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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Seventy-sixth Meeting
Montreal, 9-13 May 2016

PROJECT PROPOSAL: PAKISTAN

This document consists of the comments and recommendation of the Secretariat on the following project proposal:

Phase-out

- HCFC phase-out management plan (stage II, first tranche) (UNIDO, UNEP)

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Pakistan

(I) PROJECT TITLE	AGENCY	MEETING APPROVED	CONTROL MEASURE
HCFC phase-out plan (Stage II)	UNEP, UNIDO (lead)	n/a	n/a

(II) LATEST ARTICLE 7 DATA (Annex C Group l)	Year: 2015	203.13 (ODP tonnes)

(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)									Year: 2014
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-141b					60.1				60.1
HCFC-142b					1.2				1.2
HCFC-22					178.5				178.5

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline:	247.4	Starting point for sustained aggregate reductions:	247.4
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	79.1	Remaining:	168.3

(V) BUSINESS PLAN		2016	2017	2018	2019	2020	Total
UNIDO	**ODP phase-out (ODP tonnes)**	20.0	0	20.0	0	3.0	43.0
	Funding (US $)	1,488,259	0	1,488,259	0	280,145	3,256,663
UNEP	**ODP phase-out (ODP tonnes)**	10.0	0	5.0	0	5.0	20.0
	Funding (US $)	986,182	0	493,091	0	493,091	1,972,364

(VI) PROJECT DATA			2016	2017	2018	2019	2020	Total
Montreal Protocol consumption limits			222.66	222.66	222.66	222.66	160.81	n/a
Maximum allowable consumption (ODP tonnes)			222.66	222.66	222.66	222.66	160.81	n/a
Project costs requested in principle (US $)	UNIDO	Project costs	2,572,464	0	2,191,358	0	12,950	4,776,772
		Support costs	180,072	0	153,395	0	907	334,374
	UNEP	Project costs	321,268	0	134,432	0	47,300	503,000
		Support costs	41,727	0	17,460	0	6,143	65,330
Total project costs requested in principle (US$)			2,893,732	0	2,325,790	0	60,250	5,279,772
Total support costs requested in principle (US$)			221,799	0	170,855	0	7,050	399,704
Total funds requested in principle (US$)			3,115,531	0	2,496,645	0	54,350	5,679,476

(VII) Request for funding for the first tranche (2016)		
Agency	**Funds requested (US $)**	**Support costs (US $)**
UNEP	321,268	41,727
UNIDO	2,572,464	180,072
Total	2,893,732	221,799
Funding request:	Approval of funding for the first tranche (2016) as indicated above	
Secretariat's recommendation:	For individual consideration	

PROJECT DESCRIPTION

1. On behalf of the Government of Pakistan, UNIDO as the lead implementing agency, has submitted to the 76th meeting stage II of the HCFC phase-out management plan (HPMP) at a total cost of US $7,817,470, consisting of US $6,805,995, plus agency support costs of US $476,420 for UNIDO, and US $473,500, plus agency support costs of US $61,555 for UNEP, as originally submitted. The implementation of stage II of the HPMP will phase-out 80.55 ODP tonnes of HCFCs and assist Pakistan in meeting the Montreal Protocol compliance target of 35 per cent reduction from baseline consumption by 2020.

2. The first tranche for stage II of the HPMP being requested at this meeting amounts to US $4,151,780, consisting of US $3,658,393, plus agency support costs of US $256,087 for UNIDO, and US $210,000, plus agency support costs of US $27,300 for UNEP, as originally submitted.

Status implementation of stage I of the HPMP

3. At the 60th meeting, the Executive Committee approved on an exceptional basis and without setting a precedent, a project proposal for the phase-out of 651.8 metric tonnes (mt) (71.7 ODP tonnes) of HCFC-141b used in the manufacture of insulating polyurethane (PU) rigid foam by five enterprises[1], at a total cost of US $4,840,849, plus agency support costs of US $363,064 for UNIDO (decision 60/32).

4. Subsequently, at the 62nd meeting, the Executive Committee approved, in principle, stage I of the HPMP for Pakistan[2], at the amount of US $5,881,713 (i.e., US $5,008,849, plus agency support costs of US $375,664 for UNIDO, and US $440,000, plus agency support costs of US $57,200 for UNEP), noting that the total amount for UNIDO included the funding for the phase-out of HCFC-141b used by five enterprises previously approved at the 60th meeting (decision 62/59).

Progress in implementation of stage I activities

5. The third (and final) tranche of stage I of the HPMP for Pakistan was approved at the 73rd meeting. An overview of the results of the implementation of stage I of the HPMP is presented below.

ODS policy and regulatory framework

6. The Government of Pakistan has established a legal framework to control ODS, including a national licensing and quota system for import and export of HCFCs. Since 2013, importers are required to be registered before applying for a license to import HCFCs. Through joint collaboration between the Customs-Federal Board of Revenue (FBR) and the national ozone unit (NOU), HCFC controls were incorporated into the web based one customs (WeBOC) system in August 2015.

7. The Government continued enforcing the licensing and quota system controlling the imports and exports of HCFC; 100 customs officers had been trained; and the customs department had been equipped with nine units of refrigerant identifiers and 10 sets of training tools.

8. The verification report for 2015 consumption is currently under preparation.

[1] United Refrigeration, HNR (Haier), Varioline Intercool, Shadman Electronics, and Dawlance.
[2] UNEP/OzL.Pro/ExCom/62/44.

PU foam sector

9. The conversions of the five enterprises manufacturing insulation foam for domestic and commercial refrigerators to cyclopentane foam blowing technology have been completed. Due to increased production, the conversion of these enterprises resulted in an actual phase-out of 89.4 ODP tonnes of HCFC-141b, i.e., 17.7 ODP tonnes above the 71.7 ODP tonnes used by the enterprises when the project was approved.

Refrigeration servicing sector

10. With regard to the refrigeration servicing sector, in total 33 technicians were trained as trainers and participated in the training of 175 technicians in good service practices. Awareness activities were implemented including development and distribution of materials, and conducting workshops on emerging ozone friendly technologies that minimize the impact on the climate.

Project implementation and monitoring unit (PMU)

11. The PMU supported the NOU in the implementation of HPMP through development of technical specifications for investment projects, implementation of public awareness campaigns; and exercising financial control of the funds according to UNIDO and UNEP rules and regulations.

Status of disbursements

12. As of March 2016, of the total funds of US $5,448,849 so far approved, US $5,367,383 has been disbursed. The remaining US $81,466 will be disbursed in 2016.

