, if not submitted to the 70th meeting.

Agency	Code	Project Title	Reasons
UNIDO	MEX/ARS/63/INV/156	Phase-out of HCFC-22 and HCFC-141b in aerosol manufacturing at Silimex	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor procurement of the equipment for the project.
UNIDO	MEX/MUS/58/PRP/146	Preparation for HCFC phase-out investment activities (aerosol and solvent sectors)	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor project preparation of projects, if not submitted to the 70th meeting.
UNIDO	MOZ/FUM/60/TAS/20	Technical assistance for the elimination of controlled uses of methyl bromide in soil fumigation	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor the disbursement rates of approved funds.
UNIDO	QAT/SEV/59/INS/15	Renewal of institutional strengthening project (phase III)	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting: (a) on project document signature for institutional strengthening; (b) to monitor progress of the institutional strengthening project.
UNIDO	SAU/FOA/62/INV/11	Phase-out of HCFC-22 and HCFC-142b from the manufacture of extruded polystyrene panel at Line #2 in Arabian Chemical Company	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor the project progress and the disbursement rates of approved funds.
UNIDO	SAU/FOA/62/INV/13	Phase-out of HCFC-22 and HCFC-142b from the manufacture of extruded polystyrene panel at Al-Watania Plastics	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor the project progress and the disbursement rates of approved funds.
UNIDO	SYR/PHA/58/INV/99	National CFC phase-out plan (third tranche)	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor project with issues related to delays in the implementation of the TPMP due to the political and/or security situation in this country.
UNIDO	SYR/REF/62/INV/103	Phase-out of HCFC-22 and HCFC-141b from the manufacture of unitary air-conditioning equipment and rigid polyurethane insulation panels at Al Hafez Group	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting on project progress.
UNIDO	TUN/FOA/58/PRP/50	Preparation for HCFC phase-out investment activities (polyurethane foam sector)	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor project document preparation, if not submitted to the 70th meeting.
UNIDO	TUN/PHA/55/PRP/48	Preparation of a HCFC phase-out management plan	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor project preparation of projects, if not submitted to the 70th meeting.
UNIDO	URU/REF/60/PRP/55	Preparation for HCFC phase-out investment activities (refrigeration manufacturing sector)	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor project document preparation, if not submitted to the 70th meeting.

Agency	Code	Project Title	Reasons
UNIDO	YEM/PHA/55/INV/28	National ODS phase-out plan (first tranche)	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor project with issues related to delays in the implementation of the TPMP due to the political and/or security situation in this country.
UNIDO	YUG/PHA/51/INV/31	National CFC phase-out plan (third tranche, transferred from Sweden)	To request, for the third consecutive meeting, the submission of additional status report to the 70th meeting to monitor the disbursement rates of approved funds.

Annex VII

PROJECTS FOR WHICH ADDITIONAL STATUS REPORTS WERE REQUESTED FOR HPMP DEVELOPMENT

Agency	Project Number	Project Title	Reasons
UNEP	MAU/PHA/55/PRP/20	Preparation of a HCFC phase-out management plan	To request the submission of additional status report to the 70th meeting in order to monitor the submission of the HPMP if HPMP not submitted to the 70th meeting

Annex VIII

PROJECTS WITH SPECIFIC REPORTING REQUIREMENTS

Code	Agency	Project Title	Reasons
ALG/FOA/62/INV/75	UNIDO	Phase-out of HCFC-141b at Cristor (domestic refrigeration foam)	No additional status report
ARG/REF/61/INV/164	UNIDO	Phase-out of HCFC-22 in the RAC manufacturing sector	To request additional status report to the 70th meeting on ways forward to fund shortfall and a revised implementation schedule.
BGD/FOA/62/INV/38	UNDP	Phase-out of HCFC-141b at Walton Hi-Tech Ind. Ltd.	To request the submission of the final report on estimated and actual ICC and IOC, including information on the necessary co-financing expected from the enterprise in line with decision 55/43(b) by the 70th meeting.
COL/FOA/60/INV/76	UNDP	Phase-out of HCFCs to hydrocarbons at Mabe Colombia, Industrias Haceb, Challenger and Indusel S.A.	No additional status report
CPR/REF/60/DEM/498	UNDP	Phase-out of HCFC-22 in the commercial air-source chillers/heat pumps at Tsinghua Tong Fang Co.	To request a detailed report to be submitted with next request for a tranche of the ICR sector plan in China
CPR/REF/60/DEM/499	UNDP	Phase-out of HCFC-22 in the manufacture of two stage refrigeration systems at Yantai Moon Group Co. Ltd.	To request a detailed report to be included with next request for a tranche of the ICR sector plan in China
CPR/REF/61/DEM/502	UNIDO	Phase-out of HCFC-22 in the manufacturing of RACs at Midea and conversion of RAC compressors at Meizhi	To request a detailed report or, if not possible, an update to the 71st meeting
CPR/REF/61/DEM/503	UNIDO	Phase-out of HCFC-22 in the manufacturing of RACs at Midea and conversion of RAC compressors at Meizhi	To request a detailed report or, if not possible, an update to the 71st meeting
CUB/DES/62/DEM/46	UNDP	Pilot demonstration project on ODS waste management and disposal	To request a status report to the 72nd meeting, providing information on amounts destroyed as at December 2013, and other progress of project implementation.
Ecuador	UNEP	NPP verification reports for 2009 and 2010	No additional status report
EGY/FOA/62/INV/104	UNIDO	Phase-out of HCFC-141b from manufacturing of polyurethane foam at Mondial Freezers Company	To request the submission of the final report on estimated and actual ICC and IOC, including information on the necessary co-financing expected from the enterprise in line with decision 55/43(b) by the 70th meeting.
EGY/FOA/62/INV/105	UNDP	Conversion from HCFC-141b to n-pentane in the manufacture of polyurethane rigid insulation foam panels at MOG for Engineering and Industry	To request the submission of the final report on estimated and actual ICC and IOC, including information on the necessary co-financing expected from the enterprise in line with decision 55/43(b) by the 70th meeting.

Code	Agency	Project Title	Reasons
EGY/FOA/62/INV/106	UNDP	Conversion from HCFC-141b to methyl formate in the manufacture of polyurethane rigid insulation foam for water heaters at Fresh Electric for Home Appliances	To request a progress report on the status of the re-bidding process, including a preliminary analysis on estimated and actual (based on the selected bid) ICC and IOC by the 70th meeting
EGY/FOA/62/INV/107	UNDP	Conversion from HCFC-141b to methyl formate in the manufacture of polyurethane spray foams at Specialized Engineering Contracting Co.	To request the submission of the final report on estimated and actual ICC and IOC, including information on the necessary co-financing expected from the enterprise in line with decision 55/43(b) by the 70th meeting.
EGY/FOA/62/INV/108	UNDP	Conversion from HCFC-141b to n-pentane in the manufacture of polyurethane rigid insulation foam panels at Cairo Foam	To request the submission of the final report on estimated and actual ICC and IOC, including information on the necessary co-financing expected from the enterprise in line with decision 55/43(b) by the 70th meeting (note: the information could be provided by UNDP technical implementation team).
EGY/FOA/62/INV/110	UNIDO	Phase-out of HCFC-141b from manufacturing of polyurethane foam at El-Araby Co. for Engineering Industries	To request the submission of the final report on estimated and actual ICC and IOC, including information on the necessary co-financing expected from the enterprise in line with decision 55/43(b) by the 70th meeting.
GHA/DES/63/DEM/33	UNDP	Pilot demonstration project on ODS waste management and disposal	To request a status report to the 72nd meeting, specifically to report on the implementation of the GEF component, and further details on amounts destroyed, etc.
JOR/REF/60/INV/86	UNIDO	Phase-out of HCFC-22 and HCFC-141b at Petra Co.	To request additional status report or, if not possible, an update to the 71st meeting
KYR/PHA/55/TAS/19	UNEP	TPMP verification	No additional status report
MEX/FOA/59/INV/148	UNDP	Phase-out HCFC-141b at Mabe Mexico	No additional status report
MOR/FOA/62/INV/67	UNIDO	Phase-out of HCFC-141b at Manar (domestic refrigeration foam)	To request additional status report on ICC for awarded contract to the 71st meeting if not submitted by then
PAK/FOA/60/INV/77	UNIDO	Phase-out of HCFC-141b in the manufacture of PU foams at United Refrigeration, HNR, Varioline Intercool, Shadman Electronics and Dawlance	No additional status report
PHI/FOA/62/INV/90	UNIDO	Sector plan for the phase-out of HCFC-141b in the foam sector	To request additional report on individual HCFC demonstration and investment projects approval clause to report on ICC, IOC and technology application in line with decision 55/43(b) for submission to the 69th meeting including a table with the estimated and actual costs of the major pieces of equipment for each of the 10 enterprises

Code	Agency	Project Title	Reasons
PHI/FOA/62/INV/91	Japan	Sector plan for the phase-out of HCFC-141b in the foam sector	To request additional report on individual HCFC demonstration and investment projects approval clause to report on ICC, IOC and technology application in line with decision 55/43(b) for submission to the 70th meeting based on the anticipated completion date of the project.
SAU/FOA/62/INV/11	UNIDO	Phase-out of HCFC-22 and HCFC-142b in the manufacturing of XPS foams at Arabian Chemical Company	No additional status report
SAU/FOA/62/INV/12	Japan	Phase-out of HCFC-22 and HCFC-142b in the manufacturing of XPS foams at Al Watania Plastics and Arabian Chemical Company	To request additional report on individual HCFC demonstration and investment projects approval clause to report on ICC, IOC and technology application in line with decision 55/43(b) for submission to the 69th meeting based on the anticipated completion date of the project.
SAU/FOA/62/INV/13	UNIDO	Phase-out of HCFC-22 and HCFC-142b in the manufacturing of XPS foams at Al Watania Plastics	No additional status report
SAU/FOA/62/INV/14	Japan	Phase-out of HCFC-22 and HCFC-142b in the manufacturing of XPS foams at Al Watania Plastics and Arabian Chemical Company	To request additional report on individual HCFC demonstration and investment projects approval clause to report on ICC, IOC and technology application in line with decision 55/43(b) for submission to the 69th meeting based on the anticipated completion date of the project.
SUD/FOA/62/INV/28	UNIDO	Phase-out of HCFC-141b in the manufacture of PU foams at Modern, Amin, Coldair and Akabadi	No additional status report
SYR/REF/62/INV/103	UNIDO	Phase-out of HCFC-22 and HCFC-141b at Al Hafez Co.	To request detailed report or, if possible, a full report to the 73rd meeting
TUR/FOA/62/INV/97	UNIDO	Phase-out of HCFC-141b in the PU foam sector and phase-out of HCFC-22 and HCFC-142b in the XPS foam sector	To request the submission of the final report on estimated and actual ICC and IOC, including information on the necessary co-financing expected from the enterprises in line with decision 55/43(b) by the 71st meeting.
Saudi Arabia	UNIDO	Verification report on CFCs, CTC, TCA and halons for the years 2009 and 2010, and the full implementation report on the national ODS phase-out plan	To request a status report to the 70th meeting on the preparation of the 2009/2010 verification report for CFCs, CTC, TCA and halons, and the implementation report on the national ODS phase-out plan, if not submitted by then
Zambia	UNEP	TPMP Verification Report	No additional status report

Code	Agency	Project Title	Reasons
Detailed specific status reports			
BRA/PHA/50/INV/278	UNDP	National CFC phase-out plan	To request additional report to the 71st meeting if no PCR has been received by then
BRA/PHA/53/INV/280	UNDP	National CFC phase-out plan	To request an additional report to the 71st meeting if no PCR has been received by then
BRA/PHA/56/INV/284	UNDP	National CFC phase-out plan	To request additional report to the 71st meeting if no PCR has been received by then
BRA/PHA/59/INV/293	UNDP	National CFC phase-out plan	To request additional report to the 71st meeting if no PCR has been received by then
COL/FOA/60/DEM/75	Japan	Pilot Supercritical CO_2 in spray foam	To request the Government of Japan to submit the final report of the demonstration project taking into consideration the additional information requested in document UNEP/OzL.Pro/ExCom/69/5 to the 70th meeting
Democratic People's Republic of Korea	UNIDO	CTC phase-out plan	Not applicable (additional specific status report to be decided by Excom)
Haiti project implementation	UNEP	Actions taken for projects to improve training components and funds transfer and to provide sufficient technical advice for technology decision making	To request UNEP to provide an update on (a) the production and submission of financial and activity report and (b) the signature of the new IS agreement for Haiti that will enable the release of funds balance.
Reports on resource mobilization activities	UNEP	To provide Secretariat recommendations to the 69th meeting on criteria identified in the final reports that could facilitate consideration of whether to engage in a short-term pilot scheme for mobilization of financing for non-eligible projects	Not applicable

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INTERIM REPORT FROM UNEP ON PROJECT ON RESOURCE MOBILIZATION TO ADDRESS CLIMATE CO-BENEFITS FOR HCFC PHASE-OUT IN LVC COUNTRIES WITH SERVICING SECTOR ONLY

18 February 2013

1. This report is in response to Decision 63/22 (a), which approved funding at the level of US$ 100,000, plus agency support costs of US$ 13,000 for UNEP, for a study on financing options, regional workshops on co-financing, and/or one or more pilot applications of co-financing for one or more low-volume-consuming countries with an approved HCFC phase-out management plan, to be funded as resource mobilization activities.

2. That decision requested UNEP to provide a final report for consideration by the Executive Committee at its 69th meeting. It also requested UNEP to ensure that the regional workshops were held in the context of the network meetings under UNEP's CAP so as to ensure cost-effectiveness, and that the timing of the workshops *would be such to allow the experiences of other agencies' resource mobilization activities to be incorporated*.

3. Given that the other agencies' resource mobilization projects were recently concluded, and that the agencies will provide their final reports to the 69th Executive Committee meeting, UNEP proposes to use the Main Meetings of the Regional Networks in 2013 to facilitate the sharing of the agencies' experiences with National Ozone Units. Accordingly, the present report should be considered an interim and not a final report from UNEP on its resource mobilization project.

Study on financing options

2. To date, UNEP has made the following progress with relation to the study component of the project:

- US$ 20,000 of the project funds have been programmed for the study component.
- A Terms of Reference for the study has been prepared.
- A consultant with appropriate international experience related to multilateral environmental agreements, LVCs and resource mobilization has been identified and UNEP is finalizing the administrative procedures to retain her.
- UNEP is in the process of identifying the members of the quality review team.
- CAP staff have conducted initial background research on co-financing issues, including existing documentation of the experiences of other agencies' resource mobilization activities. CAP's internal learning process in this area is ongoing.

Regional workshops on co-financing

3. To date, UNEP has made the following progress with relation to the regional workshop component of the project:

- US$ 80,000 of the project funds have been allocated for the workshop component and provided to the regional CAP teams.
- Internal discussions are underway within CAP to identify common agenda elements, workshop methodology, and key participants to invite to ensure a certain level of standardization and comparability across regions.
- The CAP teams are scheduling the regional workshops on co-financing in the context of the Regional Network meetings planned for 2013. As of today, the Main Network meetings are planned for:
  - Main Meeting of the West Asia Network of Ozone Officers, Bahrain, May 2013 (to be confirmed).
  - Joint Meeting of Pacific Island Countries (PIC), South Asia and South East Asia (SEAP) Networks of Ozone Officers, Gold Coast, Australia, 6-9 May 2013.
  - Annual Meeting of the ECA Network of Ozone Officers, Ohrid, FYR Macedonia, 21-23 May 2013.
  - Meeting of the Central America, South America and Spanish-speaking Caribbean Networks of Ozone Officers, Bogota, Colombia, 11-14 June 2013.
  - Joint Meeting of the English-Speaking and French-Speaking Africa Networks of Ozone Officers, Accra, Ghana, 23-26 September 2013.
- An initial roster of potential invitees/partners for the workshops has been developed, drawing on multilateral and regional financing mechanisms, carbon finance experts in the private sector, other private sector organizations. UNEP is continuing to expand this list.

RESOURCE MOBILIZATION FOR CLIMATE CO-BENEFITS
Final Report

Introduction

Through Decision 63/20, the Executive Committee approved US$ 200,000 plus agency fees for UNDP, for the preparation of four pilot demonstration projects in the refrigeration and air-conditioning manufacturing sector to examine technical interventions to improve energy efficiency, national policy and regulatory measures to sustain such interventions in order to maximize the climate impact of HCFC phase-out, to be funded as resource mobilization activities on the following conditions:

(i) That UNDP inform the Executive Committee of the four proposals specified above no later than the 67th meeting, noting that this would be submitted for information only and that these proposals would not be funded under the Multilateral Fund;

(ii) That an interim report would be provided at the 66th meeting, which would include an update on the activities so far undertaken and address the following elements:

a. Additionality of the projects proposed;
b. Transparency and good governance, as well as covering the cash flow;
c. Assurance that these projects would avoid perverse incentives for countries;
d. Exploring possibilities of profit-sharing, including return of funds to the Multilateral Fund;
e. Ensuring sustainability of the projects proposed;
f. Avoidance of duplication of similar projects;
g. Information on transaction costs.

