UNITED NATIONS

EP

United Nations Environment Programme

Distr.
GENERAL

UNEP/OzL.Pro/ExCom/64/37
16 June 2011

ORIGINAL: ENGLISH

EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Sixty-fourth Meeting
Montreal, 25-29 July 2011

PROJECT PROPOSAL: LEBANON

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

Phase-out

- HCFC phase-out management plan (stage I, first tranche) UNDP

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS
Lebanon

(I) PROJECT TITLE	AGENCY
HPMP	UNDP (lead)

(II) LATEST ARTICLE 7 DATA	Year: 2009	58.4 (ODP tonnes)

(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)									Year: 2009
Chemical	Aerosol	Foam	Fire	Refrigeration		Solvent	Process	Lab	Total sector
				Manufacturing	Servicing				
HCFC123									
HCFC124									
HCFC141b		10.8		2.6					13.4
HCFC141b in		12.5							12.5
HCFC142b									
HCFC22				11.2	20.5				31.7

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline (estimate):	72.8	Starting point for sustained aggregate reductions:	72.8
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	0.0	Remaining:	72.8

(V) BUSINESS PLAN		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
UNDP	ODS phase-out (ODP tonnes)	1.0	1.0	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	2.8
	Funding (US $)	218,155	218,155	148,085	42,688	0	0	0	0	0	0	627,082

(VI) PROJECT DATA		2011	2012	2013	2014	2015	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	n/a	n/a	72.8	72.8	65.5	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	n/a	n/a	72.77	72.77	65.49	n/a
2.1	Lead IA UNDP agreed funding (US $)	1,500,000	0	745,589	0	249,520	2,495,109
2.2	Support costs for Lead IA (US $)	112,500	0	55,919	0	18,714	187,133
3.1	Total agreed funding (US $)	1,500,000	0	745,589	0	249,520	2,495,109
3.2	Total support cost (US $)	112,500	0	55,919	0	18,714	187,133
3.3	Total agreed costs (US $)	1,612,500	0	801,508	0	268,234	2,682,242

(VII) Request for funding for the first tranche (2011)		
Agency	**Funds requested (US $)**	**Support costs (US $)**
UNDP	1,500,000	112,500

Funding request:	Approval of funding for the first tranche (2011) as indicated above
Secretariat's recommendation:	For individual consideration

PROJECT DESCRIPTION

1. On behalf of the Government of Lebanon UNDP, as the lead sole implementing agency, has submitted to the 64th Meeting of the Executive Committee stage I of an HCFC phase-out management plan (HPMP) at a total cost, as originally submitted, of US $2,795,459 plus agency support costs of US $209,660. The HPMP covers strategies and activities to achieve the 10 per cent reduction in HCFC consumption by 2015.

2. First tranche for stage I being requested at this meeting amounts to US $1.5 million plus agency support costs of US $112,500 for UNDP, as originally submitted.

Background

ODS regulations

3. The Ministry of Environment is the national body responsible for international and environmental conventions and their implementation in Lebanon. The activities related to ozone layer protection and implementation of the Montreal Protocol are coordinated through the National Ozone Unit (NOU). The NOU is monitoring the import of HCFC in Lebanon through the required prior endorsement for imports of the Ministry of Environment. The regulation by the Ministry of Environment from September 2009 allows the Government to set and to monitor import quotas for HCFCs. Currently, no import quotas for HCFCs have been established, but are foreseen from 2012 onwards.

HCFC consumption

4. All HCFCs used in Lebanon are imported as the country does not produce these substances. The country has imported in the previous years three different HCFCs, mainly HCFC-22, HCFC-123 and HCFC-141b. The major HCFC imports in 2009 were 580 metric tonnes (mt) (31.9 ODP tonnes) of HCFC-22, and a further 241 mt (26.51 ODP tonnes) of HCFC-141b. In 2009, 5 mt of HCFC-123 (0.10 ODP tonne) were imported as well. In terms of ODP tonnes, HCFC-22 represents more than 54 per cent of the HCFC consumption in the country. Table 1 contains the historic HCFC consumption for the years 2005 to 2009 according to data reporting under Article 7. The consumption for 2010 has not yet been provided, and the country programme data had not yet been submitted.