Stage II of the HPMP and proposed activities

13. Through stage II of the HPMP, the Government of Pakistan is proposing to achieve the 35 per cent reduction of HCFC consumption by 2020 through the phase-out of 80.55 ODP tonnes of HCFCs, consisting of: 66.29 ODP tonnes used as a foam blowing agent (i.e.,58.69 ODP tonnes of HCFC-141b, 4.89 ODP tonnes of HCFC-142b, and 2.76 ODP tonnes of HCFC-22); 7.39 ODP tonnes of HCFC-22 through the conversion of a locally owned air-conditioning manufacturing enterprise; and 6.88 ODP tonnes of HCFC-22 through continued implementation of phase-out activities in the refrigeration servicing sector initiated during stage I.

Remaining consumption eligible for funding

14. Taking into consideration the phase-out of 79.10 ODP tonnes of HCFCs associated with stage I of the HPMP, the remaining consumption eligible for funding in stage II would be 168.3 ODP tonnes. The total phase-out of HCFC to be achieved in stage I and stage II would be 152.06 ODP tonnes, reducing HCFC consumption by 61.5 per cent of the baseline, as shown in Table 1.

Table 1. Overview of the remaining HCFC consumption in Pakistan

Description	HCFC-22		HCFC-141b		Total	
	mt	ODP tonnes	mt	ODP tonnes	mt	ODP tonnes
Starting point	1,980.00	108.90	1,259.09	138.50	3,239.09	247.40
Reduction in stage I	134.54	7.40	651.82	71.70	786.36	79.10
Remaining	1,845.46	101.50	607.27	66.80	2,452.73	168.30
Reduction in stage II	259.92	14.27	533.55	58.69	793.47	72.96*
Remaining for future stages	1,585.54	87.23	73.72	8.11	1,659.26	95.34

(*) Does not include consumption of HCFC-22/HCFC-142b in XPS (7.6 ODP tonnes)

ODS policy and regulatory framework

15. The ODS policy and regulatory framework in place will continue to be enforced and strengthened during implementation of stage II of the HPMP.

HCFC consumption and sector distribution

16. The Government of Pakistan reported a consumption of 203.13 ODP tonnes of HCFC in 2015. The 2012-2015 HCFC consumption is shown in Table 2.

Table 2. HCFC consumption in Pakistan (2012-2015 Article 7 data)

HCFC	2012	2013	2014	2015	Baseline
Metric tonnes					
HCFC-22	3,085.90	2,731.09	3,245.01	2,562.39	1,979.8
HCFC-123	0.00	1.08	0.00	0.00	0.0
HCFC-141b	1,391.90	845.00	546.50	555.75	1,259.1
HCFC-142b	52.30	59.06	18.44	16.42	0.00
Total (metric tonnes)	4,530.10	3,636.23	3,809.95	3,134.56	3,238.9
ODP tonnes					
HCFC-22	169.72	150.21	178.48	140.93	108.90
HCFC-123	0.00	0.02	0.00	0.00	0.0
HCFC-141b	153.11	92.95	60.12	61.13	138.50
HCFC-142b	3.40	3.84	1.20	1.06	0.0
Total (ODP tonnes)	326.23	247.02	239.79	203.13	247.40

17. Based on the survey conducted for the preparation of stage II of the HPMP in 2015, the sector distribution of HCFCs is presented in Table 3.

Table 3. Sector distribution of HCFCs in 2015*

Sector	HCFC	Consumption	
		mt	ODP tonnes
Manufacturing			
PU foam	HCFC-141b		
Insulation for refrigerators		23.00	2.53
Flexible moulded foam		146.90	16.16
Insulation for pipes		15.90	1.75
Panels		232.20	25.54
Spray		122.80	13.51
Thermoware		314.30	34.57
XPS foam	HCFC-22	50.20	2.76
	HCFC-142b	75.30	4.89
RAC manufacturing	HCFC-22	639.72	35.18
ICR manufacturing	HCFC-22	150.34	8.27
Subtotal manufacturing	-	1,770.66	145.16
Servicing	HCFC-22	998.80	54.93
Total consumption	**-**	**2,769.46**	**200.09**
Summary by HCFC	HCFC-141b	855.10	94.06
	HCFC-22	1,839.06	101.64
	HCFC-142b	75.30	4.89
Total consumption		**2,769.46**	**200.09**

* Based on the survey undertaken for preparation of stage II of the HPMP.

HCFC consumption in manufacturing sectors

Foam manufacturing

18. Based on the survey undertaken for the preparation of stage II of the HPMP, HCFC-141b is used in the manufacture of PU sandwich panels, flexible moulded foam, thermoware foam, pipe PU insulation and spray foam, while HCFC-142b/HCFC-22 (60/40 ratio) is used in XPS foam manufacturing.

19. The largest consumption of HCFC-141b is in the manufacture of PU foam for sandwich panels (four enterprises) and thermoware (seven enterprises) with a total consumption of 533.55 mt (58.69 ODP tonnes) in 2015, plus 13.00 mt (1.43 ODP tonnes) used by the informal sector. The remaining consumption of 308.6 mt (33.95 ODP tonnes) of HCFC-141b is used in the manufacture of flexible moulded, spray foam, and pipe insulation, by a large number of small enterprises. Only one enterprise manufactures XPS foam with consumption of 7.65 ODP tonnes of HFCF-142b and HCFC-22.

AC manufacturing sector

20. Approximately 800 mt (44 ODP tonnes) of HCFC-22 is used by five manufacturers of domestic AC equipment, and three manufacturers of commercial and industrial air-conditioners. Only the conversion of one enterprise manufacturing domestic air-conditioners, Dawlance, with a consumption of 7.44 ODP tonnes of HCFC-22, had been included in stage II of the HPMP. The remaining enterprises will be converted in future stages.

HCFC consumption in the refrigeration servicing sector

21. The consumption of HCFC-22 in the refrigeration servicing sector, estimated at 900.0 mt (54.9 ODP tonnes) in 2015, is used to service window AC units, domestic and commercial split AC units (representing over 70 per cent of the total consumption), and larger AC units in commercial establishments.

22. The refrigeration servicing sector is made up of different sized workshops usually employing one to two technicians, and characterized by seasonal workers. During the high-season for servicing (i.e., summer period), the small workshops consume around 20 kg of HCFC-22 per month, and less during the off-season (i.e., winter months). Larger workshops with more than two technicians consume around 40 to 50 kg of HCFC-22 during the high season.

Phase-out activities proposed in stage II of the HPMP

Regulatory framework

23. The ODS regulatory framework in place will support implementation of stage II of the HPMP. It will enforce ODS controls and restrictions on HCFC-based products, issue HCFC import quotas, explore option for ODS recovery and recycling, and provide training to customs officers.