UNDP submitted an interim report to the 66th ExCom meeting, providing an update on the progress on this project, and through Decision 66/15 (l) UNDP submitted an additional and more detailed report to the 67th ExCom meeting. At is 68th meeting the Executive Committee decided (Decision 68/4):

(i) To take note of the important information on resource mobilization provided in the desk study on the evaluation of chiller projects as presented in document UNEP/OzL.Pro/ExCom/68/10 and noted in paragraphs 48 to 54 of the present report [i.e. 68th ExCom report];

(ii) To request that UNDP, UNEP, UNIDO and the World Bank take into account the information provided in the desk study, where relevant, and incorporate such information in the final reports on resource mobilization for climate co-benefits to be presented to the 69th meeting in the context of the terms of reference set out in decisions 63/20, 63/22, 63/23 and 63/24;

(iii) To request the Secretariat, in its review and summary of the final reports, to include an elaboration of the elements called for in the decisions of the 63rd meeting of the Executive Committee, in consultation with the respective implementing agency, and to provide its recommendations to the 69th meeting on criteria identified in those final reports that could facilitate consideration of whether to engage in a short-term pilot scheme for mobilization of financing for non-eligible projects.

Background

The peak timeframe for implementation of HPMP Stage-I in A5 countries is during 2012-2015. During the implementation of HCFC phase-out in enterprises/sub-sectors/sectors involved in HPMP Stage-I, there is a unique window of opportunity to phase-in alternative technologies that are low-GWP, safe, cost-effective and energy-efficient, and thus maximize climate benefits of HCFC phase-out in HPMP Stage-I and beyond. This window is narrow and needs to be fully leveraged, because the enterprises would already be in the process of plant/process modifications during HCFC phase-out, and they may be reluctant to carry out plant/process modifications again/frequently. In the Air Conditioning and Refrigeration Sectors, additional opportunities exist for maximizing climate benefits through energy-efficiency enhancements, because of the intense energy use by the equipment, which contributes 60-90% to the lifecycle emissions.

Technical interventions needed to achieve additional climate benefits such as energy-efficiency enhancements, outside of the objective of phasing out HCFCs, may not be eligible for funding from the MLF.

Taking the above into account, UNDP has sought to mobilize resources from bilateral and multilateral sources as well as the private sector, which would be applied at the enterprise/sub-sector/sector level, to achieve/maximize climate benefits, beyond those that would be normally available through funding for HCFC phase-out alone.

The expected outcome of the funding approved for UNDP for resource mobilization, was the development of four concrete proposals, demonstrating the maximization of climate benefits during HCFC phase-out. It may be noted that preparing such proposals is meaningful only if the corresponding financing for the proposals is also mobilized, to ensure resources to successfully implement these proposals, and serve as an example of how such projects could be replicated in future.

Update on UNDP's Resource Mobilization for Climate Co-Benefits

The following provides a summary of UNDP's efforts to date:

1. US Department of State

   US$ 1.7 million including agency fees was mobilized from US Department of State under its Global Climate Change Initiative, to carry out technology demonstrations for low-GWP and energy-efficient alternative technologies, at select enterprises in selected sectors/sub-sectors in the Asia-Pacific region. Funds have already been received by UNDP. The planned five sub-projects cover the following:

Country	Sector/sub-sector	Baseline	Technology
India	Polyurethane Foams (Rigid)	HCFC-141b/HC	HBA-2/FEA-1100/AFA-L1
	Commercial Refrigeration	HCFC-22/Energy-efficiency	R-290/R-600a
Indonesia	Commercial Air Conditioning	Energy efficiency	Compressors, fans, heat exchangers
Malaysia	Polyurethane Foams	HCFC-141b/HC	HBA-2/FEA-1100/AFA-L1
	Commercial Refrigeration	HCFC-22/Energy-efficiency	R-290/R-600a and compressors, fans and heat-exchangers

   In addition to the technology demonstrations, following are the expected additional outcomes:

- Options for policies and regulations for sustaining technical interventions
- Recommendations for accounting of climate benefits
- Establishing benchmarks for costs and implementation timeframes

The overall project work plan comprises of the following key milestones:

Until 3Q 2013:	Preparatory work (host country agreements, enterprise-level agreements)
Until 3Q 2014:	Enterprise-level technology demonstrations
Until 4Q 2014:	Compilation of results and supplementary interventions

2. Global Environment Facility (GEF)

In collaboration with UNDP's GEF-Climate Change Mitigation team, a proposal was developed and submitted to GEF, for energy-efficiency enhancements in the Air Conditioning and Refrigeration Sectors in Indonesia. The proposal, under GEF's climate change focal area, and within Indonesia's STAR allocation, has a projected grant funding of about US$ 5 million.

Indonesia plans to phase-out HCFC consumption in manufacturing in these two sectors, as part of its HPMP Stage-I. This project includes technical and policy interventions, which would enable the Indonesian government and industry to enhance energy-efficiency of air conditioning and refrigeration equipment, contributing to Indonesia's voluntary CO_2 emission reduction targets by 2020. The key element of the proposal is that the same stakeholders who would participate in Indonesia's HPMP Stage-I, would receive additional assistance to achieve higher energy-efficiencies in their products. The HPMP Stage-I funding for these sectors, has been shown as concrete co-financing for the GEF proposal.

The proposal is technically cleared by GEF Secretariat and included in the next IWP of the GEF for Council approval.

3. Other bilateral and private sector partnerships

UNDP is pursuing mobilization of financing for energy-efficiency improvements and low-GWP alternatives from other bilateral donors.

UNDP is also in extensive engagement with private sector technology providers in the Foams, Air Conditioning and Refrigeration sectors, to precipitate additional investments for low-GWP and energy-efficient alternatives, through their subsidiaries in A5 countries.

Compliance with other provisions of Decision 63/20

Additionality of the proposed projects

The proposed projects specifically target outcomes that are additional to the HCFC phase-out objectives, either through use of further/emerging low-GWP alternatives or through achieving energy-efficiency enhancements or both, which are not normally eligible or funded by MLF.

Transparency, good governance and covering cash flow

The funds mobilized would be managed and utilized in accordance with UNDP's rules and procedures and consistent with the agreements with the relevant donors. These funds would be accounted for and reported distinctly from MLF funds. It is not expected that the funding mobilized would be adequate to

cover all costs, and therefore co-financing commitments from the participating enterprises to the extent necessary would be obtained.

The MLF funding provided to UNDP will be utilized for developing the proposals and for mobilization of additional financing, for covering costs and overheads that are additional to UNDP's normal work under the MLF.

Avoiding perverse incentives

The technical and other outcomes for the sub-projects are clearly defined. The funds mobilized would be disbursed to the participating enterprises and/or other beneficiaries through performance-based agreements, with clear milestones, indicators and targets. The diligence as required in the agreements with donors will be duly carried out.

Profit-sharing and return of funds to MLF

The purpose of these resource mobilization efforts is to provide a guide/template on how such projects with multiple objectives and sources of financing can be developed and implemented. None of these projects envisage any revenue generation or profits. None of the external resources mobilized as a result of this effort, can be returned to the MLF. If there are any unutilized funds from the original US$ 200,000 provided by MLF, then these could be returned to MLF under the normal terms of agreement between UNDP and MLF.

Ensuring sustainability

Due diligence has been and will be carried out to ensure that the selected beneficiaries are technically and financially sound. It is also expected that co-financing from beneficiaries would be needed for most of the interventions planned. This will ensure sustainability.

Avoidance of duplication of similar projects

UNDP has taken care to ensure that the sub-projects and beneficiaries are selected where UNDP already has a clear mandate to work in the specific sectors/sub-sectors in context of the HPMP Stage-I in the relevant countries. UNDP will also ensure that overlaps with other similar initiatives from different sources of financing are avoided.

Further, Decision 63/20 is specific to UNDP and overlaps with other agencies in this regard, are not envisaged. UNDP will however be ready to coordinate with other agencies to avoid any duplication of efforts.

Information on transaction costs

Information on transaction costs would be available only upon completion of the sub-projects. The expected completion of these projects would be by end-2014.

Compliance with Decision 68/4 (ii)

At is 68th meeting the Executive Committee decided:

(ii) To request that UNDP, UNEP, UNIDO and the World Bank take into account the information provided in the desk study, where relevant, and incorporate such information in the final reports on

resource mobilization for climate co-benefits to be presented to the 69th meeting in the context of the terms of reference set out in decisions 63/20, 63/22, 63/23 and 63/24;

It is important to note that the Executive Committee approved funds for UNDP "for the preparation of four pilot demonstration projects in the refrigeration and air-conditioning manufacturing sector to examine technical interventions to improve energy efficiency, national policy and regulatory measures to sustain such interventions in order to maximize the climate impact of HCFC phase-out.

The following lessons learnt applied to the kind of projects funded for UNDP, as follows:

1- The ability to mobilize external resources

The approach used to mobilize resources is in line with what was used for Chillers demonstration projects, where there was acceptance that (as per para 95 ExCom 68/10) counterpart and ODA grant co-financing options should be pursued where quick results are needed".

In the specific case of the 4 pilots under implementation, the approach used to mobilize resources was to engage with the following partners/mechanisms:

A) Private sector: HPMP implementation was already requiring substantive co-finance from private sector in developing countries, even for eligible components, due to agreed level of funding for the Stage I HPMP. Therefore it was of utmost importance we identified other sources of funding to cover of design changes in for instance conversion lines to cover for additional costs for climate related interventions.

B) GEF: While GEF has proven to be a key partner regarding the mobilization of additional resources for maximization of climate benefits, lessons learnt from Chillers submissions to the GEF indicated that it is necessary to have project cycles to be somehow synchronized as to avoid long delays in funding (with loss of co-financers and lack of interest of clients in developing countries). In average, GEF project cycle from preparation until CEO endorsement may take 3 to 8 years, depending on many factors, including but not limited to GEF availability of resource to respond to large pipeline of climate mitigation projects, including from previous replenishment cycles. If synchronized and depending on the will of different partners, the duration can be substantially reduced and MLF funds for HPMPs can be used as the source of co-finance required by GEF.

C) Bilateral Assistance: As per the report on lessons learnt from Chillers, UNDP agrees that " because of their short processing time, and relatively quick on-the–ground results, the counterpart and ODA grant co-finance options lend themselves more easily to situations where early results are needed (for example meeting eminent phase-out deadlines)".While the size of the assistance approved/required for pilot projects was limited, the results of resource mobilization via bilateral grant funding were good and funds were available quicker and implementation could start with no delay.

2. The potential to replicate the model used to other countries.

UNDP looked at the extent to what those projects can be replicated in the absence of additional resources from the Multilateral Fund. While there are common denominators, the interventions maybe quite different as the partners dealing with HCFC phase-out in sector plans in manufacturing sectors are quite different than companies and building owners dealing with chillers related demonstration projects.

The identification and sequencing of different sources of funds is something UNDP is experienced to do, with different funding sources in different areas. The challenge is to synergize among different funding mechanisms as to ensure funding is available when the country/company needs to make the necessary change. For that, the bilateral assistance has proven faster and more reliable, with fewer interventions from external bodies, and their decisions. The limitation is of course the volume of resources if replication is required at larger scale.

The option for co-finance through innovative funding arrangements indeed has a greater potential to generate a significant additional funding, but the complexity of such arrangements, while possible to generate as a model and replicate as such, have been proven difficult to implement on time for the required compliance of countries.

Any requests by the Executive Committee to continuously monitor and report on the implementation of projects approved by other funding mechanisms/sources (which fall out of the purview of the MLF), presents a big challenge.

In response to the Executive Committee decision on this matter, Secretariat has exchanged ideas with UNDP and requested further clarification of points in the Report. UNDP has added these exchanges as an Annex of our Report as it finds it to be more effective in enhancing the understanding of the Executive Committee members.

ANNEX: UNDP RESPONSES TO MLF SECRETARIAT COMMENTS ON UNDP FINAL REPORT ON RESOURCE MOBILIZATION FOR MAXIMIZATION OF CLIMATE CO-BENEFITS

1. ***Secretariat:*** *Could you please give us an overall idea on how the resources provided under the project (US$200,000) allowed UNDP to mobilize the resources indicated in the report (i.e. US$1.7 million from the US and possible Indonesia project)? Please consider whether such additional resources could have been made available to UNDP without this funding support, and kindly provide a brief explanation why or why not?*

   UNDP Response: The funds approved in the project were akin to project preparation costs and have been utilized to cover the incremental costs of staff time and travel, over and above their normal MP duties. In addition, the funds also covered incremental direct costs, such as workshops and meetings. Since UNDP MPU is a self-sustaining unit financed by MLF, which does not receive core funding from UNDP management, there was no other way that such additional resources could have been funded, except through external sources such as MLF, with a clearly defined purpose.

2. ***Secretariat:*** *In order for the Secretariat to have a better understanding of how the funding provided was used for and provide this same information to the Executive Committee, could UNDP please furnish some explanation on how these funds were used, taking into account that in the approval at the 63rd Meeting, the budget was envisaged for Technical experts/travel costs/DSA (US $50,000 per project proposal)? The Secretariat would like to understand through the utilization of funds whether these could be considered an additional transaction or administrative cost that could contribute to a more sustainable resource mobilization exercise in future that could be taken into account when looking at the agencies' costs.*

   UNDP Response: As explained in the response to the previous para, the funds were/are being utilized for the following:
   (a) Costs of MPU staff time over and above their normal MP duties
   (b) Costs of MPU staff travel over and above the normal MP budgets/needs
   (c) Costs of arranging meetings/workshops in several locations including the three countries

(d) Costs of technical experts including time and travel

The above costs are incremental to the "business-as-usual" scenario where only the core MP objectives of ODS phase-out are funded through agency fees and core unit costs. In most of the projects we have mentioned, energy-efficiency enhancements form bulk of the co-benefits and are not eligible for funding under MLF. Thus the costs of preparing projects dealing with energy-efficiency enhancements are incremental to ODS phase-out alone. UNDP does not favour any idea regarding these costs being part of current fees system as we strongly believe the above costs are over and above the normal MP needs.

3. ***Secretariat****: The Secretariat also noted the need for a further analysis in the final report of the process of mobilizing resources undertaken by UNDP, and would like to have a better understanding of the following aspects:*

- *New approaches taken, if any. Did UNDP consider similar approaches used in the past, for instance, that for the chiller project?*

  UNDP Response: As mentioned in the report above, while there are common denominators, the interventions maybe quite different as the partners dealing with HCFC phase-out in sector plans in manufacturing sectors are quite different than companies and building owners dealing with chillers related demonstration projects. The Chiller projects dealt with end-users/owners of ODS based equipment. The current projects are targeted to manufacturers of the equipment. The outcomes are different. So there is no prima facie similarity between these two types of interventions.

- *Lessons learned from past approaches and how these contributed to the current thinking adopted by UNDP*

  UNDP Response: The key commonality between past approaches and the current projects is to ensure that project beneficiaries are financially viable and sustainable. But this should be true for any project, whether MLF or outside MLF.

- *Some insight into UNDP's decision making process in selecting potential partners, for instance was it because of accessibility and closely linked objectives? Specifically, how did UNDP decide to work with the US and the GEF and not with other partners?*

  UNDP response: It is the other way round. UNDP was selected by the United States Government through their procurement process. Regarding the GEF, UNDP had the comparative advantage, because UNDP is the lead agency for the Indonesian HPMP and is implementing the phase-out in the Air Conditioning and Refrigeration Sectors. So the Indonesian government selected UNDP.

- *In addition to the above, what decision parameters were also used by UNDP in selecting the pilot countries where such projects could be undertaken?*

  UNDP Response: UNDP focused on countries, in which it was either the lead agency or was the agency responsible for implementing HCFC phase-out in the particular sector.

- *While the report briefly states that UNDP is pursuing mobilization of resources for energy-efficiency improvements and low GWP alternatives with other bilateral donors, could UNDP please elaborate even on brief bullet points what these potential initiatives are?*

UNDP Response: We have not yet decided the areas of intervention, nor is there any concrete progress in that direction to report. The potential bilateral donors could be Australia, Japan, etc., but even that is not in any way close to finalizing at this point.

- *Any other additional information that UNDP could provide would be really helpful.*
  UNDP Response: nothing else regarding the points mentioned.

4. ***Secretariat****: In looking at the different elements required by decision 63/20, the Secretariat noted that the current information under each element is quite generic and does not really provide clarity that is specific to this exercise, and would perhaps benefit from further clarification. Please note some ideas below:*
   UNDP Response: We don't agree with this assessment. Most of the elements described become applicable at best during or in most cases after the implementation stage of the projects.

   (a) With regards to the additionality of the proposed projects, did UNDP look at additionality with respect to the Multilateral Fund and the GEF, taking into account specific mandates and guidelines existing for each funding agency? For instance, under the MLF would the concept of resource mobilization meet the concept of additionality to resources also ready existing even if the money does not necessarily go to the MLF directly? It would be interesting to get your views on this aspect.

   UNDP Response: As mentioned in this Report, the proposed projects specifically target outcomes that are additional to the HCFC phase-out objectives, either through use of further/emerging low-GWP alternatives or through achieving energy-efficiency enhancements or both, which are not normally eligible or funded by MLF. "Additionality" this context is intended to mean no double dipping (funding for the same outcomes again). It is very clear that MLF funds agreed eligible incremental costs of phasing out ODS and does not fund any other costs. The projects for which we mobilized funding, target either energy-efficiency improvements and/or introducing lower GWP alternatives than those that were funded by MLF. There all these projects are clearly "additional" or incremental in terms of their outcomes.