Table 1: HCFC consumption between 2005 and 2009 according to Article 7

	2005		2006		2007		2008		2009	
Substance	mt	ODP t	mt	ODP t	mt	ODP t	mt	ODP t	mt	ODP t
HCFC-141b	18.0	1.98	21.0	2.31	5.5	0.61	11.30	1.2	241.0	26.5
HCFC-22	301.8	16.60	345.8	19.02	348.3	19.16	421.00	23.2	580.0	31.9
HCFC-123	0.0	0.00	0.0	0.00	0.0	0.00	0.00	0.0	5.0*	0.1*
Total	319.8	18.58	366.8	21.33	353.8	19.77	432.30	24.4	826.0	58.5**

*not reported under Article 7

** total 0.1 ODP tonnes higher than Article 7

Sectoral distribution of HCFC

5. HCFC-22 and HCFC-123 have been used in the refrigeration and air conditioning sectors as refrigerant, and HCFC-141b has also been used in this sector as a solvent. The major use of HCFC-141b however is as foam blowing agent in the production of rigid and integral skin foams. Table 2 provides an overview of the use of HCFCs in the different relevant sectors and sub-sectors.

Table 2: HCFC consumption for different sectors in 2009

Sector / Substance	**Manufacturing**						**Servicing**		**Total**	
	Air conditioning		Refrigeration		Foams					
	mt	ODP t	mt	ODP t	mt	ODP t	mt	ODP t	mt	ODP t
HCFC-22	101.8	5.60	44.6	2.45	0.0	0.00	433.6	23.85	580.0	31.90
HCFC-141b	0.0	0.00	10.8	1.19	230.2	25.32	0.0	0.00	241.0	26.51
HCFC-123	0.0	0.00	0.0	0.00	0.0	0.00	5.0	0.10	5.0	0.10
Total	101.8	5.60	55.4	3.64	230.2	25.32	438.6	23.95	826.0	58.51

6. The servicing sector, with more than 50 per cent of the total consumption in metric tonnes, is the largest user of HCFC in the country. The refrigeration sector has a total of about 62 manufacturers and assemblers who use HCFCs, of which one enterprise dominates the market accounting for over 60 per cent of the consumption in manufacturing and assembling. Six major manufacturers of air conditioning products provide residential air conditioners, light commercial, commercial and transport air conditioning and deliver centrifugal chillers. All manufacturing capacities in this sector were established before 2007. In the foam sector, rigid foam applications include the production of pipe insulation, sandwich panels, discontinuous blocks and spray foam; there is also one manufacturer who produces integral skin foams for furniture using HCFC-141b as blowing agent. The different manufacturers use either bulk HCFC-141b to blend it themselves with polyol, or they are using imported pre-blended polyol for foam manufacturing. As Lebanon has no system houses, all pre-blended polyol is being imported. Since 2009 imports of HCFC-141b in pre-blended polyols have been monitored and reported under Article 7 data reporting.

Estimated baseline for HCFC consumption

7. The estimated baseline for HCFCs was calculated as 72.8 ODP tonnes by the Government of Lebanon, using the average of the 2009 consumption of 58.4 ODP tonnes (821 mt) reported under Article 7 and the estimated consumption of 87.13 ODP tonnes (1,149.8 mt) for 2010 based on sector specific forecasts, using as a basis the recent consumption pattern in Lebanon.

Forecast of future HCFC consumption

8. The Government of Lebanon provided the business-as-usual scenario below indicating the demand for HCFCs as shown in Table 3.

Table 3: Forecast of HCFC consumption for business-as-usual

Substance		2009	2010	2011	2012	2013	2014	2015
HCFC-141b	mt	240.9	437.5	497.5	572.1	615.1	661.1	710.7
	ODP t	26.5	48.13	54.73	62.93	67.66	72.72	78.18
	Increase as compared to previous year	n/a	81.6%	13.7%	15.0%	7.5%	7.5%	7.5%
HCFC-22	mt	580.0	707.3	1,016.6	1,219.9	1,402.9	1,613.4	1,855.4
	ODP t	31.90	38.90	55.91	67.09	77.16	88.74	102.05
	Increase as compared to previous year	n/a	20.0%	43.7%	20.0%	15.0%	15.0%	15.0%
HCFC-123	mt	5.0	5.0	no data				
	ODP t	0.10	0.10					
Total	ODP t	58.50	87.13	110.64	130.02	144.82	161.46	180.23
	Increase as compared to previous year	n/a	48.9%	27.0%	17.5%	11.4%	11.5%	11.6%

HCFC phase-out strategy

9. Lebanon proposes to follow the reduction steps for HCFCs of the Montreal Protocol, and does not at present foresee an acceleration. This submission focuses on the activities needed to comply with the freeze in 2013 and the 10 per cent reduction in consumption in 2015.