24. The regulatory framework will also support the conversion of the PU foam sector by imposing a ban on import and use of HCFC-141b after all enterprises have been converted; and support the introduction of flammable and/or toxic alternative refrigerants by, for example, adopting standards for the safe use of HC-290 refrigerant.

Activities in the foam manufacturing sector

25. Stage II proposes to phase-out 58.70 ODP tonnes of HCFC-141b in the PU foam manufacturing sector through the conversion of the following enterprises:

(a) Seven enterprises manufacturing PU thermoware, with a consumption of 33.29 ODP tonnes (302.53 mt) to water-blown technology. Five of these enterprises received funding for their phase-out of CFC-11, and therefore are categorized as second-stage conversions;

(b) Four enterprises manufacturing PU discontinuous panels with a consumption of 23.98 ODP tonnes (218.02 mt) to cyclopentane technology; and

(c) Technical assistance and training on alternative technologies and the application of new formulations to several small- and medium-size enterprises (SMEs) manufacturing PU thermoware and discontinuous panel foam, mainly without a foam dispenser in the baseline, with a consumption of 1.43 ODP tonnes (13.00 mt).

26. For the enterprises manufacturing discontinuous panels converting to cyclopentane, incremental capital costs (ICC) included the installation of hydrocarbon storage and mixing stations, replacement of foam dispensers (where applicable); safety related equipment; and training, trials and safety audit. For the enterprises manufacturing thermoware converting to water-blown technology, ICC included retrofit or replacement of foam dispensers where applicable; installation of pre-mixing units; buffer tanks; and technology transfer, trials and training. Calculation of the incremental operating costs (IOC) were based on the costs of alternative formulations, and increases in foam density where required. IOC were requested for two years for water-blown technology and up to US $5.00/kg for non-SMEs. Conversion to cyclopentane technology resulted in incremental savings of US $5,162.

27. A summary of the PU foam sector plan is presented in table 4.

Table 4. Total cost for the conversion of the foam sector

Enterprise	Consumption		Cost (US $)			C.E. (US $/kg)
	mt	ODP tonnes	ICC	IOC	Total	
Thermoware converted to CO_2/water						
Shoaibee Industries	97.76	10.75	220,000	343,629	563,629	5.77
Full Bright Plastic	48.14	5.30	167,200	169,351	336,551	6.99
Asif Zubair & Company	40.38	4.44	246,400	141,831	388,231	9.61
Tropical Plastic	30.14	3.32	130,900	142,487	273,387	9.07
Unique Plastic	33.87	3.73	291,500	134,309	425,809	12.57
Delight Plastic	29.09	3.20	203,500	115,339	318,839	10.96
Decent Plastic	23.15	2.55	151,800	109,464	261,264	11.29
Technical assistance SMEs	7.00	0.77	59,409	-	59,409	8.49
Subtotal	309.53	34.06	1,470,709	1,156,410	2,627,119	8.49
Discontinuous panels converted to cyclopentane						
Pakistan Insulation (Pvt.) Ltd.	96.12	10.57	401,500	-2,665	398,835	4.15
PAECO	39.53	4.35	335,500	-842	334,658	8.47
Foster Refrigerators (Pvt.) Ltd.	40.92	4.50	335,500	-816	334,684	8.18
Kold Kraft (Pvt.) Ltd.	41.45	4.56	352,000	-839	351,161	8.47
Technical assistance SMEs	6.00	0.66	39,062	-	39,062	6.51
Subtotal	224.02	24.64	1,463,562	-5,162	1,458,400	6.51
Total	**533.55**	**58.69**	**2,934,271**	**1,151,248**	**4,085,519**	**7.66**

28. The remaining consumption of HCFC-141b (i.e., flexible moulded, insulation for pipes and refrigerators) will be phased out without additional assistance from the Multilateral Fund, except for the remaining eligible consumption of 8.11 ODP tonnes in small spray foam enterprises which will be included in stage III due to the absence of suitable cost effective alternative technologies for this application in the local market.

29. One enterprise manufacturing XPS board foam, Symbol Industry, with a total consumption of 7.65 ODP tonnes of HCFC-22/HCFC-142b, will be converted to CO_2 with DME/HFC technology. The cost of the conversion has been estimated at US $1,007,756 (i.e., ICC (i.e., installation of safety equipment to mitigate flammability, modification of components like the extruder dyes, storage for refrigerant, blowing agent metering units, etc.) at US $764,170 and IOC at US $243,586), with a cost-effectiveness of US $8.10/kg.

Activities in the AC manufacturing sector

30. Stage II proposes to convert one eligible enterprise in the AC manufacturing sector, Dawlance, with an annual production of 119,000 units, from HCFC-22 to HC-290 technology. The conversion will include a redesign of the model, installation of a new refrigerant charging board and a refrigerant transfer system; safety equipment including gas detection and ventilation systems; new leak detectors; and training and safety inspection. The cost of the conversion is estimated at US $1,583,720 (i.e., ICC at US $737,000 and IOC at US $846,720 (calculated at the threshold of US $6.30/kg under decision 75/40)). The cost-effectiveness of the conversion is US $11.79/kg.

Activities in the refrigeration servicing sector

31. The following activities in the refrigeration servicing sector will be implemented to phase-out 6.9 ODP tonnes of HCFC-22, at a total cost of US $602,500:

(a) Continued review and update of ODS policies to ensure sustainability of phase-out activities and the establishment and management of ODS recovery/recycling centres (US $36,000) (UNEP);

(b) Development of standards for safe handling of flammable and toxic refrigerants for enterprises, servicing workshops, and for foam and RAC products (US $20,000) (UNIDO);

(c) Continued development of policy, enforcement and capacity building through training of 100 customs and enforcement officers; provision of 10 refrigerant identifiers; and regional and cross-border enforcement cooperation meetings (US $109,000) (UNIDO);

(d) Training and certification for 1,000 RAC service technicians on best refrigeration practices, and certification of 200 technicians through a pilot technician certification programme; and distribution of three sets of tools and equipment for training and certification centres (US $402,500) (UNEP); and

(e) Promotion and introduction of low-GWP alternative technologies in the local language in collaboration with the Pakistan Society of Heating Ventilation Air-Conditioning Refrigeration (US $35,000) (UNEP).

Implementation and monitoring activities

32. The PMU will coordinate the implementation of stage II through, *inter alia*, monitoring the quota and licensing system; support policy and regulatory actions including the establishment and management of ODS recovery/recycling centres; and enhance control on goods entering Pakistan under the Free Trade Agreement.