   (b) In looking at the concept of perverse incentives, could this be a case where the funds mobilized could act as a "perverse incentive" that could potentially reduce overall contribution to the MLF and instead be diverted to "voluntary contributions" (like the mobilized resources)? Would this work the same way with other funding sources like the GEF also? You may recall that this was one of the concerns of a number of Article 5 countries during the discussion of resource mobilization at the last MOP, where many of them were concerned about a reduced MLF replenishment if donor countries can pay into a voluntary account that would include an ozone-climate benefit?

   UNDP Response: In UNDP's view, "Perverse incentives" is not meant the way the Secretariat seems to have interpreted, at least based on our understanding of the particular ExCom member's interventions. We understood the question being whether a project which receives funding in this manner, will revert back to the earlier technology after completion (since there is no legally binding international framework), and may be seek further funding for the same basic objective. The analogy is drawn from HFC-23 capture and destruction funding received by HCFC-22 producers under CDM, where there is a risk that after the end of the typical 10-year CDM contract, the producers might start releasing HFC-23 to the atmosphere again. Another example is to increase HCFC-22 production to increase release of HFC-23 to gain more CERs. From this perspective, our projects do not carry this risk, simply because increased energy-efficiency in products require plant modifications which are not reversible and market competition tends to make lower energy-efficiency products obsolete over time.

(c) As mentioned in para 2 above, the Secretariat is concerned about the sustainability not just of the specific projects where resources have been generated, but also the overall approach of resource mobilization. What are UNDP's views on how this exercise could be sustained? Would there be a need for a more institutionalised funding (i.e. with core unit costs) that could cover a continuing exercise within the agencies?

UNDP Response: On the first part of this question, as mentioned before, a key commonality between past approaches and the current projects is to ensure that project beneficiaries are financially viable and sustainable. But this should be true for any project, whether MLF or outside MLF.
Regarding the second part, on the overall approach of resource mobilization, UNDP's views are that more institutional funding is critical to the continuation and wider scale of the approach. Nevertheless, we strongly disagree that the additional finance should be part of the agency's fee system/ Core Unit budget. This exercise is above and beyond current agency fee component as agreed between the IA and the ExCom.

At the 21st MOP in Egypt and other meetings, including Executive Committee ones, UNDP has proposed "The Facility for Additional Income" (ODS Facility) as broader approach for the resource mobilization for climate benefits. Document UNEP/OzL.Pro/ExCom/58/49, refers to UNDP proposal. Regarding its relevance today, we still believe the ODS Facility could be quite applicable. It would obviously require some adjustments to the current reality. The argument for the ODS Facility remaining relevant is in our view two-fold:
(i) Funds are a good modality now. With the carbon offset markets (e.g. CDM) currently struggling with very low prices, quite a few policymakers are looking at fund-based approaches to performance-based payments for emission reductions. So, for example, the TOR of the green climate fund has the ability to make performance based payments (to complement the carbon market doing so). Basically funds can act as a bridge during this difficult market period, until 2020, when a new global agreement comes into place and hopefully markets can pick things up. Funds also have the ability to more accurately pay the real incremental cost of the action.
(ii) Sectoral approaches. The other big development in carbon finance is that there is more of a move to sector-wide, rather than project by project, approaches to mitigation. So if something like the ODS Facility was to come about, it could sponsor sector wide initiatives.

(d) The issue of avoiding the duplication of similar projects could somehow be linked to perverse incentives as well. The concern here was not merely an overlap with other agencies but a larger one that looked at the issue of possible double counting, where elements already funded would be funded elsewhere again. Could UNDP provide some views on this based on the recent experience?

UNDP response: UNDP cannot control this element. If some other funding agency chooses, for whatever reasons, to fund our beneficiaries again, then the responsibility is of that funding agency. From our side, we only incorporate language in our agreements that the beneficiary will not seek funding for this objective again.

(e) The issue of transaction costs had also been mentioned above. Could UNDP provide an explanation on how this exercise differed from the normal project preparation (PRP) exercise done under the MLF? Please take note of the response to para 2 above for this, to get a better understanding on the use of the funds, and how they will continue to be used (in case there are still some balances left).

UNDP response: In fact, this exercise does not differ much from the PRP exercise, except that instead of country specific PRPs as is the norm, this is a kind of global PRP. Regarding use of funds, please refer to our response under para 2.

5. *The Secretariat would also appreciate it if UNDP could draw some conclusions in a specific section of the final report on how successful (or not) was this exercise, how it had contributed to ensuring the consideration of climate co-benefits, how the process worked, etc, and what else needs to be done to make this more successful in the future.*

   UNDP Response: The indicator of successful utilization this funding (for resource mobilization for maximizing climate co-benefits), is the fact that resources have been actually mobilized (US bilateral, GEF, etc) for concrete projects, which are currently under approval/implementation. Without the funds allocated by the MLF, we would not have envisaged such results happening.

6. ***Secretariat****: The Secretariat also noted UNDP's efforts in responding to the information required in decision 68/4(ii).*

7. ***Secretariat:*** *As this is the final report of this project, it will be appreciated if all these elements could be compiled into a possible new version of this report so that it can be comprehensively presented to the Executive Committee. As you may be aware, one of the aspects of UNEP's work for resource mobilization would be to share with Article 5 countries (especially LVCs) the approaches taken by the other agencies and therefore a more comprehensive report would be very welcome.*

   UNDP Response: The report we are discussing currently, is UNDP's reporting to the ExCom on a specific project. It is our view that the kind of document the Secretariat is envisaging ("final or comprehensive report") should be a product of the MLF Secretariat, which can be used for information dissemination and knowledge sharing. Such a document can be produced as a result of an ExCom decision (after ExCom reviews, deliberates and acts on the current submission) requesting Secretariat and UNDP to jointly develop the document Secretariat is envisaging. According to us, this would be the appropriate procedure and we will be happy to collaborate with Secretariat on this work.

FINAL REPORT ON DEVELOPMENT OF PILOT PROPOSALS FOR POSSIBLE CO-FINANCING FOR HCFC ACTIVITIES, TO BE FUNDED AS RESOURCE MOBILIZATION ACTIVITIES

COUNTRY:	Global
PROJECT TITLE:	Conversion of HCFC-22 Based Facilities to Ozone and Climate Friendly Alternatives in the Fishing / Food Processing (Servicing) Sectors
SECTOR COVERED:	Replacement of existing industrial Refrigeration installations
TOTAL PROJECT COSTS:	USD 200,000 (excluding support costs)

69th ExCom Meeting

FINAL REPORT

CLIMATE BENEFITS GENERATED UNDER THE HCFC-22 PHASE-OUT AND CLIMATE CO-BENEFITS

1. BACKGROUND

In order to expand linkages between Hydrofluorochlorocarbons (HCFC) phase-out under the Montreal Protocol and other environmental issues, such as climate change and energy efficiency, the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol (MLF) approved funding for UNIDO to prepare two project proposals to identify potential sources of co-financing to cover costs that are not eligible under the Multilateral Fund but that could generate additional climate benefits from non eligible activities under the HCFC phase-out.

In order to find a programmatic approach to the matter and in order to identify a methodology to be replicated in all HCFC programmes in the future, UNIDO has focused on the GEF as a main funding source for these activities. Other sources of funds have also been considered and approached during project inception, such as bilateral and multilateral partners, as well as voluntary and compliance carbon markets. As it stands now, available resources and timing made the selection of the GEF as target institution as the best option for this exercise. Nonetheless, UNIDO is still very keen on engaging with partners such as the EU and bilateral development agencies, as there is a great potential of scaling up the activities and impact of this project.

The project proposals developed by UNIDO are consistent with the GEF's Climate Change Mitigation Objective 1 that targets "innovative technologies with potentially significant long-term impacts on carbon emissions", which may "involve the demonstration, deployment, and transfer of commercially available technologies that were identified as priorities by the recipient countries but have not been widely adopted in their particular markets."

The project concepts have already been presented informally to the GEF Secretariat. Moreover, two interim reports have been submitted to the Secretariat of the MLF on the occasion of the 66th and 67th Meetings of the Executive Committee and have been formally discussed.[1] Furthermore, a meeting was organized in June 2012 between the representatives of the MLF and the GEF Secretariats as well as UNIDO to discuss the proposed approach. Since then other informal discussions also took place between UNIDO and the GEF Secretariat and the feedbacks are still very positive: the GEF

1 The relevant reports can be retrieved here:
"Report on implementation of approved projects with specific reporting requirements."
http://www.multilateralfund.org/66/English/1/6617.pdf
"Status reports and compliance." http://www.multilateralfund.org/67/English/1/6706.pdf

Secretariat confirmed its interest in exploring the future prospects of this pioneer approach.

Moreover, UNIDO has also approved a total of USD 368,000 additional funds as in-kind and cash contributions for the pilot projects in the Gambia and Viet Nam.

The pilot projects have fostered the cooperation of various interested departments at UNIDO with the Montreal Protocol Branch, such as those involved in Agro-Industry, Trade and Capacity-Building and Green-Industry development. This has become a cross-cutting issue at UNIDO which may grow considerably in interest and investment in the next few years.

2. ALLOCATION OF RESOURCES PROVIDED BY THE MLF

The total project fund allocated to UNIDO has been allocated and distributed to the following key components related directly to the project formulation activities. UNIDO would like to highlight that these funds did not cover UNIDO's administrative costs.

- International Experts (Consultants),
- National Experts (Consultants),
- Project Evaluation (Appraisal), and
- Travel (International and National)

Through the fund mobilization allocation, UNIDO was able to initiate a new approach of project, which did not exist in the past within the MLF framework. The funds allowed UNIDO to invest in experts both National as well as International, which conducted country surveys, technology assessments, market trends, energy saving assessments, legal policies and legislations, all in sectors which are not eligible under the Multilateral Fund but that could generate additional climate benefits from non eligible activities under the HCFC phase-out.

Through the funding, the development of the three projects has been successful, including the mobilization of additional funding from both GEF and other co-financing entities. Without the MLF's contribution these project could not have been materialized, as UNIDO does not have financial resources within its core budget to be allocated to similar activities.

In regards to the utilization of these funds, UNIDO considers them to be neither "additional transaction" nor "administrative cost". UNIDO clearly understands that it is not related to administrative costs as explained above. In UNIDO's view, we consider this funding mechanism as "funding for additional project formulation". With the understanding that these funds must be applied to projects aimed at achieving climate benefits from non-eligible activities under the HCFC phase-out.

Moreover, these funds are used differently from PRP funds, mainly because the funding for additional project formulation objective is to achieve approved projects:

- Which directly contribute to climate benefits from non-eligible activities under the HCFC phase-out, and
- With funding outside the MLF.

3. UNIDO APPROACH

3.1 DECISION PARAMETERS

3.1.1 TARGET SECTOR

As per ExCom decision, UNIDO focused on the preparation of two project proposals for possible co-financing for HCFC activities, to be funded as resource mobilization. UNIDO looked in all sectors covered by the MLF and identified the servicing sector as one of the most critical one in terms of sustainability, diffusion and dimension. Keeping in mind the very limited grant provided by the MLF for servicing activities, UNIDO focused on finding a mechanism for promoting the conversion of the existing installations with low-GWP and energy efficient technologies. UNIDO identified the fishery as the most appropriate sector for designing the pilot projects, since most of the technologies used in Article 5 countries in the industrial refrigeration in the sector (cold stores, fish processing, handling and ice-making plants and freezing units of fishing vessels) are high carbon emitting and work with low energy efficiency. This is why substantial energy efficiency gain can be reached through the introduction of alternative refrigerants with low global-warming potential. In addition, given the importance of fishery in the industry of numerous Article 5 countries[2] as well as the importance of the cold chain in that specific industrial sector, the project concept provides great potential for replications. However, slight modifications and adaptations will be needed based on the specific local conditions.

3.1.2 TARGET COUNTRIES

The funding approved by the MLF for the preparation of project proposals allowed UNIDO to identify three pilot cases in existing industrial refrigeration installations. The target countries were selected according to the size of the country, the geographical region and the role of fishery in the national industry. The interest of the country in the

[2] According to the Food and Agriculture Organization of the United Nations (Fisheries and Aquaculture in our Changing Climate Policy brief of the FAO for the UNFCCC COP-15 in Copenhagen, December 2009), directly or indirectly, the livelihood of over 500 million people in developing countries depends on fisheries and aquaculture.

pilot proposal and the potential national co-financing naturally also needed to be taken into account.

After mapping several possibilities and considering a broad range of operating conditions of facilities, as well as social, political and economic environments, the best sites for the pilot projects were identified in existing industrial refrigeration installations in Viet Nam, Morocco and the Gambia.

3.1.3 ALTERNATIVE TECHNOLOGIES

As part of the project preparation, international experts were appointed to visit the sites and explore the best technical solutions for the conversion of existing industrial refrigeration installations, keeping in mind that alternatives to HCFC-based systems should be ozone and climate friendly with highest priority to natural refrigerants (whenever possible), as well as bring improved energy efficiency to the system. Therefore, the three project proposals has been designed to target two main goals with three different approaches: minimizing the emission of chemicals damaging the ozone layer (i.e. HCFC-22) and mitigating direct and indirect greenhouse gas emissions, thereby building synergies across global environmental conventions.

The three project proposals explore a range of refrigerants with low global-warming potential, including ammonia-brine systems, CO_2 in single as well as cascade systems as well as HC units, pioneer and unique in its kind for such application, along with reduction of leaks of ozone-depleting substances and implementation of energy efficiency solutions. The goal is to find the best choice of replacement technology with the best environmental performance and best cost effectiveness. Furthermore, capacity building activities are an integral part of the proposals, ensuring that the conditions are favorable for the replication and sustainability of the projects after its completion.

3.1.4 GEF AS A MAIN CO-FINANCING PARTNER

UNIDO aimed at mapping and identifying potential donors and funding for leveraging additional sources for the pilot projects. In the first phase of this thorough examination beside GEF, mainly those institutions and organizations were considered, which currently support projects in the target countries. Finally, in order to find a programmatic approach to the matter and to identify a methodology to be replicated in all HCFC programmes in the future, the focus was shifted to the GEF as a main funding source for these activities. Furthermore, the solid in-house expertise with GEF projects both in the field of energy efficiency and in ODS phase-out in countries with economies in transition also played an important role in the decision.

3.2 THE THREE PILOT PROPOSALS

3.2.1 Viet Nam

The objective of the proposed project is to reduce greenhouse gas emissions by creating an enabling environment for the use of low global warming potential (GWP) alternatives in cold storage facilities in Viet Nam that currently consume HCFC-22 for servicing and maintenance purposes. The project as a whole will focus on synergies between the UNFCCC and the Montreal Protocol and will also reduce ODS emissions. To reach this objective, the project will use a synergistic combination of technical assistance on policy and regulation, technology transfer, capacity building and awareness-raising.

The proposed initiatives developed under this project will help inform companies worldwide who face the common problem of having to procure future-proof plants that are affordable to run. Instilling knowledge of new technologies through this proposed project will prepare the cold storage industry in Viet Nam to select the best technologies in the conversion away from HCFC-22 avoiding the introduction of high GWP replacements.

Equipment upgrades will greatly reduce the emission of ozone depleting substances (ODS) and greenhouse gases by replacing HCFC-22 with non-ODS refrigerants with very low global warming potentials. The proposed demonstration projects will serve as a pilot for the conversion of other cold storage facilities in Viet Nam and elsewhere in both the choice of technology and project parameters.

The project includes three components in order to promote the development of a market for alternative low GWP refrigerants in the cold storage sector:

1) Policy and regulatory support;
2) Technology transfer; and
3) Capacity building and awareness raising.

A GEF Medium Sized Project Proposal (MSP) has been developed for Viet Nam and is ready to be formally submitted for the GEF Secretariat's approval upon formal endorsement of all co-financiers involved in the project. The NOU of Viet Nam has formally endorsed the project concept.

The logical framework summarizing all outcomes and outputs of this project can be found in Annex 1.

3.2.2 The Gambia

The proposed project for the Gambia aims to reduce greenhouse gas emissions associated with industrial refrigeration facilities by removing barriers to increased energy efficiency and establishing the enabling environment for the introduction of low global warming potential (GWP) alternatives to HCFC-22. The project will use a synergistic combination of technical assistance on policy and regulation, capacity

building and awareness-raising. The project will design and implement incentives to support the adoption of energy efficiency measures; and pilot innovative technical assistance delivery mechanisms.

It is expected that the policy and regulatory support, local energy service providers mechanism, and awareness and capacity development initiatives put in place under this project will help to prepare the market for the future selection and adoption of low GWP alternatives that operate both more efficiently and use chemicals with lower GWP, while minimizing the use of chemicals damaging to the ozone layer and ultimately improving productivity of the fisheries.

The initiatives developed under this project will help inform companies worldwide who face the common problem of having to procure future-proof plants that are affordable to run, especially for small or medium-scale industrial applications. Instilling better practices and knowledge through this proposed project will serve as the foundation for the growing refrigeration demand in The Gambia in the future and prepare this industry to select the best technologies for this market.

A synergistic approach is proposed to create a policy and regulatory environment conducive to the adoption of new technologies; develop mechanisms for technology transfer through the provision of targeted technical support mechanisms to identify energy efficiency measures and refrigerant options - including their economic viability - and incentive mechanisms for owners/operators to carry out improvements; and implement targeted capacity building and awareness initiatives.