10. This stage I will focus on converting manufacturing facilities in the main HCFC consuming sectors (air conditioning and foam) to the extent possible. To ensure that these conversions and the associated reductions in HCFC consumption remain sustainable, targeted and specific regulations will be promulgated. To further support the sustainability of these reductions appropriate technical assistance, training, capacity-building and awareness actions will be implemented.

11. The HPMP also included information regarding the planned implementation of future stages of the HPMP. For the period from 2015 to 2020, the HPMP proposes to phase out the residual HCFC consumption in the manufacturing sector, which was not possible to address during stage I; this will require investment activities, regulations and technical assistance. The servicing sector will need supporting activities of investment, policy, regulation, technical assistance, training, capacity-building and awareness to reduce its HCFC consumption. Finally, in the second stage there will be sustained monitoring and enforcement of the regulation issued during the implementation of the first stage of the HPMP. Beyond the year 2020, activities will focus on further reductions in the consumption of HCFCs for servicing of refrigeration and air conditioning equipment. This will involve sustaining and strengthening the infrastructure for the management of HCFCs, introducing and strengthening decentralized enforcement mechanisms and further mainstreaming of the implementation of the Montreal Protocol in national and local institutions.

Air conditioning sector

12. As part of the HPMP, an overview of the required amount of HCFC-22 for servicing was provided. It shows that currently, the existing bank of HCFC-22 air conditioners leads to a service need of 344 mt (18.9 ODP tonnes) of HCFC-22; residential air conditioning accounts for 71 per cent of this amount, with a total of 245 mt (13.5 ODP tonnes) of HCFC-22. The forecast for equipment installations until 2015 suggests an increase of this amount by another 300 mt (16.5 ODP tonnes), with a similar or higher share of the residential market. Linked with the conversion of the only manufacturer of residential air conditioners in Lebanon, the Government plans to prohibit manufacturing, assembly and import of HCFC-based residential air conditioning equipment (with or without refrigerant charge) from 1 January 2015.

13. In the refrigeration and air conditioning sector, it is proposed to convert one enterprise, Lematic s.a.l., to the use of HFC-410A technology and provide additional technical assistance to the sector; this conversion will phase out 90 mt (4.95 ODP tonnes) of HCFC-22. The enterprise manufactures using one production line with a capacity of 100,000 units per year for six different models of residential split air conditioners; other production lines make household refrigerators and freezers. The company was established in 1967, is 100 per cent locally owned, produced 64,750 units in 2009 and does not export to non-Article 5 countries.

14. The proposed conversion consists of delivery, installation and services, in particular: system, component and process redesign; heat exchanger: heat exchanger processing modifications, sheet metal processing modifications; refrigerant supply and charging: refrigerant supply system, pressure testing equipment, refrigerant charging equipment, and vacuum pumps. It also covers quality control: industrial leak detectors and modifications in quality inspection, finishing and testing; development: prototype manufacturing, trials and testing; product certification from external agencies; services: process, operation, maintenance and safety training; technical assistance from external experts; and funds for contingencies. In addition, the conversion will lead to increased operating costs.

15. The conversion costs determined by UNDP amounted to US $1,434,250, consisting of US $371,250 for incremental capital items, and US $1,063,000 for incremental operating costs, for a conversion which will reduce the consumption of HCFC-22 in Lebanon by 90 mt of HCFC-22. However, the applicable threshold for operating costs for the air conditioning sector is US $6.30/kg of HCFC-22 phased out; this leads to a request of US $567,000 as eligible incremental operating costs for the conversion, and thus to total eligible incremental cost of US $938,250.

16. In addition to the conversion project at Lematic s.a.l., UNDP proposes also to fund technical support for the air conditioning sector. In this regard, UNDP advised that alternative technologies for air conditioning applications are not fully commercialized. The technical support will allow keeping the industry, in particular small and informal assemblers, abreast of the latest technological developments, share information and exchange experiences with alternatives and document positive results for wider acceptance. This will be carried out through five technical assistance workshops (one annually) throughout the implementation period of the HPMP, mainly targeting small and medium enterprises (SMEs). In addition, alternative technology and best practice technical information would be disseminated through technical fact sheets and other information materials. The cost for this component is proposed at a level of US $60,000, with no phase-out associated.