Total cost of stage II of the HPMP

33. The total cost of stage II of the HPMP for Pakistan has been estimated at US $7,279,495 (excluding support costs), with an overall cost effectiveness of US $7.94/kg, as shown in Table 5. Implementation of stage II will result in the phase-out of 80.55 ODP tonnes of HCFCs.

Table 5. Summary of proposed activities and cost of stage II of the HPMP for Pakistan as submitted

Sector	HCFC	Consumption		Cost (US $)	CE (US $/kg)
		mt	ODP tonnes		
Manufacturing sector					
PU foam panels	HCFC-141b	224.0	24.64	1,458,400	6.51
PU foam thermoware	HCFC-141b	309.5	34.05	2,627,119	8.49
XPS foam	HCFC-22/HCFC-142b	124.3	7.60	1,007,756	8.11
Domestic AC	HCFC-22	134.4	7.39	1,583,720	11.78
Subtotal manufacturing		**792.2**	**73.68**	**6,676,995**	**8.43**
Refrigeration servicing	HCFC-22	125.5	6.88	602,500	4.80
Total		**917.2**	**80.55**	**7,279,495**	**7.94**

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

34. The Secretariat reviewed stage II of the HPMP for Pakistan in light of stage I, the policies and guidelines of the Multilateral Fund, including the criteria for funding HCFC phase-out in the consumption sector for stage II of HPMPs (decision 74/50), and the 2016-2018 business plan of the Multilateral Fund.

Verification report

35. In approving the third tranche of stage I of the HPMP[3] (73rd meeting), UNIDO and UNEP were requested to submit to the Executive Committee the project completion report for stage I no later than the 75th meeting, and a verification report confirming that the country had met the Montreal Protocol targets for 2015 no later than the first meeting of 2016; and to address the issues on the licensing and quota system identified in the verification report during the preparation of stage II of the HPMP.

36. UNIDO explained that the verification report for HCFC consumption in 2015 is currently on-going and is expected to be completed by May 2016, however, the Government of Pakistan has already reported an HCFC consumption of 203.13 ODP tonnes in 2015 under Article 7 of the Montreal Protocol, which is below the control measures under the Protocol and under its Agreement with the Executive Committee. UNIDO submitted to the Secretariat the project completion report for the

[3] Annex X of document UNEP/OzL.Pro/ExCom/73/62 (List of projects and activities approved for funding).

conversion of the five manufacturing enterprises in December 2015 (representing over 82 per cent of the total funding of stage I). With regard to the issues on the licensing and quota system identified in the verification report submitted to the 73rd meeting, UNIDO indicated that in 2015, the FBR introduced changes to the licensing system including the revision of the appropriate regulation to ensure the use of the harmonized customs codes for HCFCs to record imports and exports, and comprehensive data recording of each actual import compared to the permit issued, per importer. These changes were also incorporated into the customs training curriculum.

Country programme (CP) report

37. In reviewing the 2014 CP data submitted by Pakistan, it was noted that all HCFC consumption was reported under the refrigeration servicing sector and none under manufacturing. UNIDO was advised to encourage the Government of Pakistan to revise the CP data submitted to reflect actual distribution of HCFC consumption in the manufacturing and servicing sectors. UNIDO indicated that this will be revised upon submission of the 2015 CP data report.

Issues on the remaining consumption eligible for funding

38. While the submission included the phase-out of 75.3 mt (4.89 ODP tonnes) of HCFC-142b used by one XPS foam enterprise, there was no eligible funding for it as this consumption was not included in the calculation of the HCFC baseline for compliance (the starting point for aggregate reductions in HCFC consumption). Accordingly UNIDO agreed to defer the request for the conversion of the XPS foam manufacturing enterprises until such time that the Government of Pakistan submits a request to the Implementation Committee to revise its HCFC baseline to include the consumption of HCFC-22 and HCFC-142b associated with the enterprise, and demonstrating that it was established before the cut-off date of 21 September 2007.

39. The Secretariat further noted that the country will phase-out an additional 25.48 ODP tonnes HCFC-141b in the foam sector without assistance from the Multilateral Fund, resulting in a remaining eligible consumption of 8.11 ODP tonnes associated with the spray foam sector which will be phased out in future stages.

Overarching strategy for stage II

40. UNIDO reiterated that the Government of Pakistan commits to phasing out the use of HCFC-141b in all foam applications by 2020 including the 25.48 ODP tonnes without assistance from the Multilateral Fund, and to phasing out 8.11 ODP tonnes in spray foam in stage III since cost-effective low-GWP alternative foam blowing technologies (i.e., HFO) still need to be identified, developed and tested, noting that smaller enterprises take a longer time to adopt new technologies. The Government also commits to initiate conversion in the AC manufacturing sector by converting one company to HC-290, to promote the use of this technology in the country.

Issues related to activities proposed in stage II of the HPMP

41. During the discussion, costs of foam dispensers, pre-mixing units, nitrogen systems, firefighting reservoirs, exhaust systems, and trials and training associated with foam enterprises manufacturing sandwich panels, were reduced by US $175,438.

42. Regarding the eligibility of the five foam enterprises manufacturing thermoware that received funding for the phase-out of CFC-11, (i.e., second-stage conversions), it was noted that the enterprises are converting to low-GWP alternatives and are therefore eligible for funding in accordance with

decision 74/50(b)(i) and (c)[4]. However, as these enterprises had already been provided with foaming equipment during the earlier conversion, US $750,200 associated with such equipment was deducted.

43. IOC were adjusted for one-year (rather than the two-year period requested in the project proposal) and for maintaining the same foam density, when an increase was proposed with the use of cyclopentane technology.

44. Technical assistance was included in the amount of US $98,471 for very small foam enterprises with a consumption of 13 mt, to support the conversion to low-GWP alternatives.

45. The total agreed cost to phase-out of 533.55 mt (58.69 ODP tonnes) of HCFC-141b for the foam sector amounts to US $2,730,522, with a cost effectiveness of US $5.12/kg, as shown in Table 6.