The project has three expected outcomes associated with three Components to improve energy efficiency and reduce ozone depleting substances (ODS) emissions in the industrial refrigeration sector in The Gambia:

1) Policy and regulatory support
2) Technology transfer support
3) Capacity development and awareness-raising

A GEF Medium Sized Project Proposal (MSP) has been developed for the Gambia and is ready to be formally submitted for the GEF Secretariat's approval upon formal endorsement of all co-financiers involved in the project. The NOU of the Gambia has formally endorsed the project concept.

The logical framework summarizing all outcomes and outputs of this project can be found in Annex 2.

3.2.3 Morocco

The objective of this project is to lay the foundations for long-term reductions in greenhouse gas and ozone depleting substance emissions by demonstrating a leapfrog

technology using alternative refrigerants in fishing vessels that currently consume HCFC-22 for servicing and maintenance purposes. The project will demonstrate the conversion of cold stores and freezing units of fishing vessels in Morocco from HCFC-22 which has a global warming potential (GWP) of 1700, to the low GWP refrigerants CO_2 and HFO-1234ze (GWP of 6). The project thereby demonstrates the worldwide potential of leapfrog technology for fishing vessels in particular, and for medium-scale industrial and commercial refrigeration in general, both of which are currently dependent on refrigerants with high GHG and ODS emissions.

As consistent with the CCM-1 focal area strategy, the project will: (1) demonstrate and deploy a high efficiency low GHG technology with significant replication potential worldwide; (2) develop policy tools and mechanisms to support the transfer of the technology; and (3) offset GHG emissions through demonstration and deployment projects. This will directly feed into the CCM-2 strategy by establishing appropriate policy, legal and regulatory frameworks and exploring sustainable financing and delivery mechanisms, leading to the direct reductions in GHG emissions.

The project will demonstrate the use of a cascade system of CO_2 and HFO-1234ze to eliminate the emissions of ODS, reduce GHG emissions and improve energy efficiency substantially in deep sea fishing vessels, where viable alternatives do not currently exist. Through a pilot demonstration of this emerging clean technology followed by initial technology deployment the project will lay the foundations for large-scale replication.

A GEF Full Sized Project Proposal (FSP) is planned to be developed for Morocco and is likely to be submitted for the GEF Secretariat's approval for the Sixth Replenishment Period (GEF-6) starting in 2014. Under the current project find, the related PIF will be developed.

4. MLF REQUIREMENTS

4.1 ADDITIONALITY OF THE PROJECTS PROPOSED

4.1.1 Elimination of ODS

The projects in Viet Nam, the Gambia and Morocco aim to replace HCFCs with non-ODS, low GWP alternatives, thereby eliminating the use of ODS for refrigeration. As a result of the implementation of the projects, the emission of ODS would decrease to zero.

The definition of additionality depends to the target donor. The UNFCCC's Clean Development Mechanism (CDM), for instance, determines a project to be "additional" "… if anthropogenic emissions of greenhouse gases by sources are reduced below those

that would have occurred in the absence of the proposed project"[3]. In other words, the project must demonstrate that a Business-As-Usual scenario would not result in the project taking place and there will be no emission reductions.

The CDM Board provided examples that demonstrate "additionality" for small scale projects, and advises project developers to "…identify the most relevant barrier and provide transparent and documented third party evidence such as national/international statistics, national/provincial policy and legislation, studies/surveys by independent agencies etc". The CDM Board recently elaborated on the definition of "additionality" when relevant to developing projects within a Programme of Activities[4] which remains similar to the definition above. Tools have been developed by the UNFCCC to demonstrate and assess additionality[5].

The CDM Board described a number of barriers to implementing the project, including those related to investment, financial (loan), technological and regulatory/policy instruments. In general, the project should demonstrate additionality by providing information that shows 1) there is no regulation or incentive scheme in place covering the project; or 2) the project is financially weak or not the least cost option; or 3) there is a country risk with the implementation of new technology in the country.

The proposed projects in Viet Nam, the Gambia and Morocco would comply with most of the criteria used in the CDM for "additionality", even though compliance with only one of the criteria would be necessary to demonstrate "additionality".

In regards to the additionality with respect to the GEF, the projects must comply with all GEF requirements of additionality, which is fully considered in each project proposal. For every project, the GEF requires a specific description of baseline of the project as well as proposed alternative scenario, with a description of expected outcomes and components of the project. In the process of project formulation, all ongoing GEF as well as MLF projects in the respective countries were taken into consideration in the baseline scenario, and the project itself was developed additionally to what would have happened in all other projects. Subsequently, incremental costs of the proposed alternative scenario are calculated based on the baseline. Details on GEF operation and incremental cost calculation are available at the following link: http://www.thegef.org/gef/node/1890.

When analyzing the additionality aspect from the point of view of Multilateral Fund projects, it is clear that this project is additional to the baseline scenario as it is targeting a sector with HCFC consumption, where the retrofit or replacement of refrigeration

[3] UNFCCC. 2011. CDM Methodology Booklet. Glossary [of Terms], p236. November 2011.
[4] UNFCCC. 2011. Standard for demonstration of additionality…for programme activities. EB65 Annex 3.
[5] UNFCCC. 2012. Methodological tool for the demonstration and assessment of Additionality. Vers. 06.0.0. EB65Report, Annex 21: 13pp.

units into low GWP alternatives is not eligible for funding. This project is additional to the usual activities under HPMPs because it assures that in the phase-out of HCFCs, the project will introduce low-GWP alternatives and promote energy savings from converting technologies in existing refrigeration installations. From the point of view of the MLF, this is an investment as projects will accelerate the phase-out of HCFCs before the set deadlines of the Montreal Protocol and at the same time guarantee that the project sites are leapfrogging the use of HFC and adopting low-GWP alternatives. This GEF project will establish a low GWP development path for cold storage facilities as opposed to the high GWP development path that might result if the HPMP were not accompanied by projects focusing on greenhouse gas emissions such as this one.

4.1.2 Improvements in energy efficiency

Energy efficiency improvements reduce the energy use per unit of activity. Because the cost of energy is increasing in many countries, there is an increasing interest in minimizing energy use and improving profitability. Electricity charges also play a major role in the control and running of cold stores in Viet Nam and the Gambia as operators try to limit the operation of their refrigeration plants to the lowest tariffs periods, and sometimes even over-ride the plant automatic controllers.

When demonstrating and assessing 'additionality' under the CDM, "… changing the technology with and without a change to the source of energy (including an energy efficiency improvement)" is one of four types of measures that are applicable for reducing greenhouse gas emissions. Therefore energy efficiency improvement is one of the core 'additionality' criteria for which measures have been developed, even though a 'reduction in energy' is grouped within the jargon of the CDM as 'additional'.
The CDM has developed methodologies for projects that use steam, pump water, make silicon and ferro alloys, replace inefficient boilers for space heating, light bulbs, chillers, power plant turbines, domestic refrigerator production, and fuel switching in new buildings[6]. Elements in these methodologies would be applicable to additionality tests for projects involving energy efficiency improvements related to the replacement of HCFCs.

In order to quantify the reduction in GHG emissions (direct and indirect) as a result of the change to non-ODS, low GWP alternatives, UNIDO will need to accurately assess the reduction in energy consumption by undertaking an energy audit. This will require an examination of the electrical consumption of the building and equipment over a number of years. A register will need to be developed of the equipment and its operational time, when relevant its capacity and power estimates. The thermal characteristics of the buildings will need to be determined with k values determined for the existing and

[6] UNFCCC. 2012. Approved large scale methodologies related to energy efficiency improvements: AM0017 (steam), AM0020 (water pumps), AM0038 (silicon and ferro alloys), AM0044 (boilers), AM0046 (light bulbs), AM0060 (chillers), AM0062 (power plant turbines), AM0070 (domestic refrigerator production), AM0091 (fuel switching in new buildings). CDM Methodologies.

future insulation. Load profiles for the cold stores need to be examined over several months. It is important to draw up an Energy Balance for the building and its equipment, and to make sure that the 'balance closes' and that there are no 'unexplained' gaps in the supply and demand. This procedure needs to be standardized so that benchmarking can take place between the existing and other cold stores in the project sites.

4.2 TRANSPARENCY AND GOOD GOVERNANCE

4.2.1 Transparency

UNIDO has developed an Enterprise Resource Planning (ERP) system to improve transparency, information flow, efficiency and effectiveness[7]. ERP facilitates the flow of information between all business functions inside an organization and manage the connections to outside stakeholders. Built on a centralized database, ERP systems consolidate all business operations into a uniform and organization-wide system environment.

ERP provides an integrated suite of IT applications that, following best practice, support business processes and activities such as project management, human resource management, finance, procurement and other corporate core functions, both at Headquarters and the field. The implementation of an ERP system will deliver a fully transparent end-to-end process from identification of needs to achievement of project results i.e. the whole project cycle on one ERP platform; and it will share information without duplication, seamlessly connecting operations at Headquarters and field and across business functions and units.

ERP is part of UNIDO's Programme for Change and Organizational Renewal (PCOR) that aims to increase organizational efficiency and effectiveness by fundamentally changing UNIDO's way of doing business and, at the same time, promote a proactive work environment, organization-wide knowledge sharing, risk management and better results-based management to allow for consistent reporting of results to all stakeholders.

4.2.2 Good governance

UNIDO has developed a prime[8] that provides information on good organization, management and governance practices for organizations that fulfill at least in part a public good role, and practical applications for providers of Resource Efficient and Cleaner Production (RECP) services in different regions. The guiding principles of this prime will be used throughout the implementation of the three pilot projects. Governance is defined as "… the processes and interactions by which the organization

[7] UNIDO. 2012. What is ERP? UNIDO website.

[8] UNIDO. 2010. Good organisation, management and governance practices: A primer for providers of services in Resource Efficient and Cleaner Production. UNIDO.

engages and consults with its stakeholders and accounts for its achievements. Governance characterizes how things are decided and then realized within an organization, be it a government or a company. Governance determines how organizations are directed, administered or controlled".

This primer developed by UNIDO and UNEP provides information on the role and composition of a board; procedures used to control, decide and govern; transparency and accountability; conflicts of interest; stakeholder engagement and external communication; operational management; financial management; other aspects.

At present there is no common agreement on how governance can be specifically applied to resource mobilization projects that are implemented for improvements in energy efficiency. UNIDO is willing to work with other agencies and the MLF to use rules and procedures that have been developed to track carbon offsets and other relevant programmes, such as establishing a board and advisory groups; setting boundaries on project eligibility and geographic restriction; defining what types of energy efficiency projects would be included; defining validation and verification procedures; defining the project approval process; establishing a registry; establishing rules to avoid double counting and accounting for energy efficiency reductions; and providing financial information on transaction costs.

4.3 ASSURANCE THAT THESE PROJECTS WOULD AVOID PERVERSE INCENTIVES FOR COUNTRIES

A perverse incentive is one that "… has an unintended and undesirable result which is contrary to the interests of the incentive makers".

The funding of HFC-23 abatement as a by-product of HCFC-22 production is often used as an example of a "perverse incentive". Although the CDM methodology contains a cap on HCFC-22 production eligible for crediting, the incentives from the CDM resulted in more HCFC-22 being produced (to generate HFC-23) than would have been produced without the CDM. Increased production of HCFCs was not intended by the Parties to the Montreal Protocol that agreed in 2007 to significantly accelerate the phase out of HCFCs[9]. As a result, the HFC-23 abatement projects have generated almost half of the Certified Emission Reductions generated under the CDM as the return on investment through the carbon market is 70-90 times more than the cost of destroying HFC-23. Since 2007, 19 HFC-23 abatement projects have been approved including eleven in China, five in India and one each in Argentina, Mexico and South Korea. Changes[10] to the

[9] UNEP. 2007. Decision IXX/6: Adjustments to the Montreal Protocol with regard to Annex C, Group 1, substances (hydrochlorofluorocarbons). Ozone Secretariat website.

[10] UNFCCC. 2011. Report of the 65th Meeting of the CDM Board. Paragraph 86: Summary of changes to AM0001 methodology.

methodology[11] that were recently approved by the CDM Board with the aim of eliminating this perverse incentive are believed by some to be insufficient[12].

The MLF, in establishing the Terms of Reference[13] for the audit of HCFC production in developing countries, aimed to determine if the high HCFC-22 production was driven either by the demand for feedstock for TFE/PTFE or refrigeration purposes, or for financial reward of the CDM credits. Tetrafluoroethylene, the direct reaction product of HCFC-22, is not just used to make PTFE polymer, but is also used to make HFC-125 which is one component of R410a. The audit was required to collect national and individual plant data, place them in the global context for a supply and demand analysis, and assess the impact of the CDM on an individual company, as well as on national and global situations.

4.3.1 Other activities that might result in a perverse incentive

There are concerns that carbon payments for destruction of ODS will result in virgin ODS being deliberately contaminated and then submitted for destruction. As the projects in Viet Nam, the Gambia and Morocco do not require destruction of the HCFCs, they might legitimately be placed on the market as recycled HCFCs that could be used for servicing of equipment. A perverse incentive related to destruction therefore is unlikely to eventuate.

4.3.2 Organizational activities that guard against perverse incentives

Unlike the CDM review process that failed to act in a timely manner to address deficiencies in the methodology that led to the perverse incentives associated with the production of HFC-23, the MLF has a number of procedures in place that make the likelihood of perverse incentives unlikely. The MLF activities that limit the liability of the Fund to perverse incentives include:

1. Timely project assessment and review through various MLF committees, most notably the ExCom. The ExCom routinely requests further information on a project as part of the process of deciding whether or not to fund the project;
2. Timely modification of the HPMP requirements to ensure appropriate action by Parties e.g. for all submissions from the 68th Meeting onwards, the MLF requires notification by the Party requesting funds for HPMP that an enforceable national system of licensing and quotas for HCFC imports and, where applicable, production and exports is in place and that the system is capable of ensuring the

[11] UNFCCC. 2011. Approved baseline and monitoring methodology AM0001 "Decomposition of fluoroform (HFC-23) waste streams. Vers. 06.0.0. Annex 10 of EB65.

[12] EIA. 2012. Response to call for public inputs on issues to be addressed in the CDM policy dialogue. UNFCCC website.

[13] MLF. 2010. Terms of Reference for the Technical Audit of HCFC Production in Article 5 countries. UNEP/OzL.Pro/ExCom/60/54 Annex IX para 4.

country's compliance with the Montreal Protocol HCFC phase-out schedule for the duration of this agreement[14];

3. Projects for the conversion of HCFC-based manufacturing capacity installed after 21 September 2007 would not be considered. This restricts the quantity of HCFCs that would need to be phased out, in the event that some facilities are installed after this date. Since HCFC consumption has continued to increase after this date, it is reasonable to assume that in many countries additional facilities have been put in place for which the fund is not liable.
4. The MLF reduces its liability for ODS phase out by operating at a country level.

In addition, it is important for the MLF establish a registry that contains the relevant details for projects that are co-financed with the MLF. Such a registry could be checked to reduce the risk of duplication of requests, or conversely that a single enterprise is not "double dipping" for funds from multiple sources.

In addition, it is important that the MLF does not specify eligibility criteria based on the minimum size of the cold store equipment, as those with smaller equipment may increase the size in order to comply with a the project criteria.

4.3.3 Perverse incentives that could potentially reduce overall contribution to the MLF and instead be diverted to "voluntary contributions"

As these GEF pilot projects fall exclusively under the focal area of the GEF "Climate Change Mitigation," global environmental benefits of projects are calculated in terms of quantity of tons of CO_2 equivalent mitigated, rather than ozone depleting potential (ODP). The mandate of the GEF is not to reduce the consumption of ozone-depleting substances in Article 5 countries, therefore, the amount of ODP reduced cannot be an outcome indicator, which means donors may not claim directly protecting the ozone layer by a specific amount through GEF projects.

This means that the GEF itself as well as its donors are focusing on the climate change benefits of the project, and ozone as well as other environmental benefits come as value added of climate change projects. The scope of GEF projects is very broad and comprehensive and donors welcome cross-cutting issues rather than see it as an incentive to cut contributions elsewhere. Besides the protection of the ozone layer, for instance, projects targeting the fishing industry also have a positive impact on biodiversity, as improving refrigeration practices help optimize resources throughout the value chain and therefore help to reduce the pressure on fisheries resources and contribute to conservation of fisheries biodiversity. The same rationale would apply to other funding sources like the GEF.

4.4 ENSURING SUSTAINABILITY OF THE PROJECTS PROPOSED

[14] MLF. 2011. UNEP/OzL.Pro/ExCom/63/60, Decision 63/17 para 71

The projects aim at identifying the best technology options for replacing HCFC-22-based industrial refrigeration facilities in different sectors, climates and environments. Pilot conversions will enable generating experiences on the adoption of low-environmental impact technologies in the conversion of existing industrial refrigeration installations, including cost for conversion and assessment of climate benefits. The projects will provide information on most suitable financial mechanisms to leverage additional funds to promote the conversion of the remaining similar industrial refrigeration installations, including fishing vessels.

From the implementation of the approved pilot cases, UNIDO's ultimate goal is to gain experience and expertise that can be used to better assist various countries in developing their national strategy for the HCFC-22 phase-out in the fishing / food processing sectors.