Foam sector

17. In the foam sector, it is proposed to convert one enterprise, Dalal Steel Industries, to cyclopentane and provide additional technical assistance to the sector; this conversion will phase out 137.1 mt (15.1 ODP tonnes) of HCFC-141b, 50 per cent of which are contained in pre-blended polyols. The enterprise is located in the Bekaa region of Lebanon, manufactures sandwich polyurethane foam panels of various sizes and thicknesses, serving the insulation and construction industry sectors, the main applications being prefabricated buildings and shelters, cold storages and warehouses, and roofing. It was established in 1987 and is 100 per cent locally owned, and does not export to non-Article 5 countries. The enterprise has two continuous lines and five discontinuous lines for manufacturing sandwich panels, served by a total of 11 foam dispensers. Since the enterprise is large-scale, well-organized and has qualified technical and managerial staff, it is in a position to manage the pentane-based conversion cost-effectively and safely.

18. The proposed conversion consists of delivery, installation and services, in particular: storage, delivery and handling: 60 m^3 capacity carbon steel storage tank for cyclopentane, delivery pumps, pipes and fittings; pre-mixing: three pre-mixing stations, seven buffer tanks; and foam dispensers. The retrofitting of four existing high-pressure foam dispensers is intended as well as replacement of seven low-pressure dispensers; changes to high-pressure chemical piping; retrofitting of foaming jigs/molds for the discontinuous lines; water conditioning system for process heating and cooling; safety: ventilation and exhaust system, 30 hydrocarbon sensors, alarm and control system, water sprinkler system, nitrogen system for mold flushing, anti-static floor treatment for 1,000 sq. m., changes in electrical installations, back-up power for the emergency systems; installation of new electrical control and supply systems for the newly installed equipment. Technical assistance from external experts will be required, and trials for validation to implement the new formulations and to ensure smooth transition to the new technology; also safety audit, training of production personnel on safety and handling of new formulations, and funds for contingencies. In addition, the conversion will lead to increased operating costs.

19. The conversion costs determined by UNDP amounted to US $2,510,434, consisting of US $2,414,500 for incremental capital items, and US $95,934 for incremental operating costs, for a conversion which will reduce the consumption of HCFC-141b in Lebanon by 137.1 mt of HCFC-141b, representing 40.4 per cent of the HCFC-141b baseline consumption of the country, and 20.7 per cent of the baseline. However, the applicable threshold for rigid polyurethane foam projects is US $7.83/kg of HCFC-141b phased out; since cyclopentane is a low GWP substance, decision 60/44 allows an increase of the threshold by 25 per cent that would lead to a request of US $1,342,209 as eligible incremental costs for the conversion.

20. In addition to the conversion project at Dalal steel industries, UNDP also proposes to fund technical support for the foam sector. In this regard, UNDP advised that alternative technologies for foam applications and those particularly suited to SMEs are not fully commercialized. The technical support will allow the industry to keep abreast of the latest technological developments, share information and exchange experiences with alternatives and document positive results for wider acceptance. This will be carried out through five technical assistance workshops (one annually) throughout the implementation period of the HPMP, mainly targeting SMEs. In addition, alternative technology and best practice technical information would be disseminated through technical fact sheets and other information materials. The cost for this component is proposed at a level of US $60,000, with no phase-out associated.

Cost of stage I of the HPMP

21. The total cost of stage I of the HPMP for Lebanon has been estimated at US $2,795,459 plus agency support costs. The detailed cost breakdown for activities is listed in Table 4.

Table 4: Proposed activities and cost of the different components of stage I of the HPMP

Strategy component	Funding request (US $)
Sector plans	
Air conditioning sector plan - investment component	938,250
Air conditioning sector plan - technical support	60,000
Foams sector plan - investment component	1,342,209
Foams sector plan - technical support	60,000
Overarching activities	
Project management and coordination	395,000
Grand total	2,795,459

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

22. The Secretariat reviewed the HPMP for Lebanon in the context of the guidelines for the preparation of HPMPs (decision 54/39), the criteria for funding HCFC phase-out in the consumption sector agreed at the 60th Meeting (decision 60/44), subsequent decisions on HPMPs made at the 62nd and 63rd Meetings and the 2011-2014 business plan of the Multilateral Fund.