Table 6. Agreed activities and costs for the foam sector in Pakistan

Enterprise	Consumption		Cost (US $)			C.E. (US $/kg)
	mt	ODP tonnes	ICC	IOC	Total	
Thermoware converted to CO_2/water						
Shoaibee Industries	97.76	10.75	88,000	199,846	287,846	2.94
Full Bright Plastic	48.14	5.30	134,200	98,419	232,619	4.83
Asif Zubair & Company	40.38	4.44	88,000	82,545	170,545	4.22
Tropical Plastic	30.14	3.32	88,000	82,640	170,640	5.66
Unique Plastic	33.87	3.73	88,000	77,973	165,973	4.90
Delight Plastic	29.09	3.20	176,000	66,969	242,969	8.35
Decent Plastic	23.15	2.55	88,000	63,489	151,489	6.54
Technical assistance SMEs	7.00	0.77	59,409	0	59,409	8.49
Subtotal	309.53	34.06	**809,609**	**671,881**	1,481,490	4.79
Discontinuous panels converted to cyclopentane						
Pakistan Insulation (Pvt.) Ltd.	96.12	10.57	352,000	0	352,000	3.66
PAECO	39.53	4.35	275,000	0	275,000	6.96
Foster Refrigerators (Pvt.) Ltd.	40.92	4.50	286,000	0	286,000	6.99
Kold Kraft (Pvt.) Ltd.	41.45	4.56	297,000	0	297,000	7.17
Technical assistance SMEs	6.00	0.66	39,062	0	39,062	6.51
Subtotal	224.02	24.64	**1,249,062**	**0**	**1,249,062**	**5.58**
Total	**533.55**	**58.69**	**2,058,671**	**671,881**	**2,730,552**	**5.12**

46. During the discussion the cost for the conversion of the AC manufacturing enterprise to HC-290 was reduced from US $737,000 to US $715,000, after adjustments to the costs related to product redesign, technology transfer, vacuum pumps, leak detectors, civil works, and refrigerant storage.

Agreed costs for stage II of the HPMP

47. The agreed cost of the activities proposed in stage II of the HPMP amounts to US $5,279,772, including US $385,000 for the PMU (i.e., US $30,000 for UNEP and US $355,00 for UNIDO), and

[4] Full funding of eligible incremental costs of second-stage conversion projects would be considered in those cases where an Article 5 Party clearly demonstrated in its HPMP that such projects were necessary to comply with the Montreal Protocol HCFC targets up to and including the 35 per cent reduction step by 1 January 2020; and/or were the most cost-effective projects measured in ODP tonnes that the Party concerned could undertake in the manufacturing sector in order to comply with those targets; and/or would make the transition to low-GWP alternatives.

excluding agency support costs, as shown in Table 7. Stage II of the HPMP will result in the phase-out of 72.96 ODP tonnes of HCFCs with an overall cost-effectiveness of US $6.17/kg.

Table 7. Agreed cost for stage II of the HPMP for Pakistan

Sector	Substance	mt	ODP tonnes	ICC (US $)	IOC (US $)	Funds requested (US $)	C.E. (US $/kg)
PU foam enterprise conversion	HCFC-141b	533.55	58.69	2,058,671	671,881	2,730,552	5.12
Domestic AC manufacturing	HCFC-22	134.40	7.39	715,000	846,720	1,561,720	11.62
Servicing sector	HCFC-22	125.52	6.88	-	-	602,500	4.80
Total	**All**	**793.47**	**72.98**	**2,773,671**	**1,518,601**	**4,894,772**	**6.17**
PMU						385,000	n/a
Total						**5,279,772**	**6.17**

48. The total phase-out of HCFCs associated with stage I (79.1 ODP tonnes) and stage II (72.9 ODP tonnes) amounts to 152.0 ODP tonnes, which represents a reduction of 61.5 per cent of the HCFC baseline consumption. Further to a discussion, UNIDO provided information that the Government of Pakistan agreed to extend its commitment to phase-out 50 per cent of the HCFC baseline by 2020 (instead of 35 per cent as originally proposed).

Impact on the climate

49. The conversion of the remaining PU foam manufacturing enterprises in Pakistan would avoid the emission into the atmosphere of some 379,537 tonnes of CO_2 equivalent per year, as shown in Table 8.

Table 8. Impact on the climate PU foam projects

Substance	GWP	Tonnes/year	CO_2-eq (tonnes/year)
Before conversion			
HCFC-141b	725	533.55	386,823
Total before conversion	725	533.55	386,823
After conversion			
Cyclopentane, CO_2/water	~20	364.37	7,287
Impact			**379,537**

50. Table 9 presents the climate impact on the AC manufacturing sector based on the multilateral climate impact indicator (MCII), indicating emission reductions of 304,964 tonnes of CO_2 equivalent with the use of HC-290 as an alternative.

Table 9. Climate impact in the air-conditioning sector in Pakistan*

Refrigerant charge: 1.13**			Refrigeration capacity: 5.2 KW		
Yearly output: 119,000			Export to non-A5 countries: 0		
Enterprise	**Alternatives**	**Emission (tCO2eq)**			
			Before conversion	**After conversion**	**Emission reduction**
Dawlance, Karachi*	HC-290	Direct	244,144	283	243,861
		Indirect	2,237,951	2,176,848	61,103
		Sub-total	2,482,095	2,177,131	304,964

***** The climate impact in a life time of 12 years of equipment.

****** The company produces units from 1 to 4 ton of refrigeration with the largest share for 1.5 ton split units. Calculations are based on assuming the full production at this capacity.

51. The proposed activities in the servicing sector, which include better containment of refrigerants through training and provision of equipment, will reduce the amount of HCFC-22 used for refrigeration servicing. Each kilogramme of HCFC-22 not emitted due to better refrigeration practices results in a savings of approximately 1.8 CO_2-equivalent tonnes. However, a more accurate quantitative assessment on the impact on climate cannot be conducted. The impact might be established through an assessment of implementation reports by, *inter alia*, comparing the levels of refrigerants used annually from the commencement of the implementation of the HPMP, the reported amounts of refrigerants being recovered and recycled, the number of technicians trained and the HCFC-22 based equipment being retrofitted.

Co-financing

44. No co-financing from beneficiary enterprises is expected for stage II of the HPMP. The Government has committed to provide in-kind contribution for the implementation of some activities under the policy and regulatory component of the HPMP.

2016-2018 draft business plan of the Multilateral Fund

52. UNIDO and UNEP are requesting US $5,279,492, plus agency support costs, for the implementation of stage II of the HPMP (2016-2018). The total funding requested for stage II in the business plans for UNIDO and UNEP is US $4,455,791.

Draft Agreement

53. A draft Agreement between the Government of Pakistan and the Executive Committee for the phase-out of HCFCs in stage II of the HPMP is contained in Annex I to the present document.