Besides the above mentioned, the demonstrated willingness of the potential partners gives the promise of a successful cooperation for sustainable project outcomes.

Therefore, UNIDO sees the need for sustaining similar activities. However, the main concern would be the means of financing the direct project formulation costs. UNIDO has highlighted before that this project does not relate to core unit cost and therefore, should remain as a stand-alone approach. UNIDO would stand ready to review any suggestions put forward in regards to the establishment of an additional funding source with the main function to provide recourse mobilization within the framework of the of attracting other donors or co-financers for projects, which directly contribute to climate benefits from non eligible activities under the HCFC phase-out.

4.5 AVOIDANCE OF DUPLICATION OF SIMILAR PROJECTS

The term double counting can refer to Double Monetization which occurs when a singular GHG emission reduction or removal is monetized once as a GHG credit and a second time as a GHG allowance[15].

Rules have been developed to guard against both eventualities in all reputable protocol standards that have been developed to track carbon offsets[16]. Similar rules could be adopted in the MLF's resource mobilization projects to guard against programme participants making multiple claims for financial support for the same project. GHG programmes can address this through oversight procedures such as a registry that could be developed for resource mobilization projects.

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[15] VCS. 2012. Double counting: Clarification of the rules. VCS 1 February 2012.

[16] 3Degrees. 2011. Carbon Protocols, standards and registries: Climate Action Reserve; Clean Development Mechanism; Good Standard Foundation; Verified Carbon Standard; Chicago Climate Exchange (CCX).

All GHG programmes must address double counting of GHG emission reductions and removals to ensure environmental integrity. Duplication of projects has been an issue in projects in the Kyoto Protocol, the EU Emissions Trading Scheme and the Voluntary Carbon Market that have the potential to claim the same greenhouse gas credits more than once. GEF projects are no different.

GEF projects should always outline the existence of similar projects in the relevant region and country in the baseline scenario in order to assess how existing projects interfere/interact with the proposed project. This is to avoid the duplication of similar projects and double counting of GHG emission reductions as well as assure additionality of the proposed alternative scenario.

Moreover, the proposed GEF projects will be implemented parallel to stage I of the HPMP and thus prior to stage II of the HPMP. Hence, this project will be incremental to the limited number of activities affecting the cold storage sector that are included in the HPMP stage I and will set the baseline for the HPMP stage II, therefore avoiding double-counting. Although stage II for most of the countries is foreseen to cover the servicing sector in a robust manner, the aim of the HPMP is only the reduction of ODS emissions and it does not deal with greenhouse gas emissions. This GEF project will establish a low GWP development path for cold storage facilities as opposed to the high GWP development path that might result if the HPMP were not accompanied by projects focusing on greenhouse gas emissions such as this one.

Furthermore, before the development of a GEF proposal and in line with the ExCom Decision 63/23, UNIDO addressed the issue of the nature and scope of project to other implementing agencies of the Multilateral Fund requesting verification through official communication on the existence of projects which target the same sectors (fishing / food processing (servicing) sectors).

4.6 INFORMATION ON TRANSACTION COSTS

UNIDO does not plan to apply for carbon finance for the resource mobilization projects that achieve energy reductions as a result of upgrading the technology. Therefore, UNIDO does not believe that transaction costs are applicable at this time.

5. LESSONS LEARNED

5.1 LINKAGES WITH CHILLER PROJECTS

4.1.1 Lessons Learned

A "Desk Study on The Evaluation Of Chiller Projects"[17] has been circulated during the 68th Meeting of the Executive Committee. UNIDO has noted all lessons learned from the desk study and will take them into account in the process of project implementation.

UNIDO has especially taken into consideration that different methodologies and replacement schemes, with a high degree of flexibility, are necessary to adapt a programme to the needs in different countries where markedly different local conditions prevail. This is already reflected in two of the pilot cases. In Viet Nam, a deal has been agreed with the Vietnamese Environmental Protection Fund to provide with soft loans for facility owners. In the Gambia, a revolving fund will be established with the Ministry of Environment.

UNIDO has also noted that co-financing with the GEF has proven to be a key partnership in chiller projects. However, the necessity of synchronizing two major funding sources, the Multilateral Fund and the GEF, can introduce a two to three year project delays but ultimately can create revenue streams that encourage national engagement. Additional high-level meetings between the two should be arranged in order to settle both issues.

The Regional African Chiller project was UNIDO's first attempt to mobilize additional funds through the phase-out of ODSs. The chiller project aims at promoting energy efficient replacements of CFC-based chillers by offering the replacement of 30 chillers in six African countries. The project attempts to remove the barriers to chiller replacement by illustrating a financial and institutional mechanism able to support chiller replacements while making use of and building on existing instruments within the energy market. A full report on the African Chiller Project will be submitted to the 70th Meeting of the Executive Committee of the MLF.

Through chiller project, different financial mechanisms were established in different countries. In Egypt, for instance, a scheme with the National Bank of Egypt was established for the provision of soft loans for companies interested in replacing their old chillers while, in Cameroon, a revolving fund was put in place. Such schemes are necessary, especially in Africa, because beneficiaries do not have the means to give up-front payments for new chillers and in order to ensure the sustainability of the project. This also applies for this project replacing HCFC-based systems. As mentioned, in order to produce sustainable incentives for natural refrigerants, similar schemes must also be put in place. In Viet Nam, soft loans for companies will be facilitated through the Vietnamese Environmental Protection Fund. In the Gambia, a revolving fund will be established.

[17] "Desk study on the evaluation of chiller projects." http://www.multilateralfund.org/68/English/1/6810.pdf

The chiller project serves as valuable experience in building trust between different stakeholders in the private and public sector. In Africa, it has become evident that it is difficult to maintain a sustainable relationship between banks, companies and the government due to the lack of transparency. The chiller project is therefore an example of how to foster cooperation amongst partners in order to achieve a sustainable solution. This will be the case for all three pilot projects currently being developed, as well as future ones. UNIDO shall take the experience from the chiller projects into consideration when developing financial mechanisms for the replacement of HCFC-based systems.

4.1.2 New Approach

Although the two pilot projects (i.e. resource mobilization and chiller programme) are in principle similar, there are limitations in terms of lessons learned. It was necessary e.g. to develop a new approach towards partners and co-financiers: in the chiller project, most of the mobilized funds come from beneficiary companies, since it is a one-time approach. On the other hand, when addressing the issue of HCFC-based systems, a one-time approach is not sufficient to tackle the problem, and a programmatic method should be developed. That is why UNIDO is focusing on the GEF as a partner for these three pilot projects in Viet Nam, the Gambia and Morocco. Upon the successful completion of these projects, it is expected that similar concepts could be developed to replace HCFC-based systems, to be extended also to different sectors and countries.

5.2 GEF PROJECT DESIGN AND DEVELOPMENT

4.2.1 GEF Star Allocation and Competition For Funds

The STAR is a short name of the System for Transparent Allocation of Resources. With the STAR, the GEF Secretariat allocates resources in an indicative way to its eligible countries in a replenishment period. In the fifth replenishment period of the GEF (GEF-5), the STAR covers three focal areas: biodiversity (BD), climate change (CC), and land degradation (LD).[18] Although this system gives predictability of funding and flexibility in programming for eligible countries, it also restrains implementing agencies in terms of potential projects, as they are subject to competition for funds.

With the STAR system, availability of funds depends greatly on:

- Country;
- Number of GEF implementing agencies in the country;
- Allocation of funds for each focal area and number of similar projects;
- Project size;
- Timing.

[18] http://www.thegef.org/gef/sites/thegef.org/files/publication/GEF_STAR_A4_april11_CRA.pdf

In the case of the three pilot cases, availability of GEF funds was limited as this initiative came about quite late into the fifth replenishment period. Usually, in order to ensure greater availability of funds, implementing agencies should try to have projects approved early in the GEF cycle. In the case of Viet Nam, for instance, GEF funds had to be cut down from planned USD 900,000 to approximately USD 300,000 due to stark competition for funds. For Morocco, the proposed project had to be postponed because funds were no longer available for climate change projects under GEF 5. The GEF focal point also expressed the preference of the country towards Full Sized Projects (over USD 2 Mio GEF contribution), therefore UNIDO must wait until the next cycle in order to apply for GEF funds in Morocco. For future projects, concepts should be developed well in advance so that funds can be secured for planned activities.

4.2.2 The GEF Approach

The GEF approach in regards to project design and development is a very holistic one, which involves the engagement of several counterparts, co-financiers prior to project approval. It also requires a broader approach to project impact, including several aspects besides the targeted focal area such as socioeconomic benefits. Below the characteristics of this approach which are the most striking when compared to the development of MLF-funded projects:

a) Co-financing

Developing a GEF project requires intensive exchange with the host government and potential donors/co-financiers. This includes defining modalities of cooperation, activities and co-financing schemes.

b) Project Endorsement Process

Prior to formal submission of a project to the GEF Secretariat, an endorsement letter is required from the GEF Operational Focal Point[19] and from all the co-financiers. This procedure, depending on the national routine, can take more than six months.

c) Socioeconomic benefits

[19] The GEF Focal Points play a critical coordination role regarding GEF matters at country level as well as serving as the liaison with the GEF Secretariat and Implementing Agencies. The GEF Political Focal Points are concerned primarily with issues related to GEF governance, including policies and decisions, as well as relations between member countries and the GEF Council and Assembly. The GEF Operational Focal Points are concerned with the operational aspects of GEF activities, such as endorsing project proposals to affirm that they are consistent with national plans and priorities and facilitating GEF coordination, integration, and consultation at country level.

Besides promoting integrated approaches that tap the potential for synergies across global environmental issues and ensure that resources and capacity build are best utilized, GEF strongly requires the delivery and monitoring of socioeconomic benefits at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits.

In order to strengthen the gender mainstreaming argumentation in UNIDO's two proposal, extensive consultations took place with UNIDO's Gender Focal Point and the project documents were adjusted accordingly.

6. CONCLUSIONS

In the selection of alternative technologies to replace ODSs, energy efficiency has always been taken into account at UNIDO. However, in the recent years, the introduction of low GWP and high energy efficiency alternatives has gained even higher attention to achieve additional climate benefits in the ODS phase-out process. UNIDO is constantly looking into the assessment of climate impacts of the MP activities, including the application of the Multilateral Fund Climate Impact Indicator (MCII) and the GEF Tracking Tool for Climate Change Mitigation Projects. Recognizing the increasing importance of the subject, staff members regularly participate in trainings and related events.

While developing the three pilot projects, it has also become evident that on the country level it would be also necessary to raise awareness, since it is still not fully clear to NOUs how to mobilize additional funds based on climate benefits generated through the phase-out of HCFCs. This happens because the MLF mechanism is a very specific one, and usually NOUs are not exposed to other environmental financial mechanisms. It is, therefore, of paramount importance that NOUs receive training on GEF mechanisms, as well as others, in order to appreciate the differences between MLF and the GEF. This would allow them to facilitate the dialogue with GEF focal points and substantially contribute to project development.

Given its pioneer nature, the present exercise has been a challenge for UNIDO. The brainstorming, the process of exploring the potential co-financing sources, the selection of the target countries, the information and knowledge sharing with the other technical branches of UNIDO all helped our team to have a better understanding on the complex issue of generating climate co-benefits. Furthermore, UNIDO has been working out mechanisms to strengthen the synergies and cooperation with other branches in-house dealing with climate change and energy efficiency, which promises interesting opportunities for the future.

Future Montreal Protocol projects at UNIDO will definitely benefit from the broader perspective gained through the preparation of this exercise.

ANNEX 1: PROJECT RESULTS FRAMEWORK – VIET NAM

Project Narrative	**Indicator**		**Sources of Verification**
Project Objective Reduction of greenhouse gas emission in the cold storage sector in Viet Nam.	*Direct emission reduction:* Direct emissions reduction of 20,000 tonnes of CO_2 equivalent (with the elimination of HCFC-22, with global-warming potential of 1,810) *Indirect emission reduction:* GEF bottom-up methodology – Indirect emissions reduction of 81,000 tonnes of CO_2 equivalent through all the activities GEF top-down methodology – 117,000 tonnes of CO_2 equivalent through all the activities		Reports from MONRE during and after the duration of the project.
Component 1: Policy and Regulatory Support			
Outcome	**Indicator**	**Sources of Verification**	**Assumptions/Risks (see section 4)**
Policy, regulatory and legal measures are adopted by the government to support the adoption of low global-warming potential and energy efficient technology.	Number of national policies changed or adopted in favour of the use of alternative technologies with low global-warming potential.	Public records such as government websites and publications in the national gazette.	Assumes no radical shifts in Government priorities.
Outputs	**Indicator**	**Sources of Verification**	**Assumptions/Risks (see section 4)**
1.1 Gap analysis carried out in the national policy, legal and regulatory frameworks. 1.2 Relevant recommendations drafted into	Availability of gap analysis report. Number of laws/regulations/guidance (new or amended) in favour of	Project progress report UNIDO project progress report.	Continuous government support and participation.

the national laws/regulations/guidance.	low global-warming technologies promulgated.		
Component 2: Technology Transfer			
Outcome	**Indicator**	**Sources of Verification**	**Assumptions/Risks (see section 4)**
Technology with low global-warming potential (hydrocarbon system) is demonstrated, replicated and deployed.	Up to 20,000 tonnes of CO_2 emission reduced, by enterprise/facility Energy efficiency gain in percentage, by enterprise/facility Technicians of 12 enterprises/facilities reported that they can operate the new technology independently	Records of each enterprise/facility to the National Cleaner Production Centre Validation reports from MONRE Reports from the Viet Nam Environmental Protection Fund (VEPF).	The companies want and can proceed with the conversion process.
Outputs	**Indicators**	**Sources of Verification**	**Assumptions/Risks (see section 4)**
2.1 Two pilot demonstration conversions are carried out: 2 cold storage facilities converted from HCFC-22 use to hydrocarbon systems. 2.2 The demonstration	Technology designs are available what time of equipment are installed No of. technicians from each facility are trained	Records of each enterprise/facility to MONRE Validation reports from MONRE Reports of the Viet Nam Environmental Protection Fund	The initial two pilot projects are successful. There is sufficient interest from private sector and trainee technicians. The companies are able to use and

conversions are replicated in up to 10 facilities.	(disaggregated by gender) Monitoring of the results is continuous for minimum 12 months. Reduced emission of greenhouse gases and improved energy efficiency are verified. Up to 900,000 USD from the Viet Nam Environmental Protection Fund will cover the costs from the new equipment in these 10 companies.	(VEPF). UNIDO project report.	maintain the new technology. Trainees value the information provided and are able to use it in their day to day activities.
Component 3: Awareness raising			
Outcome	**Indicators**	**Sources of Verification**	**Assumptions/Risks (see section 4)**
Demand for low-GWP refrigerant systems that are more energy efficient than existing technologies is increased.	At least 20 firm inquiries indicating intent to use alternative refrigerants made to MONRE	Report from MONRE indicates their interest towards the technology.	Continuous support and participation from national authorities and companies.
Outputs	**Indicators**	**Sources of Verification**	**Assumptions/Risks (see section 4)**

3.1 Lessons learnt and information on technology solutions is disseminated to policy makers, companies, and technicians.[20]	Written materials delivered to 50 policy-makers by month 18 (disaggregated by gender). Up to 10 bilateral meetings carried out by month 24. Up to 100 attendees at stakeholder meeting (disaggregated by gender)	Market survey at the end of the project: demand for replicating the technology in other sectors. Monitoring reports on events and activities.	Assumes the ability to gain media attraction on the issues. Continuous government support and participation.