Regulatory issues

23. The Secretariat enquired about the reference to HCFCs in the regulation and the requirement to control and monitor them, as well as issued import licenses. UNDP replied that, as of Spring 2011, the harmonized system (HS) customs code specific to each HCFC had not been stipulated. In this situation, enforcement of any specific control on specific HCFC appears to be difficult. While the licensing system through the NOU, where the requirement for importers to be registered and have import permits appears to function, there is currently no system due to the lack of the HS codes to allow or disallow imports at the customs level. UNDP also advised that currently, imports of pre-blended polyols are not controlled by the Government. The definition of HS codes is proposed to be carried out under the HPMP.

Determination of the estimated baseline consumption

24. The Secretariat requested additional information regarding the estimation of the 2010 consumption, used to establish the baseline. The Secretariat noted that the average annual growth between 1997 and 2007 was at a level of 2 per cent. Using this growth rate from 2009 onwards would lead to a consumption in 2015 of about 30 per cent of the forecast for Lebanon in its HPMP. UNDP advised that between 2003 and 2006 the consumption of HCFCs stagnated due to the initial instability and subsequent war situation in Lebanon during this time period. From 2007 onwards, due to the resurgence of economic activity and opening up of large portions of southern Lebanon, the consumption picked up again and continued to grow at a significantly higher rate. The Secretariat also questioned the 20 fold increase in consumption of HCFC-141b between 2008 and 2009, and the further increase of about 80 per cent between 2009 and 2010 (see Table 3 above). Regarding the high increase of HCFC-141b consumption, UNDP advised that significant quantities of pre-blended polyols in Lebanon have to be imported since there are no system houses. HCFC-141b quantities in imported pre-blended polyols were

not recorded until and including the year 2008, but have been recorded and reported under Article 7 in the year 2009 and will continue to be reported under Article 7. Another point is that the substance-specific disaggregation of the HCFC in the years prior to 2008 is based on periodically collected market data and not on customs information due to the lack of a harmonized system customs code by substance during that time. Further, UNDP pointed to the same information provided regarding the general consumption increase; this should be seen in conjunction with the fact that at least one large foam manufacturer had been located in an area that had been directly affected by the military actions, leading to frequent shut downs and damages and resulting loss in production. Finally, foam products, in particular building materials, manufactured in Lebanon are sold to Iraq, a market which developed rapidly in the last two years due to the specific situation in Iraq. UNDP points out that because of the above reasons, any analysis and future projection would have to be based on consumption figures or trends from 2009 onwards. The Secretariat also raised questions regarding the consumption of HCFC-22, increasing by 20.3 per cent in 2008 and a further 37.8 per cent in 2009 as compared to the previous year, resulting in an increase in the year 2009 of 82 per cent above the average of 2000 to 2007. UNDP pointed to the information provided above regarding the change in Lebanon's overall political and economic situation and the low reliability of data on a substance basis referring to the years 2000 to 2007.

Starting point for aggregate reduction in HCFC consumption

25. The Government of Lebanon agreed to establish as its starting point for sustained aggregate reduction in HCFC consumption the average level of consumption in 2009 reported under Article 7 and 2010 which has been estimated at 985.4 mt (72.8 ODP tonnes); the figures for the different substances are provided in Table 5 below. The business plan indicated a baseline of 853.8 mt. The HPMP contains a substantially higher increase in the 2010 consumption as compared to the 2009 consumption than the business plan foresaw. This is because the assumed high growth rate of HCFC consumption is assumed to continue to be very high due to the one-time efforts of post-war reconstruction and economic development in both Lebanon and in an important export market, Iraq.

Table 5: Calculation of the estimated baseline, used as starting point

Year	**2009 (A7 data)**		**2010 (est.)**		**Baseline (est.)**	
	mt	ODP t	mt	ODP t	mt	ODP t
HCFC-22	580.0	31.90	707.3	38.90	643.7	35.40
HCFC-123	0.0	0.00	5.0	0.10	2.5	0.05
HCFC-141b	240.9	26.50	437.5	48.13	339.3	37.32
Total	821.0	58.41	1,149.8	87.12	985.4	72.77

Estimated impact on the climate

26. A calculation of the impact on the climate of HCFC consumption through the investment components of stage I of the HPMP in Lebanon based on the GWP values of the HCFCs and alternative substances introduced and their level of consumption before and after conversion has been carried out. The climate impact of the foam sector conversion is determined based on the current consumption of 137.1 mt of HCFC-141b in Dalal Steel Industries, leading to a climate impact of 99,398 tonnes of CO_2 equivalent. The replacement technology, pentane, has only a climate impact of 2,742 tonnes of CO_2 equivalent; consequently, the climate impact of the conversion in the foam sector will be a decrease of 96,656 tonnes of CO_2 equivalent. Table 6 presents the climate impact in the air conditioning sector.