RECOMMENDATION

54. The Executive Committee may wish to consider:

(a) Approving, in principle, stage II of the HCFC phase-out management plan (HPMP) for Pakistan for the period 2016 to 2020 to reduce HCFC consumption by 50 per cent of its baseline, in the amount of US $5,679,476, consisting of US $4,776,772, plus agency support costs of US $334,374 for UNIDO and US $503,000, plus agency support costs of US $65,330 for UNEP;

(b) Noting that the Government of Pakistan has committed to reducing HCFC consumption by 50 per cent by 2020;

(c) Deducting 72.98 ODP tonnes of HCFCs from the remaining HCFC consumption eligible for funding;

(d) Approving the draft Agreement between the Government of Pakistan and the Executive Committee for the reduction in consumption of HCFCs, in accordance with stage II of the HPMP, contained in Annex I to the present document;

(e) Approving the first tranche of stage II of the HPMP for Pakistan, and the corresponding tranche implementation plans, at the amount of US $3,115,531, consisting of US $2,572,464 plus agency support costs of US $180,072 for UNIDO and US $321,268

plus agency support costs of US $41,727 for UNEP; and

(f) Noting that during the implementation of stage II of the HPMP, the Government of Pakistan could submit an investment project to phase-out the use of HCFC-142b in the extruded polystyrene (XPS) foam manufacturing sector on the condition that the country's baseline consumption is revised to include HCFC-142b and approved by the Meeting of the Parties to the Montreal Protocol.

Annex I

DRAFT AGREEMENT BETWEEN THE GOVERNMENT OF PAKISTAN AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE REDUCTION IN CONSUMPTION OF HYDROCHLOROFLUOROCARBONS IN ACCORDANCE WITH STAGE II OF THE HCFC PHASE-OUT MANAGEMENT PLAN

1. This Agreement represents the understanding of the Government of Pakistan (the "Country") and the Executive Committee with respect to the reduction of controlled use of the ozone-depleting substances (ODS) set out in Appendix 1-A ("The Substances") to a sustained level of 123.7 ODP tonnes by 1 January 2020 in compliance with Montreal Protocol schedule.

2. The Country agrees to meet the annual consumption limits of the Substances as set out in row 1.2 of Appendix 2-A ("The Targets, and Funding") in this Agreement as well as in the Montreal Protocol reduction schedule for all Substances mentioned in Appendix 1-A. The Country accepts that, by its acceptance of this Agreement and performance by the Executive Committee of its funding obligations described in paragraph 3, it is precluded from applying for or receiving further funding from the Multilateral Fund in respect to any consumption of the Substances that exceeds the level defined in row 1.2 of Appendix 2-A as the final reduction step under this Agreement for all of the Substances specified in Appendix 1-A, and in respect to any consumption of each of the Substances that exceeds the level defined in rows 4.1.3 and 4.2.3 (remaining consumption eligible for funding).

3. Subject to compliance by the Country with its obligations set out in this Agreement, the Executive Committee agrees, in principle, to provide the funding set out in row 3.1 of Appendix 2-A to the Country. The Executive Committee will, in principle, provide this funding at the Executive Committee meetings specified in Appendix 3-A ("Funding Approval Schedule").

4. The Country agrees to implement this Agreement in accordance with the stage II of the HCFC phase-out management plan (HPMP) approved ("the Plan"). In accordance with sub-paragraph 5(b) of this Agreement, the Country will accept independent verification of the achievement of the annual consumption limits of the Substances as set out in row 1.2 of Appendix 2-A of this Agreement. The aforementioned verification will be commissioned by the relevant bilateral or implementing agency.

5. The Executive Committee will not provide the Funding in accordance with the Funding Approval Schedule unless the Country satisfies the following conditions at least eight weeks in advance of the applicable Executive Committee meeting set out in the Funding Approval Schedule:

(a) That the Country has met the Targets set out in row 1.2 of Appendix 2-A for all relevant years. Relevant years are all years since the year in which this Agreement was approved. Years for which there are no due country programme implementation reports at the date of the Executive Committee meeting at which the funding request is being presented are exempted;

(b) That the meeting of these Targets has been independently verified, unless the Executive Committee decided that such verification would not be required;

(c) That the Country had submitted a Tranche Implementation Report in the form of Appendix 4-A ("Format of Tranche Implementation Reports and Plans") covering each previous calendar year; that it had achieved a significant level of implementation of activities initiated with previously approved tranches; and that the rate of disbursement of funding available from the previously approved tranche was more than 20 per cent; and

(d) That the Country has submitted a Tranche Implementation Plan in the form of Appendix 4-A covering each calendar year until and including the year for which the funding schedule foresees the submission of the next tranche or, in case of the final tranche, until completion of all activities foreseen.

6. The Country will ensure that it conducts accurate monitoring of its activities under this Agreement. The institutions set out in Appendix 5-A ("Monitoring Institutions and Roles") will monitor and report on implementation of the activities in the previous Tranche Implementation Plans in accordance with their roles and responsibilities set out in Appendix 5-A. This monitoring will also be subject to independent verification as described in paragraph 4 above.

7. The Executive Committee agrees that the Country may have the flexibility to reallocate part or all of the approved funds, according to the evolving circumstances to achieve the smoothest reduction of consumption and phase-out of the Substances specified in Appendix 1-A:

(a) Reallocations categorized as major changes must be documented in advance either in a Tranche Implementation Plan as foreseen in sub-paragraph 5(d) above, or as a revision to an existing Tranche Implementation Plan to be submitted eight weeks prior to any meeting of the Executive Committee, for its approval. Major changes would relate to:

(i) Issues potentially concerning the rules and policies of the Multilateral Fund;

(ii) Changes which would modify any clause of this Agreement;

(iii) Changes in the annual levels of funding allocated to individual bilateral or implementing agencies for the different tranches; and

(iv) Provision of funding for programmes or activities not included in the current endorsed Tranche Implementation Plan, or removal of an activity in the Tranche Implementation Plan, with a cost greater than 30 per cent of the total cost of the last approved tranche;

(b) Reallocations not categorized as major changes may be incorporated in the approved Tranche Implementation Plan, under implementation at the time, and reported to the Executive Committee in the subsequent Tranche Implementation Report;

(c) Should the Country decide during implementation of the Agreement to introduce an alternative technology other than that proposed in the Plan, this would require approval by the Executive Committee as part of a Tranche Implementation Plan or the revision of the approved plan. Any submission of such a request for change in technology would identify the associated incremental costs, the potential impact to the climate, and any differences in ODP tonnes to be phased out if applicable. The Country agrees that potential savings in incremental costs related to the change of technology would decrease the overall funding level under this Agreement accordingly;

(d) Any enterprise to be converted to non-HCFC technology included in the Plan and that would be found to be ineligible under the guidelines of the Multilateral Fund (i.e., due to foreign ownership or establishment post the 21 September 2007 cut-off date), will not receive assistance. This information would be reported to the Executive Committee as part of the Tranche Implementation Plan; and

(e) Any remaining funds held by the bilateral or implementing agencies or the country under

the Plan will be returned to the Multilateral Fund upon completion of the last tranche foreseen under this Agreement.