[20] All awareness and capacity indicators will be collected disaggregated by gender

ANNEX 2: PROJECT RESULTS FRAMEWORK – THE GAMBIA

Project Narrative	**Indicator**		**Sources of Verification**
Project Objective Reduction of greenhouse gas emission associated with industrial refrigeration and air-conditioning facilities in The Gambia	*Direct emission reduction*: Direct emissions reduction of 56,000 tonnes of CO_2 equivalent through all the activities (elimination of the use of HCFC-22, with GWP of 1,810, and improved energy efficiency) *Indirect emission reduction*: - GEF bottom-up methodology Indirect emissions reduction of 222,000 tonnes of CO_2 equivalent through all the activities - GEF top-down methodology 432,000 tonnes of CO_2 equivalent through all the activities		Reports from the National Ozone Unit and The Gambia Technical Training Institute during and after the duration of the project.
Component 1: Policy and Regulatory Support			
Outcome	**Indicator**	**Sources of Verification**	**Assumptions/Risks (see section 4)**
Policy, regulatory and legal measures are adopted by the government to support the adoption of low global-warming potential and energy efficient technology.	Number of national policies changed or adopted in favour of the use of alternative technologies with low global-warming potential.	Public records such as government websites and publications in the national gazette.	Assumes no radical shifts in Government priorities.
Outputs	**Indicator**	**Sources of Verification**	**Assumptions/Risks (see section 4)**
1.1 Gap analysis carried out in the national policy, legal and regulatory frameworks. 1.2 Relevant recommendations drafted into	Availability of gap analysis report. Number of laws/regulations/guidance (new or amended) in favour of	Project progress report UNIDO project progress report.	Continuous government support and participation.

the national laws/regulations/guidance.	low global-warming technologies promulgated.		
Component 2: Technology Transfer			
Outcome	**Indicator**	**Sources of Verification**	**Assumptions/Risks (see section 4)**
Technical and financial support on replacement refrigerants, and reducing greenhouse gas emissions and operational costs, is ensured.	Up to 56,000 tonnes of CO_2 equivalent emission reduced Energy efficiency gain in percentage, by enterprise/facility Up to 60 facilities involved in interventions of various scales	Records of each enterprise/facility to the National Ozone Unit and to The Gambia Technical Training Institute Validation reports from The Gambia Technical Training Institute	The pilot demonstration systems with low global-warming potential refrigerants installed. The companies want and can proceed with the conversion process.
Outputs	**Indicators**	**Sources of Verification**	**Assumptions/Risks (see section 4)**
2.1 Refrigeration and air-conditioning support mechanisms established and piloted 2.2 Incentive Mechanism piloted	Up to 20 Support Service providers certified through course given at the training institute (disaggregated by gender) Over 30 interventions supported through the Incentive Mechanism Monitoring of the results is continuous for minimum 12 months. Reduced emission of greenhouse gases and	Records of each enterprise/facility to the The Gambia Technical Training Institute Reports of The Gambia Technical Training Institute UNIDO project report.	There is sufficient interest from private sector and trainee technicians. Certified trainees, as Support Service providers, are able to promote good practices regarding energy efficiency and sustainability in the refrigeration and air-conditioning sector. The companies choose to proceed with improvement process and able to secure financing

	improved energy efficiency are verified.		
Component 3: Awareness raising			
Outcome	**Indicators**	**Sources of Verification**	**Assumptions/Risks (see section 4)**
Demand for refrigerant systems with low global-warming potential that are more energy efficient than existing technologies is increased.	At least 20 firm inquiries indicating intent to use alternative refrigerants made to the Gambia Technical Training Institute and to the Support Service.	Report from the Gambia Technical Training Institute and from the Support Service: Companies indicate their interest towards the new technology.	Continuous support and participation from national authorities and companies.
Outputs	**Indicators**	**Sources of Verification**	**Assumptions/Risks (see section 4)**
3.1 Lessons learnt and information on technology solutions is disseminated to policy makers, companies, and technicians.[21]	Written materials delivered to 15 policy-makers (disaggregated by gender). Capacity perception index of 5 reached by the end of the project for targeted trainees[22]	Market survey at the end of the project: demand for replicating the technology in other sectors. Monitoring reports on events and activities.	Assumes the ability to gain media attraction on the issues. Continuous government support and participation. Trainees value the information provided and are able to use it in their day-to-day activities.

[21] All awareness and capacity indicators will be collected disaggregated by gender

[22] A capacity perception index score of between 1 and 5 will be used, to assessed through a survey at the end of the project, disaggregated by gender as follows: 1. No capacity built; 2. Initial Awareness raised (e.g., workshops, seminars); 3. Substantial training in practical application (e.g. vocational training); 4. Knowledge effectively transferred (e.g. passing examination, certification); 5. Ability to apply or disseminate knowledge demonstrated.

FINAL REPORT ON DEVELOPMENT OF PILOT PROPOSALS FOR POSSIBLE CO-FINANCING FOR HCFC ACTIVITIES, TO BE FUNDED AS RESOURCE MOBILIZATION ACTIVITIES

COUNTRY:	Global
PROJECT TITLE:	Conversion of HCFC-22 Based Facilities to Ozone and Climate Friendly Alternatives in the Fishing / Food Processing (Servicing) Sectors
SECTOR COVERED:	Replacement of existing industrial Refrigeration installations
TOTAL PROJECT COSTS:	USD 200,000 (excluding support costs)

69th ExCom Meeting

FINAL REPORT

CLIMATE BENEFITS GENERATED UNDER THE HCFC-22 PHASE-OUT AND CLIMATE CO-BENEFITS

1. BACKGROUND

In order to expand linkages between Hydrofluorochlorocarbons (HCFC) phase-out under the Montreal Protocol and other environmental issues, such as climate change and energy efficiency, the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol (MLF) approved funding for UNIDO to prepare two project proposals to identify potential sources of co-financing to cover costs that are not eligible under the Multilateral Fund but that could generate additional climate benefits from non eligible activities under the HCFC phase-out.

In order to find a programmatic approach to the matter and in order to identify a methodology to be replicated in all HCFC programmes in the future, UNIDO has focused on the GEF as a main funding source for these activities. Other sources of funds have also been considered and approached during project inception, such as bilateral and multilateral partners, as well as voluntary and compliance carbon markets. As it stands now, available resources and timing made the selection of the GEF as target institution as the best option for this exercise. Nonetheless, UNIDO is still very keen on engaging with partners such as the EU and bilateral development agencies, as there is a great potential of scaling up the activities and impact of this project.

The project proposals developed by UNIDO are consistent with the GEF's Climate Change Mitigation Objective 1 that targets "innovative technologies with potentially significant long-term impacts on carbon emissions", which may "involve the demonstration, deployment, and transfer of commercially available technologies that were identified as priorities by the recipient countries but have not been widely adopted in their particular markets."

The project concepts have already been presented informally to the GEF Secretariat. Moreover, two interim reports have been submitted to the Secretariat of the MLF on the occasion of the 66th and 67th Meetings of the Executive Committee and have been formally discussed.[1] Furthermore, a meeting was organized in June 2012 between the representatives of the MLF and the GEF Secretariats as well as UNIDO to discuss the proposed approach. Since then other informal discussions also took place between UNIDO and the GEF Secretariat and the feedbacks are still very positive: the GEF

1 The relevant reports can be retrieved here:
"Report on implementation of approved projects with specific reporting requirements."
http://www.multilateralfund.org/66/English/1/6617.pdf
"Status reports and compliance." http://www.multilateralfund.org/67/English/1/6706.pdf

Secretariat confirmed its interest in exploring the future prospects of this pioneer approach.

Moreover, UNIDO has also approved a total of USD 368,000 additional funds as in-kind and cash contributions for the pilot projects in the Gambia and Viet Nam.

The pilot projects have fostered the cooperation of various interested departments at UNIDO with the Montreal Protocol Branch, such as those involved in Agro-Industry, Trade and Capacity-Building and Green-Industry development. This has become a cross-cutting issue at UNIDO which may grow considerably in interest and investment in the next few years.

2. ALLOCATION OF RESOURCES PROVIDED BY THE MLF

The total project fund allocated to UNIDO has been allocated and distributed to the following key components related directly to the project formulation activities. UNIDO would like to highlight that these funds did not cover UNIDO's administrative costs.

- International Experts (Consultants),
- National Experts (Consultants),
- Project Evaluation (Appraisal), and
- Travel (International and National)

Through the fund mobilization allocation, UNIDO was able to initiate a new approach of project, which did not exist in the past within the MLF framework. The funds allowed UNIDO to invest in experts both National as well as International, which conducted country surveys, technology assessments, market trends, energy saving assessments, legal policies and legislations, all in sectors which are not eligible under the Multilateral Fund but that could generate additional climate benefits from non eligible activities under the HCFC phase-out.

Through the funding, the development of the three projects has been successful, including the mobilization of additional funding from both GEF and other co-financing entities. Without the MLF's contribution these project could not have been materialized, as UNIDO does not have financial resources within its core budget to be allocated to similar activities.

In regards to the utilization of these funds, UNIDO considers them to be neither "additional transaction" nor "administrative cost". UNIDO clearly understands that it is not related to administrative costs as explained above. In UNIDO's view, we consider this funding mechanism as "funding for additional project formulation". With the understanding that these funds must be applied to projects aimed at achieving climate benefits from non-eligible activities under the HCFC phase-out.

Moreover, these funds are used differently from PRP funds, mainly because the funding for additional project formulation objective is to achieve approved projects:

- Which directly contribute to climate benefits from non-eligible activities under the HCFC phase-out, and
- With funding outside the MLF.

3. UNIDO APPROACH

3.1 DECISION PARAMETERS

3.1.1 TARGET SECTOR

As per ExCom decision, UNIDO focused on the preparation of two project proposals for possible co-financing for HCFC activities, to be funded as resource mobilization. UNIDO looked in all sectors covered by the MLF and identified the servicing sector as one of the most critical one in terms of sustainability, diffusion and dimension. Keeping in mind the very limited grant provided by the MLF for servicing activities, UNIDO focused on finding a mechanism for promoting the conversion of the existing installations with low-GWP and energy efficient technologies. UNIDO identified the fishery as the most appropriate sector for designing the pilot projects, since most of the technologies used in Article 5 countries in the industrial refrigeration in the sector (cold stores, fish processing, handling and ice-making plants and freezing units of fishing vessels) are high carbon emitting and work with low energy efficiency. This is why substantial energy efficiency gain can be reached through the introduction of alternative refrigerants with low global-warming potential. In addition, given the importance of fishery in the industry of numerous Article 5 countries[2] as well as the importance of the cold chain in that specific industrial sector, the project concept provides great potential for replications. However, slight modifications and adaptations will be needed based on the specific local conditions.

3.1.2 TARGET COUNTRIES

The funding approved by the MLF for the preparation of project proposals allowed UNIDO to identify three pilot cases in existing industrial refrigeration installations. The target countries were selected according to the size of the country, the geographical region and the role of fishery in the national industry. The interest of the country in the

[2] According to the Food and Agriculture Organization of the United Nations (Fisheries and Aquaculture in our Changing Climate Policy brief of the FAO for the UNFCCC COP-15 in Copenhagen, December 2009), directly or indirectly, the livelihood of over 500 million people in developing countries depends on fisheries and aquaculture.

pilot proposal and the potential national co-financing naturally also needed to be taken into account.

After mapping several possibilities and considering a broad range of operating conditions of facilities, as well as social, political and economic environments, the best sites for the pilot projects were identified in existing industrial refrigeration installations in Viet Nam, Morocco and the Gambia.

3.1.3 ALTERNATIVE TECHNOLOGIES

As part of the project preparation, international experts were appointed to visit the sites and explore the best technical solutions for the conversion of existing industrial refrigeration installations, keeping in mind that alternatives to HCFC-based systems should be ozone and climate friendly with highest priority to natural refrigerants (whenever possible), as well as bring improved energy efficiency to the system. Therefore, the three project proposals has been designed to target two main goals with three different approaches: minimizing the emission of chemicals damaging the ozone layer (i.e. HCFC-22) and mitigating direct and indirect greenhouse gas emissions, thereby building synergies across global environmental conventions.

The three project proposals explore a range of refrigerants with low global-warming potential, including ammonia-brine systems, CO_2 in single as well as cascade systems as well as HC units, pioneer and unique in its kind for such application, along with reduction of leaks of ozone-depleting substances and implementation of energy efficiency solutions. The goal is to find the best choice of replacement technology with the best environmental performance and best cost effectiveness. Furthermore, capacity building activities are an integral part of the proposals, ensuring that the conditions are favorable for the replication and sustainability of the projects after its completion.

3.1.4 GEF AS A MAIN CO-FINANCING PARTNER

UNIDO aimed at mapping and identifying potential donors and funding for leveraging additional sources for the pilot projects. In the first phase of this thorough examination beside GEF, mainly those institutions and organizations were considered, which currently support projects in the target countries. Finally, in order to find a programmatic approach to the matter and to identify a methodology to be replicated in all HCFC programmes in the future, the focus was shifted to the GEF as a main funding source for these activities. Furthermore, the solid in-house expertise with GEF projects both in the field of energy efficiency and in ODS phase-out in countries with economies in transition also played an important role in the decision.

3.2 THE THREE PILOT PROPOSALS

3.2.1 Viet Nam

The objective of the proposed project is to reduce greenhouse gas emissions by creating an enabling environment for the use of low global warming potential (GWP) alternatives in cold storage facilities in Viet Nam that currently consume HCFC-22 for servicing and maintenance purposes. The project as a whole will focus on synergies between the UNFCCC and the Montreal Protocol and will also reduce ODS emissions. To reach this objective, the project will use a synergistic combination of technical assistance on policy and regulation, technology transfer, capacity building and awareness-raising.

The proposed initiatives developed under this project will help inform companies worldwide who face the common problem of having to procure future-proof plants that are affordable to run. Instilling knowledge of new technologies through this proposed project will prepare the cold storage industry in Viet Nam to select the best technologies in the conversion away from HCFC-22 avoiding the introduction of high GWP replacements.

Equipment upgrades will greatly reduce the emission of ozone depleting substances (ODS) and greenhouse gases by replacing HCFC-22 with non-ODS refrigerants with very low global warming potentials. The proposed demonstration projects will serve as a pilot for the conversion of other cold storage facilities in Viet Nam and elsewhere in both the choice of technology and project parameters.

The project includes three components in order to promote the development of a market for alternative low GWP refrigerants in the cold storage sector:

1) Policy and regulatory support;
2) Technology transfer; and
3) Capacity building and awareness raising.

A GEF Medium Sized Project Proposal (MSP) has been developed for Viet Nam and is ready to be formally submitted for the GEF Secretariat's approval upon formal endorsement of all co-financiers involved in the project. The NOU of Viet Nam has formally endorsed the project concept.

The logical framework summarizing all outcomes and outputs of this project can be found in Annex 1.

3.2.2 The Gambia

The proposed project for the Gambia aims to reduce greenhouse gas emissions associated with industrial refrigeration facilities by removing barriers to increased energy efficiency and establishing the enabling environment for the introduction of low global warming potential (GWP) alternatives to HCFC-22. The project will use a synergistic combination of technical assistance on policy and regulation, capacity

building and awareness-raising. The project will design and implement incentives to support the adoption of energy efficiency measures; and pilot innovative technical assistance delivery mechanisms.

It is expected that the policy and regulatory support, local energy service providers mechanism, and awareness and capacity development initiatives put in place under this project will help to prepare the market for the future selection and adoption of low GWP alternatives that operate both more efficiently and use chemicals with lower GWP, while minimizing the use of chemicals damaging to the ozone layer and ultimately improving productivity of the fisheries.

The initiatives developed under this project will help inform companies worldwide who face the common problem of having to procure future-proof plants that are affordable to run, especially for small or medium-scale industrial applications. Instilling better practices and knowledge through this proposed project will serve as the foundation for the growing refrigeration demand in The Gambia in the future and prepare this industry to select the best technologies for this market.

A synergistic approach is proposed to create a policy and regulatory environment conducive to the adoption of new technologies; develop mechanisms for technology transfer through the provision of targeted technical support mechanisms to identify energy efficiency measures and refrigerant options - including their economic viability - and incentive mechanisms for owners/operators to carry out improvements; and implement targeted capacity building and awareness initiatives.

The project has three expected outcomes associated with three Components to improve energy efficiency and reduce ozone depleting substances (ODS) emissions in the industrial refrigeration sector in The Gambia:

1) Policy and regulatory support
2) Technology transfer support
3) Capacity development and awareness-raising

A GEF Medium Sized Project Proposal (MSP) has been developed for the Gambia and is ready to be formally submitted for the GEF Secretariat's approval upon formal endorsement of all co-financiers involved in the project. The NOU of the Gambia has formally endorsed the project concept.

The logical framework summarizing all outcomes and outputs of this project can be found in Annex 2.

3.2.3 Morocco

The objective of this project is to lay the foundations for long-term reductions in greenhouse gas and ozone depleting substance emissions by demonstrating a leapfrog

technology using alternative refrigerants in fishing vessels that currently consume HCFC-22 for servicing and maintenance purposes. The project will demonstrate the conversion of cold stores and freezing units of fishing vessels in Morocco from HCFC-22 which has a global warming potential (GWP) of 1700, to the low GWP refrigerants CO_2 and HFO-1234ze (GWP of 6). The project thereby demonstrates the worldwide potential of leapfrog technology for fishing vessels in particular, and for medium-scale industrial and commercial refrigeration in general, both of which are currently dependent on refrigerants with high GHG and ODS emissions.

As consistent with the CCM-1 focal area strategy, the project will: (1) demonstrate and deploy a high efficiency low GHG technology with significant replication potential worldwide; (2) develop policy tools and mechanisms to support the transfer of the technology; and (3) offset GHG emissions through demonstration and deployment projects. This will directly feed into the CCM-2 strategy by establishing appropriate policy, legal and regulatory frameworks and exploring sustainable financing and delivery mechanisms, leading to the direct reductions in GHG emissions.

The project will demonstrate the use of a cascade system of CO_2 and HFO-1234ze to eliminate the emissions of ODS, reduce GHG emissions and improve energy efficiency substantially in deep sea fishing vessels, where viable alternatives do not currently exist. Through a pilot demonstration of this emerging clean technology followed by initial technology deployment the project will lay the foundations for large-scale replication.

A GEF Full Sized Project Proposal (FSP) is planned to be developed for Morocco and is likely to be submitted for the GEF Secretariat's approval for the Sixth Replenishment Period (GEF-6) starting in 2014. Under the current project find, the related PIF will be developed.

4. MLF REQUIREMENTS

4.1 ADDITIONALITY OF THE PROJECTS PROPOSED

4.1.1 Elimination of ODS

The projects in Viet Nam, the Gambia and Morocco aim to replace HCFCs with non-ODS, low GWP alternatives, thereby eliminating the use of ODS for refrigeration. As a result of the implementation of the projects, the emission of ODS would decrease to zero.