Table 6: Climate impact in the air conditioning sector

Input			
	Generic		
	Country	[-]	**Lebanon**
	Company data (name, location)	[-]	**Lematic s.a.l.**
	Select system type	[list]	Air conditioning / on-site assembly
	General refrigeration information		
	HCFC to be replaced	[-]	HCFC-22
	Amount of refrigerant per unit	[kg]	between 0.47 and 3.3; av. 1.38
	No. of units	[-]	64,750
	Refrigeration capacity	[kW]	between 2.6 and 12.3; av. 6.38
	Selection of alternative with minimum environmental impact		
	Share of exports (all countries)	[%]	0
	Calculation of the climate impact		
	Alternative refrigerant (more than one possible)	[list]	HFC-410A; HC-290

NOTE

All data displayed is specific to the case investigated and is not generic information about the performance of one alternative; performance can differ significantly depending on the case.

Output	*Note: The output is calculated as the climate impact of the refrigerant systems in their lifetime as compared to HCFC-22, on the basis of the amount produced within one year. Additional/different outputs are possible*		
	Country		**Lebanon**
	Identification of the alternative technology with minimum climate impact		
	List of alternatives for identification of the one with minimum climate impact	[Sorted list, best = top (% deviation from HCFC)]	HC-600a (-18.6%)
			HC-290 (-14.6%)
			HFC-134a (-5.1%)
			HFC-407C (-0.3%)
			HCFC-22
			HFC-410A (5.2%)
			HFC-404A (15.6%)
	Calculation of the climate impact		
	Per unit, over lifetime (for information only):		
	Energy consumption	[kWh]	26,288
	Direct climate impact (substance)	[kg CO_2 equiv]	23,195
	Indirect climate impact (energy): In country	[kg CO_2 equiv]	3,672
	Indirect climate impact (energy): Global average	[kg CO_2 equiv]	0
	Calculation of the climate impact of the conversion		
	Alternative refrigerant 1		**HFC-410A**
	*Total direct impact (post conversion – baseline)**	*[t CO_2 equiv]*	*6,429*
	*Indirect impact (country)***	*[t CO_2 equiv]*	*83,876*
	*Indirect impact (outside country)***	*[t CO_2 equiv]*	*0*
	Total indirect impact	*[t CO_2 equiv]*	*83,876*
	Total impact	**[t CO_2 equiv]**	**90,305**
	Alternative refrigerant 2		**HC-290**
	*Total direct impact (post conversion – baseline)**	*[t CO_2 equiv]*	*-236,661*
	*Total indirect impact (country)***	*[t CO_2 equiv]*	*-16,943*
	*Total indirect impact (outside country)***	*[t CO_2 equiv]*	*0*
	*Total indirect impact***	*[t CO_2 equiv]*	*-16,943*
	Total impact	**[t CO_2 equiv]**	**-253,604**

*Direct impact: Different impact between alternative technology and HCFC technology for the substance-related emissions.
**Indirect impact: Difference in impact between alternative technology and HCFC technology for the energy-consumption-related emissions of CO_2 when generating electricity.

27. The total impact of the refrigerant selection on the climate calculated with the multilateral climate impact indicator is an increase in climate relevant emissions by 90,305 tonnes of CO_2 equivalent, or 5.2 per cent. Propane, HC-290, would be an alternative technologies with the potential to reduce the impact on the climate by 253,604 tonnes of CO_2 equivalent. However, UNDP pointed out that at this point in time HFC-410A is the only alternative technology that could be proposed, since the availability of components for technologies other than HFC 410A remains as yet uncertain.

28. The HPMP proposes neither the introduction of better servicing practices nor the support for enforcement of HCFC import controls; consequently, reductions of the amount of HCFC-22 used for refrigeration servicing are unlikely to take place. As a result, the overall climate impact of the conversion is estimated at 6,381 tonnes of CO_2 equivalent over the lifetime of equipment manufactured per year.

Co-financing

29. In response to decision 54/39(h) on potential financial incentives and opportunities for additional resources to maximize the environmental benefits from HPMPs pursuant to paragraph 11(b) of decision XIX/6 of the Nineteenth Meeting of the Parties, UNDP explained that currently, the GEF-V programming cycle is underway and the country is exploring possibilities to seek GEF financing for energy efficiency improvements in the refrigeration and air conditioning sectors, for a project to be developed and submitted during 2012.