8. Specific attention will be paid to the execution of the activities in the refrigeration servicing sub-sector included in the Plan, in particular:

(a) The Country would use the flexibility available under this Agreement to address specific needs that might arise during project implementation; and

(b) The Country and the relevant bilateral and/or implementing agencies will take into consideration decision 72/41 during the implementation of the Plan.

9. The Country agrees to assume overall responsibility for the management and implementation of this Agreement and of all activities undertaken by it or on its behalf to fulfil the obligations under this Agreement. UNIDO has agreed to be the lead implementing agency (the "Lead IA") and UNEP has agreed to be the cooperating implementing agencies (the "Cooperating IA") under the lead of the Lead IA in respect of the Country's activities under this Agreement. The Country agrees to evaluations, which might be carried out under the monitoring and evaluation work programmes of the Multilateral Fund or under the evaluation programme of the Lead IA and Cooperating IA taking part in this Agreement.

10. The Lead IA will be responsible for ensuring co-ordinated planning, implementation and reporting of all activities under this Agreement, including but not limited to independent verification as per sub-paragraph 5(b). This responsibility includes the necessity to co-ordinate with the Cooperating IA to ensure appropriate timing and sequence of activities in the implementation. The Cooperating IA will support the Lead IA by implementing the activities listed in Appendix 6-B under the overall co-ordination of the Lead IA. The Lead IA and Cooperating IA will reach consensus on the arrangements regarding inter-agency planning including regular co-ordination meetings, reporting and responsibilities under this Agreement in order to facilitate a co-ordinated implementation of the Plan. The Executive Committee agrees, in principle, to provide the Lead IA and the Cooperating IA with the fees set out in rows 2.2, and 2.4 of Appendix 2-A.

11. Should the Country, for any reason, not meet the Targets for the elimination of the Substances set out in row 1.2 of Appendix 2-A or otherwise does not comply with this Agreement, then the Country agrees that it will not be entitled to the Funding in accordance with the Funding Approval Schedule. At the discretion of the Executive Committee, funding will be reinstated according to a revised Funding Approval Schedule determined by the Executive Committee after the Country has demonstrated that it has satisfied all of its obligations that were due to be met prior to receipt of the next tranche of funding under the Funding Approval Schedule. The Country acknowledges that the Executive Committee may reduce the amount of the Funding by the amount set out in Appendix 7-A ("Reductions in Funding for Failure to Comply") in respect of each ODP kilogram of reductions in consumption not achieved in any one year. The Executive Committee will discuss each specific case in which the Country did not comply with this Agreement, and take related decisions. Once decisions are taken, the specific case of not compliance with this Agreement, will not be an impediment for the provision of funding for future tranches as per paragraph 5 above.

12. The Funding of this Agreement will not be modified on the basis of any future Executive Committee decision that may affect the funding of any other consumption sector projects or any other related activities in the Country.

13. The Country will comply with any reasonable request of the Executive Committee, the Lead IA and the Cooperating IA to facilitate implementation of this Agreement. In particular, it will provide the Lead IA and the Cooperating IA with access to the information necessary to verify compliance with this Agreement.

14. The completion of the Plan and the associated Agreement will take place at the end of the year following the last year for which a maximum allowable total consumption level has been specified in Appendix 2-A. Should at that time there still be activities that are outstanding, and which were foreseen in the last Tranche Implementation Plan and its subsequent revisions as per sub-paragraph 5(d) and paragraph 7, the completion of the Plan will be delayed until the end of the year following the implementation of the remaining activities. The reporting requirements as per sub-paragraphs 1(a), 1(b), 1(d), and 1(e) of Appendix 4-A will continue until the time of the completion of the Plan unless otherwise specified by the Executive Committee.

15. All of the conditions set out in this Agreement are undertaken solely within the context of the Montreal Protocol and as specified in this Agreement. All terms used in this Agreement have the meaning ascribed to them in the Montreal Protocol unless otherwise defined herein.

APPENDICES

APPENDIX 1-A: THE SUBSTANCES

Substance	Annex	Group	Starting point for aggregate reductions in consumption (ODP tonnes)
HCFC-22	C	I	108.90
HCFC-141b	C	I	138.50
Total	C	I	247.40

APPENDIX 2-A: THE TARGETS, AND FUNDING

Row	Particulars	2016	2017	2018	2019	2020	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	222.66	222.66	222.66	222.66	160.88	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	222.66	222.66	222.66	222.66	123.70	n/a
2.1	Lead IA (UNIDO) agreed funding (US $)	2,572,464	0	2,191,358	0	12,950	4,776,772
2.2	Support costs for Lead IA (US $)	180,072	0	153,395	0	907	334,374
2.3	Cooperating IA (UNEP) agreed funding (US $)	321,268	0	134,432	0	47,300	503,000
2.4	Support costs for Cooperating IA (US $)	41,727	0	17,460	0	6,143	65,330
3.1	Total agreed funding (US $)	2,893,732	0	2,325,790	0	60,250	5,279,772
3.2	Total support costs (US $)	221,799	0	170,855	0	7,050	399,704
3.3	Total agreed costs (US $)	3,115,531	0	2,496,645	0	54,350	5,679,476
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this Agreement (ODP tonnes)						14.29
4.1.2	Phase-out of HCFC-22 to be achieved in previously approved projects (ODP tonnes)						7.40
4.1.3	Remaining eligible consumption for HCFC-22 (ODP tonnes)						87.21
4.2.1	Total phase-out of HCFC-141b agreed to be achieved under this Agreement (ODP tonnes)						58.69
4.2.2	Phase-out of HCFC-141b to be achieved in previously approved projects (ODP tonnes)						71.70
4.2.3	Remaining eligible consumption for HCFC-141b (ODP tonnes)						8.11

APPENDIX 3-A: FUNDING APPROVAL SCHEDULE

1. Funding for the future tranches will be considered for approval at the first meeting of the year specified in Appendix 2-A.