The definition of additionality depends to the target donor. The UNFCCC's Clean Development Mechanism (CDM), for instance, determines a project to be "additional" "… if anthropogenic emissions of greenhouse gases by sources are reduced below those

that would have occurred in the absence of the proposed project"[3]. In other words, the project must demonstrate that a Business-As-Usual scenario would not result in the project taking place and there will be no emission reductions.

The CDM Board provided examples that demonstrate "additionality" for small scale projects, and advises project developers to "…identify the most relevant barrier and provide transparent and documented third party evidence such as national/international statistics, national/provincial policy and legislation, studies/surveys by independent agencies etc". The CDM Board recently elaborated on the definition of "additionality" when relevant to developing projects within a Programme of Activities[4] which remains similar to the definition above. Tools have been developed by the UNFCCC to demonstrate and assess additionality[5].

The CDM Board described a number of barriers to implementing the project, including those related to investment, financial (loan), technological and regulatory/policy instruments. In general, the project should demonstrate additionality by providing information that shows 1) there is no regulation or incentive scheme in place covering the project; or 2) the project is financially weak or not the least cost option; or 3) there is a country risk with the implementation of new technology in the country.

The proposed projects in Viet Nam, the Gambia and Morocco would comply with most of the criteria used in the CDM for "additionality", even though compliance with only one of the criteria would be necessary to demonstrate "additionality".

In regards to the additionality with respect to the GEF, the projects must comply with all GEF requirements of additionality, which is fully considered in each project proposal. For every project, the GEF requires a specific description of baseline of the project as well as proposed alternative scenario, with a description of expected outcomes and components of the project. In the process of project formulation, all ongoing GEF as well as MLF projects in the respective countries were taken into consideration in the baseline scenario, and the project itself was developed additionally to what would have happened in all other projects. Subsequently, incremental costs of the proposed alternative scenario are calculated based on the baseline. Details on GEF operation and incremental cost calculation are available at the following link: http://www.thegef.org/gef/node/1890.

When analyzing the additionality aspect from the point of view of Multilateral Fund projects, it is clear that this project is additional to the baseline scenario as it is targeting a sector with HCFC consumption, where the retrofit or replacement of refrigeration

[3] UNFCCC. 2011. CDM Methodology Booklet. Glossary [of Terms], p236. November 2011.
[4] UNFCCC. 2011. Standard for demonstration of additionality…for programme activities. EB65 Annex 3.
[5] UNFCCC. 2012. Methodological tool for the demonstration and assessment of Additionality. Vers. 06.0.0. EB65Report, Annex 21: 13pp.

units into low GWP alternatives is not eligible for funding. This project is additional to the usual activities under HPMPs because it assures that in the phase-out of HCFCs, the project will introduce low-GWP alternatives and promote energy savings from converting technologies in existing refrigeration installations. From the point of view of the MLF, this is an investment as projects will accelerate the phase-out of HCFCs before the set deadlines of the Montreal Protocol and at the same time guarantee that the project sites are leapfrogging the use of HFC and adopting low-GWP alternatives. This GEF project will establish a low GWP development path for cold storage facilities as opposed to the high GWP development path that might result if the HPMP were not accompanied by projects focusing on greenhouse gas emissions such as this one.

4.1.2 Improvements in energy efficiency

Energy efficiency improvements reduce the energy use per unit of activity. Because the cost of energy is increasing in many countries, there is an increasing interest in minimizing energy use and improving profitability. Electricity charges also play a major role in the control and running of cold stores in Viet Nam and the Gambia as operators try to limit the operation of their refrigeration plants to the lowest tariffs periods, and sometimes even over-ride the plant automatic controllers.

When demonstrating and assessing 'additionality' under the CDM, "… changing the technology with and without a change to the source of energy (including an energy efficiency improvement)" is one of four types of measures that are applicable for reducing greenhouse gas emissions. Therefore energy efficiency improvement is one of the core 'additionality' criteria for which measures have been developed, even though a 'reduction in energy' is grouped within the jargon of the CDM as 'additional'.
The CDM has developed methodologies for projects that use steam, pump water, make silicon and ferro alloys, replace inefficient boilers for space heating, light bulbs, chillers, power plant turbines, domestic refrigerator production, and fuel switching in new buildings[6]. Elements in these methodologies would be applicable to additionality tests for projects involving energy efficiency improvements related to the replacement of HCFCs.

In order to quantify the reduction in GHG emissions (direct and indirect) as a result of the change to non-ODS, low GWP alternatives, UNIDO will need to accurately assess the reduction in energy consumption by undertaking an energy audit. This will require an examination of the electrical consumption of the building and equipment over a number of years. A register will need to be developed of the equipment and its operational time, when relevant its capacity and power estimates. The thermal characteristics of the buildings will need to be determined with k values determined for the existing and

[6] UNFCCC. 2012. Approved large scale methodologies related to energy efficiency improvements: AM0017 (steam), AM0020 (water pumps), AM0038 (silicon and ferro alloys), AM0044 (boilers), AM0046 (light bulbs), AM0060 (chillers), AM0062 (power plant turbines), AM0070 (domestic refrigerator production), AM0091 (fuel switching in new buildings). CDM Methodologies.

future insulation. Load profiles for the cold stores need to be examined over several months. It is important to draw up an Energy Balance for the building and its equipment, and to make sure that the 'balance closes' and that there are no 'unexplained' gaps in the supply and demand. This procedure needs to be standardized so that benchmarking can take place between the existing and other cold stores in the project sites.

4.2 TRANSPARENCY AND GOOD GOVERNANCE

4.2.1 Transparency

UNIDO has developed an Enterprise Resource Planning (ERP) system to improve transparency, information flow, efficiency and effectiveness[7]. ERP facilitates the flow of information between all business functions inside an organization and manage the connections to outside stakeholders. Built on a centralized database, ERP systems consolidate all business operations into a uniform and organization-wide system environment.

ERP provides an integrated suite of IT applications that, following best practice, support business processes and activities such as project management, human resource management, finance, procurement and other corporate core functions, both at Headquarters and the field. The implementation of an ERP system will deliver a fully transparent end-to-end process from identification of needs to achievement of project results i.e. the whole project cycle on one ERP platform; and it will share information without duplication, seamlessly connecting operations at Headquarters and field and across business functions and units.

ERP is part of UNIDO's Programme for Change and Organizational Renewal (PCOR) that aims to increase organizational efficiency and effectiveness by fundamentally changing UNIDO's way of doing business and, at the same time, promote a proactive work environment, organization-wide knowledge sharing, risk management and better results-based management to allow for consistent reporting of results to all stakeholders.

4.2.2 Good governance

UNIDO has developed a prime[8] that provides information on good organization, management and governance practices for organizations that fulfill at least in part a public good role, and practical applications for providers of Resource Efficient and Cleaner Production (RECP) services in different regions. The guiding principles of this prime will be used throughout the implementation of the three pilot projects. Governance is defined as "… the processes and interactions by which the organization

[7] UNIDO. 2012. What is ERP? UNIDO website.

[8] UNIDO. 2010. Good organisation, management and governance practices: A primer for providers of services in Resource Efficient and Cleaner Production. UNIDO.

engages and consults with its stakeholders and accounts for its achievements. Governance characterizes how things are decided and then realized within an organization, be it a government or a company. Governance determines how organizations are directed, administered or controlled".

This primer developed by UNIDO and UNEP provides information on the role and composition of a board; procedures used to control, decide and govern; transparency and accountability; conflicts of interest; stakeholder engagement and external communication; operational management; financial management; other aspects.

At present there is no common agreement on how governance can be specifically applied to resource mobilization projects that are implemented for improvements in energy efficiency. UNIDO is willing to work with other agencies and the MLF to use rules and procedures that have been developed to track carbon offsets and other relevant programmes, such as establishing a board and advisory groups; setting boundaries on project eligibility and geographic restriction; defining what types of energy efficiency projects would be included; defining validation and verification procedures; defining the project approval process; establishing a registry; establishing rules to avoid double counting and accounting for energy efficiency reductions; and providing financial information on transaction costs.

4.3 ASSURANCE THAT THESE PROJECTS WOULD AVOID PERVERSE INCENTIVES FOR COUNTRIES

A perverse incentive is one that "… has an unintended and undesirable result which is contrary to the interests of the incentive makers".

The funding of HFC-23 abatement as a by-product of HCFC-22 production is often used as an example of a "perverse incentive". Although the CDM methodology contains a cap on HCFC-22 production eligible for crediting, the incentives from the CDM resulted in more HCFC-22 being produced (to generate HFC-23) than would have been produced without the CDM. Increased production of HCFCs was not intended by the Parties to the Montreal Protocol that agreed in 2007 to significantly accelerate the phase out of HCFCs[9]. As a result, the HFC-23 abatement projects have generated almost half of the Certified Emission Reductions generated under the CDM as the return on investment through the carbon market is 70-90 times more than the cost of destroying HFC-23. Since 2007, 19 HFC-23 abatement projects have been approved including eleven in China, five in India and one each in Argentina, Mexico and South Korea. Changes[10] to the

[9] UNEP. 2007. Decision IXX/6: Adjustments to the Montreal Protocol with regard to Annex C, Group 1, substances (hydrochlorofluorocarbons). Ozone Secretariat website.

[10] UNFCCC. 2011. Report of the 65th Meeting of the CDM Board. Paragraph 86: Summary of changes to AM0001 methodology.

methodology[11] that were recently approved by the CDM Board with the aim of eliminating this perverse incentive are believed by some to be insufficient[12].

The MLF, in establishing the Terms of Reference[13] for the audit of HCFC production in developing countries, aimed to determine if the high HCFC-22 production was driven either by the demand for feedstock for TFE/PTFE or refrigeration purposes, or for financial reward of the CDM credits. Tetrafluoroethylene, the direct reaction product of HCFC-22, is not just used to make PTFE polymer, but is also used to make HFC-125 which is one component of R410a. The audit was required to collect national and individual plant data, place them in the global context for a supply and demand analysis, and assess the impact of the CDM on an individual company, as well as on national and global situations.

4.3.1 Other activities that might result in a perverse incentive

There are concerns that carbon payments for destruction of ODS will result in virgin ODS being deliberately contaminated and then submitted for destruction. As the projects in Viet Nam, the Gambia and Morocco do not require destruction of the HCFCs, they might legitimately be placed on the market as recycled HCFCs that could be used for servicing of equipment. A perverse incentive related to destruction therefore is unlikely to eventuate.

4.3.2 Organizational activities that guard against perverse incentives

Unlike the CDM review process that failed to act in a timely manner to address deficiencies in the methodology that led to the perverse incentives associated with the production of HFC-23, the MLF has a number of procedures in place that make the likelihood of perverse incentives unlikely. The MLF activities that limit the liability of the Fund to perverse incentives include:

1. Timely project assessment and review through various MLF committees, most notably the ExCom. The ExCom routinely requests further information on a project as part of the process of deciding whether or not to fund the project;
2. Timely modification of the HPMP requirements to ensure appropriate action by Parties e.g. for all submissions from the 68th Meeting onwards, the MLF requires notification by the Party requesting funds for HPMP that an enforceable national system of licensing and quotas for HCFC imports and, where applicable, production and exports is in place and that the system is capable of ensuring the

[11] UNFCCC. 2011. Approved baseline and monitoring methodology AM0001 "Decomposition of fluoroform (HFC-23) waste streams. Vers. 06.0.0. Annex 10 of EB65.

[12] EIA. 2012. Response to call for public inputs on issues to be addressed in the CDM policy dialogue. UNFCCC website.

[13] MLF. 2010. Terms of Reference for the Technical Audit of HCFC Production in Article 5 countries. UNEP/OzL.Pro/ExCom/60/54 Annex IX para 4.

country's compliance with the Montreal Protocol HCFC phase-out schedule for the duration of this agreement[14];

3. Projects for the conversion of HCFC-based manufacturing capacity installed after 21 September 2007 would not be considered. This restricts the quantity of HCFCs that would need to be phased out, in the event that some facilities are installed after this date. Since HCFC consumption has continued to increase after this date, it is reasonable to assume that in many countries additional facilities have been put in place for which the fund is not liable.
4. The MLF reduces its liability for ODS phase out by operating at a country level.

In addition, it is important for the MLF establish a registry that contains the relevant details for projects that are co-financed with the MLF. Such a registry could be checked to reduce the risk of duplication of requests, or conversely that a single enterprise is not "double dipping" for funds from multiple sources.

In addition, it is important that the MLF does not specify eligibility criteria based on the minimum size of the cold store equipment, as those with smaller equipment may increase the size in order to comply with a the project criteria.

4.3.3 Perverse incentives that could potentially reduce overall contribution to the MLF and instead be diverted to "voluntary contributions"

As these GEF pilot projects fall exclusively under the focal area of the GEF "Climate Change Mitigation," global environmental benefits of projects are calculated in terms of quantity of tons of CO_2 equivalent mitigated, rather than ozone depleting potential (ODP). The mandate of the GEF is not to reduce the consumption of ozone-depleting substances in Article 5 countries, therefore, the amount of ODP reduced cannot be an outcome indicator, which means donors may not claim directly protecting the ozone layer by a specific amount through GEF projects.

This means that the GEF itself as well as its donors are focusing on the climate change benefits of the project, and ozone as well as other environmental benefits come as value added of climate change projects. The scope of GEF projects is very broad and comprehensive and donors welcome cross-cutting issues rather than see it as an incentive to cut contributions elsewhere. Besides the protection of the ozone layer, for instance, projects targeting the fishing industry also have a positive impact on biodiversity, as improving refrigeration practices help optimize resources throughout the value chain and therefore help to reduce the pressure on fisheries resources and contribute to conservation of fisheries biodiversity. The same rationale would apply to other funding sources like the GEF.

4.4 ENSURING SUSTAINABILITY OF THE PROJECTS PROPOSED

[14] MLF. 2011. UNEP/OzL.Pro/ExCom/63/60, Decision 63/17 para 71

The projects aim at identifying the best technology options for replacing HCFC-22-based industrial refrigeration facilities in different sectors, climates and environments. Pilot conversions will enable generating experiences on the adoption of low-environmental impact technologies in the conversion of existing industrial refrigeration installations, including cost for conversion and assessment of climate benefits. The projects will provide information on most suitable financial mechanisms to leverage additional funds to promote the conversion of the remaining similar industrial refrigeration installations, including fishing vessels.

From the implementation of the approved pilot cases, UNIDO's ultimate goal is to gain experience and expertise that can be used to better assist various countries in developing their national strategy for the HCFC-22 phase-out in the fishing / food processing sectors.

Besides the above mentioned, the demonstrated willingness of the potential partners gives the promise of a successful cooperation for sustainable project outcomes.

Therefore, UNIDO sees the need for sustaining similar activities. However, the main concern would be the means of financing the direct project formulation costs. UNIDO has highlighted before that this project does not relate to core unit cost and therefore, should remain as a stand-alone approach. UNIDO would stand ready to review any suggestions put forward in regards to the establishment of an additional funding source with the main function to provide recourse mobilization within the framework of the of attracting other donors or co-financers for projects, which directly contribute to climate benefits from non eligible activities under the HCFC phase-out.

4.5 AVOIDANCE OF DUPLICATION OF SIMILAR PROJECTS

The term double counting can refer to Double Monetization which occurs when a singular GHG emission reduction or removal is monetized once as a GHG credit and a second time as a GHG allowance[15].

Rules have been developed to guard against both eventualities in all reputable protocol standards that have been developed to track carbon offsets[16]. Similar rules could be adopted in the MLF's resource mobilization projects to guard against programme participants making multiple claims for financial support for the same project. GHG programmes can address this through oversight procedures such as a registry that could be developed for resource mobilization projects.

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[15] VCS. 2012. Double counting: Clarification of the rules. VCS 1 February 2012.

[16] 3Degrees. 2011. Carbon Protocols, standards and registries: Climate Action Reserve; Clean Development Mechanism; Good Standard Foundation; Verified Carbon Standard; Chicago Climate Exchange (CCX).

All GHG programmes must address double counting of GHG emission reductions and removals to ensure environmental integrity. Duplication of projects has been an issue in projects in the Kyoto Protocol, the EU Emissions Trading Scheme and the Voluntary Carbon Market that have the potential to claim the same greenhouse gas credits more than once. GEF projects are no different.

GEF projects should always outline the existence of similar projects in the relevant region and country in the baseline scenario in order to assess how existing projects interfere/interact with the proposed project. This is to avoid the duplication of similar projects and double counting of GHG emission reductions as well as assure additionality of the proposed alternative scenario.

Moreover, the proposed GEF projects will be implemented parallel to stage I of the HPMP and thus prior to stage II of the HPMP. Hence, this project will be incremental to the limited number of activities affecting the cold storage sector that are included in the HPMP stage I and will set the baseline for the HPMP stage II, therefore avoiding double-counting. Although stage II for most of the countries is foreseen to cover the servicing sector in a robust manner, the aim of the HPMP is only the reduction of ODS emissions and it does not deal with greenhouse gas emissions. This GEF project will establish a low GWP development path for cold storage facilities as opposed to the high GWP development path that might result if the HPMP were not accompanied by projects focusing on greenhouse gas emissions such as this one.

Furthermore, before the development of a GEF proposal and in line with the ExCom Decision 63/23, UNIDO addressed the issue of the nature and scope of project to other implementing agencies of the Multilateral Fund requesting verification through official communication on the existence of projects which target the same sectors (fishing / food processing (servicing) sectors).