Overall concept

30. The Secretariat noted that the phase-out achieved in the foam sector will amount to 20.7 per cent of the estimated baseline, and will convert to a low-GWP alternative. The Secretariat also noted that the calculated baseline is based on a very significant increase in consumption between 2009 and 2010 of 48.9 per cent, and therefore is likely not to be increased once the Article 7 data for 2010 has been reported. This might reduce the urgency of reductions in the air conditioning sector, where 4.97 ODP tonnes of HCFC-22 use are to be converted at Lematic s.a.l. to a high GWP alternative, namely HFC-410A. Given ongoing development of alternatives for HCFC-22 with substantially lower GWP than HFC-410A, and the increasing availability of components and know-how necessary for such systems being expected in the next years, the Secretariat is not convinced that the conversion at Lematic s.a.l. should be supported by the Multilateral Fund as part of stage I of the HPMP.

Foam sector

31. The Secretariat raised issues regarding the conversion effort and related costs in the foam sector, in particular whether there are possibilities to rationalise the production in an enterprise with eleven foam machines on seven lines. The project is requesting funding for four retrofits of high pressure machines and the replacement of seven low pressure machines by the same number of high pressure machines. UNDP advised that the current facilities reflect the wide variability in products needed, and that a significant amount of thought has gone into ensuring a cost-effective conversion, without sacrificing capacity and flexibility. Consolidating foam dispensers would also mean dismantling the existing chemical flow connections, piping, tanks, etc., and replacing them with a new set of circuitry and controls, which is in the opinion of UNDP neither cost-effective, nor would it maintain the required flexibility and output. The Secretariat noted the substantial difference between the UNDP-calculated incremental cost and the eligible funding, established by the cost effectiveness threshold, and agreed to the cost effectiveness threshold figure.

32. The Secretariat also discussed with UNDP the technical support through workshops and leaflets foreseen for the foam sector. The Secretariat took into account in its comments the phase-out in the foam sector funded at the threshold level on the one side, and the request for funding for overarching activities, including awareness, at an originally requested level of US $395,000, as well as the existing institutional

strengthening funding of US $77,500 per year on the other. UNDP agreed to subsume the costs for the technical support for the foam sector within the threshold, leading to foam sector costs at the threshold level.

Refrigeration sector

33. The Secretariat advised UNDP that the heat exchanger cost, at a level of US $60,000, were contingent upon a related decision to be made by the Executive Committee. UNDP and the Secretariat also discussed the cost of some items, and the tonnage phased out, leading to a reduced cost of US $860,600 for the investment component of the refrigeration sector. The Secretariat and UNDP agreed to maintain the technical support component for the refrigeration sector at the level originally requested, i.e. US $60,000.

Overarching activities

34. The Secretariat discussed with UNDP the cost of the overarching activities. The Secretariat noted that the overarching activities did not include those related to enforcement or the service sector, that the main activities in the country relate to only two enterprises and that for the foam and air conditioning sectors, separate funding was foreseen for awareness and information activities. On the other hand, the situation in the remaining air conditioning and refrigeration enterprises, the foam enterprises, and, in particular, the service sector need to be monitored and addressed, to reduce the very considerable growth and allow targeted implementation activities in stage II of the HPMP. With these considerations in mind, the Secretariat and UNDP could agree on a revised overall budget, shown in Table 7 below.

Table 7: Revised overall budget for the implementation of stage I of the HPMP

	Funding (US $)	**Phase-out (mt)**	**Cost effectiveness (US $/kg)**	**Phase-out (ODP t)**
Sector plans				
Air conditioning sector plan - investment component	860,600			
Air conditioning sector plan - heat exchanger conversion	[60,000]			
Air conditioning sector plan - technical support	60,000			
Air conditioning sector - sub-total	920,600	89.5	10.29	4.92
Foams sector plan - investment component	1,282,209			
Foams sector plan - technical support	60,000			
Foam sector plan - sub-total	1,342,209	137.1	9.79	15.08
Overarching activities				
Project management and coordination	232,300			
Total	2,495,109	226.6		20.00

Second-stage conversion

35. The enterprise Dalal Steel Industries had already received support under the national CFC phase-out plan (NPP) for Lebanon. Following a request for more detailed information to ensure compliance with decision 60/44 (b), UNDP informed that due to the instability and war situation in Lebanon during 2005-2007, almost no new capacity for HCFC-based foam manufacturing was established in the country in that period. Prior to this, enterprises were using CFC-11, and eligible enterprises were being addressed under the NPP. On this basis, the eligible HCFC consumption in Lebanon in the foam sector almost entirely originates from enterprises previously assisted by the Multilateral Fund for CFC phase-out, i.e. virtually any activity in the foam sector would be a second-stage conversion. UNDP advised that it is therefore inevitable that previously MLF-assisted enterprises would need to be addressed in order to meet the compliance targets for 2013 and 2015.