APPENDIX 4-A: FORMAT OF TRANCHE IMPLEMENTATION REPORTS AND PLANS

1. The submission of the Tranche Implementation Report and Plans for each tranche request will consist of five parts:

(a) A narrative report, with data provided by calendar year, regarding the progress since the year prior to the previous report, reflecting the situation of the Country in regard to phase-out of the Substances, how the different activities contribute to it, and how they relate to each other. The report should include ODS phase-out as a direct result from the implementation of activities, by substance, and the alternative technology used and the related phase-in of alternatives, to allow the Secretariat to provide to the Executive Committee information about the resulting change in climate relevant emissions. The report should further highlight successes, experiences, and challenges related to the different activities included in the Plan, reflecting any changes in the circumstances in the Country, and providing other relevant information. The report should also include information on and justification for any changes vis-à-vis the previously submitted Tranche Implementation Plan(s), such as delays, uses of the flexibility for reallocation of funds during implementation of a tranche, as provided for in paragraph 7 of this Agreement, or other changes. The narrative report will cover all relevant years specified in sub-paragraph 5(a) of the Agreement and can in addition also include information on activities in the current year;

(b) An independent verification report of the Plan results and the consumption of the Substances mentioned in Appendix 1-A, as per sub-paragraph 5(b) of the Agreement. If not decided otherwise by the Executive Committee, such a verification has to be provided together with each tranche request and will have to provide verification of the consumption for all relevant years as specified in sub-paragraph 5(a) of the Agreement for which a verification report has not yet been acknowledged by the Committee;

(c) A written description of the activities to be undertaken until and including the year of the planned submission of the next tranche request, highlighting the interdependence of the activities, and taking into account experiences made and progress achieved in the implementation of earlier tranches; the data in the plan will be provided by calendar year. The description should also include a reference to the overall plan and progress achieved, as well as any possible changes to the overall plan that are foreseen. The description should cover the years specified in sub-paragraph 5(d) of the Agreement. The description should also specify and explain in detail such changes to the overall plan. This description of future activities can be submitted as a part of the same document as the narrative report under sub-paragraph (b) above;

(d) A set of quantitative information for all Tranche Implementation Reports and Plans, submitted through an online database. This quantitative information, to be submitted by calendar year with each tranche request, will be amending the narratives and description for the report (see sub-paragraph 1(a) above) and the plan (see sub-paragraph 1(c) above), the Tranche Implementation Plan and any changes to the overall plan, and will cover the same time periods and activities; and

(e) An Executive Summary of about five paragraphs, summarizing the information of the above sub-paragraphs 1(a) to 1(d).

2. In the event that in a particular year more than one stage of the HPMP are being implemented in parallel, the following considerations should be taken in preparing the Tranche Implementation Reports and Plans:

(a) The Tranche Implementation Reports and Plans referred to as part of this Agreement, will exclusively refer to activities and funds covered by this Agreement; and

(b) If the stages under implementation have different HCFC consumption targets in a particular year, the lower HCFC consumption target will be used as reference for compliance with the HPMP Agreements and for the independent verification.

APPENDIX 5-A: MONITORING INSTITUTIONS AND ROLES

1. Ministry of Environment, Government of Pakistan, ant the national ozone cell is responsible for the overall project controlling, coordination, assessment and monitoring.

2. Project management unit (PMU) officer will coordinate daily work of the project implementation and also to assist the enterprises, as well as Government and non-Government offices and organizations, to streamline their activities for smooth implementation of the projects. The PMU will help the Government of Pakistan with monitoring the progress on implementation, and reporting to the Executive Committee.

3. An independent and certified auditor will audit and verify the consumption of ODS reported by the Government through Article 7 data and country programme progress reports.

APPENDIX 6-A: ROLE OF THE LEAD IMPLEMENTING AGENCY

1. The Lead IA will be responsible for a range of activities, including at least the following:

(a) Ensuring performance and financial verification in accordance with this Agreement and with its specific internal procedures and requirements as set out in the Country's HPMP;

(b) Assisting the Country in preparation of the Tranche Implementation Reports and Plans as per Appendix 4-A;

(c) Providing independent verification to the Executive Committee that the Targets have been met and associated tranche activities have been completed as indicated in the Tranche Implementation Plan consistent with Appendix 4-A;

(d) Ensuring that the experiences and progress is reflected in updates of the overall plan and in future Tranche Implementation Plans consistent with sub-paragraphs 1(c) and 1(d) of Appendix 4-A;

(e) Fulfilling the reporting requirements for the Tranche Implementation Reports and Plans and the overall plan as specified in Appendix 4-A for submission to the Executive Committee. The reporting requirements include the reporting about activities undertaken by the Cooperating IA;

(f) Ensuring that appropriate independent technical experts carry out the technical reviews;

(g) Carrying out required supervision missions;

(h) Ensuring the presence of an operating mechanism to allow effective, transparent implementation of the Tranche Implementation Plan and accurate data reporting;

(i) Co-ordinating the activities of the Cooperating IA, and ensuring appropriate sequence of activities;

(j) In case of reductions in funding for failure to comply in accordance with paragraph 11 of the Agreement, to determine, in consultation with the Country and the Cooperating IA, the allocation of the reductions to the different budget items and to the funding of the Lead IA and each Cooperating IA;

(k) Ensuring that disbursements made to the Country are based on the use of the indicators; and

(l) Providing assistance with policy, management and technical support when required.

2. After consultation with the Country and taking into account any views expressed, the Lead IA will select and mandate an independent entity to carry out the verification of the HPMP results and the consumption of the Substances mentioned in Appendix 1-A, as per sub-paragraph 5(b) of the Agreement and sub-paragraph 1(b) of Appendix 4-A.

APPENDIX 6-B: ROLE OF THE COOPERATING IMPLEMENTING AGENCIES

1. The Cooperating IA will be responsible for a range of activities. These activities are specified in the Plan, including at least the following:

(a) Providing assistance for policy development when required;

(b) Assisting the Country in the implementation and assessment of the activities funded by the Cooperating IA, and refer to the Lead IA to ensure a co-ordinated sequence in the activities; and

(c) Providing reports to the Lead IA on these activities, for inclusion in the consolidated reports as per Appendix 4-A.

APPENDIX 7-A: REDUCTIONS IN FUNDING FOR FAILURE TO COMPLY

1. In accordance with paragraph 11 of the Agreement, the amount of funding provided may be reduced by US $144 per ODP tonne of consumption beyond the level defined in row 1.2 of Appendix 2-A for each year in which the target specified in row 1.2 of Appendix 2-A has not been met. In the event that the penalty needs to be applied for a year in which there are two Agreements in force (two stages of the HPMP being implemented in parallel) with different penalty levels, the application of the penalty will be determined on a case-by-case basis taking into consideration the specific sectors related to the non-compliance. If it is not possible to determine a sector, or both stages are addressing the same sector, the penalty level to be applied would be the largest.