4.6 INFORMATION ON TRANSACTION COSTS

UNIDO does not plan to apply for carbon finance for the resource mobilization projects that achieve energy reductions as a result of upgrading the technology. Therefore, UNIDO does not believe that transaction costs are applicable at this time.

5. LESSONS LEARNED

5.1 LINKAGES WITH CHILLER PROJECTS

4.1.1 Lessons Learned

A "Desk Study on The Evaluation Of Chiller Projects"[17] has been circulated during the 68th Meeting of the Executive Committee. UNIDO has noted all lessons learned from the desk study and will take them into account in the process of project implementation.

UNIDO has especially taken into consideration that different methodologies and replacement schemes, with a high degree of flexibility, are necessary to adapt a programme to the needs in different countries where markedly different local conditions prevail. This is already reflected in two of the pilot cases. In Viet Nam, a deal has been agreed with the Vietnamese Environmental Protection Fund to provide with soft loans for facility owners. In the Gambia, a revolving fund will be established with the Ministry of Environment.

UNIDO has also noted that co-financing with the GEF has proven to be a key partnership in chiller projects. However, the necessity of synchronizing two major funding sources, the Multilateral Fund and the GEF, can introduce a two to three year project delays but ultimately can create revenue streams that encourage national engagement. Additional high-level meetings between the two should be arranged in order to settle both issues.

The Regional African Chiller project was UNIDO's first attempt to mobilize additional funds through the phase-out of ODSs. The chiller project aims at promoting energy efficient replacements of CFC-based chillers by offering the replacement of 30 chillers in six African countries. The project attempts to remove the barriers to chiller replacement by illustrating a financial and institutional mechanism able to support chiller replacements while making use of and building on existing instruments within the energy market. A full report on the African Chiller Project will be submitted to the 70th Meeting of the Executive Committee of the MLF.

Through chiller project, different financial mechanisms were established in different countries. In Egypt, for instance, a scheme with the National Bank of Egypt was established for the provision of soft loans for companies interested in replacing their old chillers while, in Cameroon, a revolving fund was put in place. Such schemes are necessary, especially in Africa, because beneficiaries do not have the means to give up-front payments for new chillers and in order to ensure the sustainability of the project. This also applies for this project replacing HCFC-based systems. As mentioned, in order to produce sustainable incentives for natural refrigerants, similar schemes must also be put in place. In Viet Nam, soft loans for companies will be facilitated through the Vietnamese Environmental Protection Fund. In the Gambia, a revolving fund will be established.

[17] "Desk study on the evaluation of chiller projects." http://www.multilateralfund.org/68/English/1/6810.pdf

The chiller project serves as valuable experience in building trust between different stakeholders in the private and public sector. In Africa, it has become evident that it is difficult to maintain a sustainable relationship between banks, companies and the government due to the lack of transparency. The chiller project is therefore an example of how to foster cooperation amongst partners in order to achieve a sustainable solution. This will be the case for all three pilot projects currently being developed, as well as future ones. UNIDO shall take the experience from the chiller projects into consideration when developing financial mechanisms for the replacement of HCFC-based systems.

4.1.2 New Approach

Although the two pilot projects (i.e. resource mobilization and chiller programme) are in principle similar, there are limitations in terms of lessons learned. It was necessary e.g. to develop a new approach towards partners and co-financiers: in the chiller project, most of the mobilized funds come from beneficiary companies, since it is a one-time approach. On the other hand, when addressing the issue of HCFC-based systems, a one-time approach is not sufficient to tackle the problem, and a programmatic method should be developed. That is why UNIDO is focusing on the GEF as a partner for these three pilot projects in Viet Nam, the Gambia and Morocco. Upon the successful completion of these projects, it is expected that similar concepts could be developed to replace HCFC-based systems, to be extended also to different sectors and countries.

5.2 GEF PROJECT DESIGN AND DEVELOPMENT

4.2.1 GEF Star Allocation and Competition For Funds

The STAR is a short name of the System for Transparent Allocation of Resources. With the STAR, the GEF Secretariat allocates resources in an indicative way to its eligible countries in a replenishment period. In the fifth replenishment period of the GEF (GEF-5), the STAR covers three focal areas: biodiversity (BD), climate change (CC), and land degradation (LD).[18] Although this system gives predictability of funding and flexibility in programming for eligible countries, it also restrains implementing agencies in terms of potential projects, as they are subject to competition for funds.

With the STAR system, availability of funds depends greatly on:

- Country;
- Number of GEF implementing agencies in the country;
- Allocation of funds for each focal area and number of similar projects;
- Project size;
- Timing.

[18] http://www.thegef.org/gef/sites/thegef.org/files/publication/GEF_STAR_A4_april11_CRA.pdf

In the case of the three pilot cases, availability of GEF funds was limited as this initiative came about quite late into the fifth replenishment period. Usually, in order to ensure greater availability of funds, implementing agencies should try to have projects approved early in the GEF cycle. In the case of Viet Nam, for instance, GEF funds had to be cut down from planned USD 900,000 to approximately USD 300,000 due to stark competition for funds. For Morocco, the proposed project had to be postponed because funds were no longer available for climate change projects under GEF 5. The GEF focal point also expressed the preference of the country towards Full Sized Projects (over USD 2 Mio GEF contribution), therefore UNIDO must wait until the next cycle in order to apply for GEF funds in Morocco. For future projects, concepts should be developed well in advance so that funds can be secured for planned activities.

4.2.2 The GEF Approach

The GEF approach in regards to project design and development is a very holistic one, which involves the engagement of several counterparts, co-financiers prior to project approval. It also requires a broader approach to project impact, including several aspects besides the targeted focal area such as socioeconomic benefits. Below the characteristics of this approach which are the most striking when compared to the development of MLF-funded projects:

a) Co-financing

Developing a GEF project requires intensive exchange with the host government and potential donors/co-financiers. This includes defining modalities of cooperation, activities and co-financing schemes.

b) Project Endorsement Process

Prior to formal submission of a project to the GEF Secretariat, an endorsement letter is required from the GEF Operational Focal Point[19] and from all the co-financiers. This procedure, depending on the national routine, can take more than six months.

c) Socioeconomic benefits

[19] The GEF Focal Points play a critical coordination role regarding GEF matters at country level as well as serving as the liaison with the GEF Secretariat and Implementing Agencies. The GEF Political Focal Points are concerned primarily with issues related to GEF governance, including policies and decisions, as well as relations between member countries and the GEF Council and Assembly. The GEF Operational Focal Points are concerned with the operational aspects of GEF activities, such as endorsing project proposals to affirm that they are consistent with national plans and priorities and facilitating GEF coordination, integration, and consultation at country level.

Besides promoting integrated approaches that tap the potential for synergies across global environmental issues and ensure that resources and capacity build are best utilized, GEF strongly requires the delivery and monitoring of socioeconomic benefits at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits.

In order to strengthen the gender mainstreaming argumentation in UNIDO's two proposal, extensive consultations took place with UNIDO's Gender Focal Point and the project documents were adjusted accordingly.

6. CONCLUSIONS

In the selection of alternative technologies to replace ODSs, energy efficiency has always been taken into account at UNIDO. However, in the recent years, the introduction of low GWP and high energy efficiency alternatives has gained even higher attention to achieve additional climate benefits in the ODS phase-out process. UNIDO is constantly looking into the assessment of climate impacts of the MP activities, including the application of the Multilateral Fund Climate Impact Indicator (MCII) and the GEF Tracking Tool for Climate Change Mitigation Projects. Recognizing the increasing importance of the subject, staff members regularly participate in trainings and related events.

While developing the three pilot projects, it has also become evident that on the country level it would be also necessary to raise awareness, since it is still not fully clear to NOUs how to mobilize additional funds based on climate benefits generated through the phase-out of HCFCs. This happens because the MLF mechanism is a very specific one, and usually NOUs are not exposed to other environmental financial mechanisms. It is, therefore, of paramount importance that NOUs receive training on GEF mechanisms, as well as others, in order to appreciate the differences between MLF and the GEF. This would allow them to facilitate the dialogue with GEF focal points and substantially contribute to project development.

Given its pioneer nature, the present exercise has been a challenge for UNIDO. The brainstorming, the process of exploring the potential co-financing sources, the selection of the target countries, the information and knowledge sharing with the other technical branches of UNIDO all helped our team to have a better understanding on the complex issue of generating climate co-benefits. Furthermore, UNIDO has been working out mechanisms to strengthen the synergies and cooperation with other branches in-house dealing with climate change and energy efficiency, which promises interesting opportunities for the future.

Future Montreal Protocol projects at UNIDO will definitely benefit from the broader perspective gained through the preparation of this exercise.

ANNEX 1: PROJECT RESULTS FRAMEWORK – VIET NAM

Project Narrative	**Indicator**		**Sources of Verification**
Project Objective Reduction of greenhouse gas emission in the cold storage sector in Viet Nam.	*Direct emission reduction:* Direct emissions reduction of 20,000 tonnes of CO_2 equivalent (with the elimination of HCFC-22, with global-warming potential of 1,810) *Indirect emission reduction:* GEF bottom-up methodology – Indirect emissions reduction of 81,000 tonnes of CO_2 equivalent through all the activities GEF top-down methodology – 117,000 tonnes of CO_2 equivalent through all the activities		Reports from MONRE during and after the duration of the project.
Component 1: Policy and Regulatory Support			
Outcome	**Indicator**	**Sources of Verification**	**Assumptions/Risks (see section 4)**
Policy, regulatory and legal measures are adopted by the government to support the adoption of low global-warming potential and energy efficient technology.	Number of national policies changed or adopted in favour of the use of alternative technologies with low global-warming potential.	Public records such as government websites and publications in the national gazette.	Assumes no radical shifts in Government priorities.
Outputs	**Indicator**	**Sources of Verification**	**Assumptions/Risks (see section 4)**
1.1 Gap analysis carried out in the national policy, legal and regulatory frameworks. 1.2 Relevant recommendations drafted into	Availability of gap analysis report. Number of laws/regulations/guidance (new or amended) in favour of	Project progress report UNIDO project progress report.	Continuous government support and participation.

the national laws/regulations/guidance.	low global-warming technologies promulgated.		
Component 2: Technology Transfer			
Outcome	**Indicator**	**Sources of Verification**	**Assumptions/Risks (see section 4)**
Technology with low global-warming potential (hydrocarbon system) is demonstrated, replicated and deployed.	Up to 20,000 tonnes of CO_2 emission reduced, by enterprise/facility Energy efficiency gain in percentage, by enterprise/facility Technicians of 12 enterprises/facilities reported that they can operate the new technology independently	Records of each enterprise/facility to the National Cleaner Production Centre Validation reports from MONRE Reports from the Viet Nam Environmental Protection Fund (VEPF).	The companies want and can proceed with the conversion process.
Outputs	**Indicators**	**Sources of Verification**	**Assumptions/Risks (see section 4)**
2.1 Two pilot demonstration conversions are carried out: 2 cold storage facilities converted from HCFC-22 use to hydrocarbon systems. 2.2 The demonstration	Technology designs are available what time of equipment are installed No of. technicians from each facility are trained	Records of each enterprise/facility to MONRE Validation reports from MONRE Reports of the Viet Nam Environmental Protection Fund	The initial two pilot projects are successful. There is sufficient interest from private sector and trainee technicians. The companies are able to use and

conversions are replicated in up to 10 facilities.	(disaggregated by gender) Monitoring of the results is continuous for minimum 12 months. Reduced emission of greenhouse gases and improved energy efficiency are verified. Up to 900,000 USD from the Viet Nam Environmental Protection Fund will cover the costs from the new equipment in these 10 companies.	(VEPF). UNIDO project report.	maintain the new technology. Trainees value the information provided and are able to use it in their day to day activities.
Component 3: Awareness raising			
Outcome	**Indicators**	**Sources of Verification**	**Assumptions/Risks (see section 4)**
Demand for low-GWP refrigerant systems that are more energy efficient than existing technologies is increased.	At least 20 firm inquiries indicating intent to use alternative refrigerants made to MONRE	Report from MONRE indicates their interest towards the technology.	Continuous support and participation from national authorities and companies.
Outputs	**Indicators**	**Sources of Verification**	**Assumptions/Risks (see section 4)**

3.1 Lessons learnt and information on technology solutions is disseminated to policy makers, companies, and technicians.[20]	Written materials delivered to 50 policy-makers by month 18 (disaggregated by gender). Up to 10 bilateral meetings carried out by month 24. Up to 100 attendees at stakeholder meeting (disaggregated by gender)	Market survey at the end of the project: demand for replicating the technology in other sectors. Monitoring reports on events and activities.	Assumes the ability to gain media attraction on the issues. Continuous government support and participation.

[20] All awareness and capacity indicators will be collected disaggregated by gender

ANNEX 2: PROJECT RESULTS FRAMEWORK – THE GAMBIA

Project Narrative	**Indicator**		**Sources of Verification**
Project Objective Reduction of greenhouse gas emission associated with industrial refrigeration and air-conditioning facilities in The Gambia	*Direct emission reduction*: Direct emissions reduction of 56,000 tonnes of CO_2 equivalent through all the activities (elimination of the use of HCFC-22, with GWP of 1,810, and improved energy efficiency) *Indirect emission reduction*: - GEF bottom-up methodology Indirect emissions reduction of 222,000 tonnes of CO_2 equivalent through all the activities - GEF top-down methodology 432,000 tonnes of CO_2 equivalent through all the activities		Reports from the National Ozone Unit and The Gambia Technical Training Institute during and after the duration of the project.
Component 1: Policy and Regulatory Support			
Outcome	**Indicator**	**Sources of Verification**	**Assumptions/Risks (see section 4)**
Policy, regulatory and legal measures are adopted by the government to support the adoption of low global-warming potential and energy efficient technology.	Number of national policies changed or adopted in favour of the use of alternative technologies with low global-warming potential.	Public records such as government websites and publications in the national gazette.	Assumes no radical shifts in Government priorities.
Outputs	**Indicator**	**Sources of Verification**	**Assumptions/Risks (see section 4)**
1.1 Gap analysis carried out in the national policy, legal and regulatory frameworks. 1.2 Relevant recommendations drafted into	Availability of gap analysis report. Number of laws/regulations/guidance (new or amended) in favour of	Project progress report UNIDO project progress report.	Continuous government support and participation.

the national laws/regulations/guidance.	low global-warming technologies promulgated.		
Component 2: Technology Transfer			
Outcome	**Indicator**	**Sources of Verification**	**Assumptions/Risks (see section 4)**
Technical and financial support on replacement refrigerants, and reducing greenhouse gas emissions and operational costs, is ensured.	Up to 56,000 tonnes of CO_2 equivalent emission reduced Energy efficiency gain in percentage, by enterprise/facility Up to 60 facilities involved in interventions of various scales	Records of each enterprise/facility to the National Ozone Unit and to The Gambia Technical Training Institute Validation reports from The Gambia Technical Training Institute	The pilot demonstration systems with low global-warming potential refrigerants installed. The companies want and can proceed with the conversion process.
Outputs	**Indicators**	**Sources of Verification**	**Assumptions/Risks (see section 4)**
2.1 Refrigeration and air-conditioning support mechanisms established and piloted 2.2 Incentive Mechanism piloted	Up to 20 Support Service providers certified through course given at the training institute (disaggregated by gender) Over 30 interventions supported through the Incentive Mechanism Monitoring of the results is continuous for minimum 12 months. Reduced emission of greenhouse gases and	Records of each enterprise/facility to the The Gambia Technical Training Institute Reports of The Gambia Technical Training Institute UNIDO project report.	There is sufficient interest from private sector and trainee technicians. Certified trainees, as Support Service providers, are able to promote good practices regarding energy efficiency and sustainability in the refrigeration and air-conditioning sector. The companies choose to proceed with improvement process and able to secure financing

	improved energy efficiency are verified.		
Component 3: Awareness raising			
Outcome	**Indicators**	**Sources of Verification**	**Assumptions/Risks (see section 4)**
Demand for refrigerant systems with low global-warming potential that are more energy efficient than existing technologies is increased.	At least 20 firm inquiries indicating intent to use alternative refrigerants made to the Gambia Technical Training Institute and to the Support Service.	Report from the Gambia Technical Training Institute and from the Support Service: Companies indicate their interest towards the new technology.	Continuous support and participation from national authorities and companies.
Outputs	**Indicators**	**Sources of Verification**	**Assumptions/Risks (see section 4)**
3.1 Lessons learnt and information on technology solutions is disseminated to policy makers, companies, and technicians.[21]	Written materials delivered to 15 policy-makers (disaggregated by gender). Capacity perception index of 5 reached by the end of the project for targeted trainees[22]	Market survey at the end of the project: demand for replicating the technology in other sectors. Monitoring reports on events and activities.	Assumes the ability to gain media attraction on the issues. Continuous government support and participation. Trainees value the information provided and are able to use it in their day-to-day activities.

[21] All awareness and capacity indicators will be collected disaggregated by gender

[22] A capacity perception index score of between 1 and 5 will be used, to assessed through a survey at the end of the project, disaggregated by gender as follows: 1. No capacity built; 2. Initial Awareness raised (e.g., workshops, seminars); 3. Substantial training in practical application (e.g. vocational training); 4. Knowledge effectively transferred (e.g. passing examination, certification); 5. Ability to apply or disseminate knowledge demonstrated.