36. The Secretariat took into account the priority for the phase-out of high ODP substances, i.e. HCFC-141b, expressed by the Meeting of the Parties and the Executive Committee in several decisions, as well as the considerable difference of 7.28 ODP tonnes between the estimated baseline consumption and the 2015 compliance level. On that basis and in light of the explanations provided by UNDP, the Secretariat therefore considers that Lebanon has demonstrated sufficiently that this activity is both necessary to comply with the Montreal Protocol HCFC target of 2015 and that no other enterprise could have been chosen in the sector because of the lack of other eligible companies, which had not received support previously. A reduction in the service sector, which is nominally more cost effective, would have result in a substantial reduction to comply with the 2015 target; the phase-out equivalent to 10 per cent of the baseline would have to be 132 mt of HCFC-22 in the service sector, while replacing the foam project fully would require a phase-out of 274.2 mt of HCFC-22. Given these significant reductions, it appears that the service sector would have a significantly higher risk of implementation than the conversion of Dalal Steel Industries. Consequently, carrying out a second conversion at Dalal Steel Industries appears to be justified.

2011-2014 business plan of the Multilateral Fund

37. UNDP is requesting US $2,495,109 plus support costs for implementation of stage I of the HPMP. The total value requested for the period 2011-2014 of US $2,416,911 including support cost is above the total amount in the business plan. The difference in the figures is because the business plan only addressed 2.8 ODP tonnes, a phase-out of less than 10 per cent of the baseline, and the baseline in the business plan was assumed lower than that estimated in the HPMP.

Draft Agreement

38. A draft Agreement between the Government of Lebanon and the Executive Committee for HCFCs phase-out is contained in Annex I to the present document.

RECOMMENDATION

39. The Executive Committee may wish to consider whether:

(a) To approve, in principle, stage I of the HCFC phase-out management plan (HPMP) for Lebanon for the period 2011 to 2015, at the amount of US $2,495,109, plus agency support costs of US $187,133 for UNDP;

(b) To note that the Government of Lebanon had agreed to establish an estimated baseline of 72.77 ODP tonnes as its starting point for sustained aggregate reduction in HCFC consumption, calculated using actual consumption of 58.41 ODP tonnes reported for 2009 and 87.12 ODP tonnes estimated for 2010;

(c) To deduct 20.00 ODP tonnes of HCFCs from the starting point for sustained aggregate reduction in HCFC consumption;

(d) To approve the draft Agreement between the Government of Lebanon and the Executive Committee for the reduction in consumption of HCFCs, as contained in Annex I to the present document;

(e) To request the Fund Secretariat, once the baseline data were known, to update Appendix 2-A to the Agreement to include the figures for maximum allowable consumption, and to notify the Executive Committee of the resulting change in the levels of maximum allowable consumption and of any potential related impact on the eligible

funding level, with any adjustments needed being made when the next tranche was submitted; and

(f) To approve the first tranche of stage I of the HPMP for Lebanon, and the corresponding implementation plan, at the amount of US $1,500,000, plus agency support costs of US $112,500 for UNDP.

Annex I

DRAFT AGREEMENT BETWEEN THE GOVERNMENT OF LEBANON AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE REDUCTION IN CONSUMPTION OF HYDROCHLOROFLUROCARBONS

1. This Agreement represents the understanding of the Government of Lebanon (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 65.49 ODP tonnes prior to 1 January 2015 in compliance with Montreal Protocol schedules, with the understanding that this figure is to be revised one single time, once the baseline consumption for compliance has been established based on Article 7 data, with the funding to be adjusted accordingly, as per decision 60/44.

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 which exceeds the level defined in row 1.2 of Appendix 2-A ("Maximum allowable total consumption of Annex C, Group I Substances") 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 which exceeds the level defined in rows 4.1.3 and 4.2.3 and 4.3.3 (remaining eligible consumption).

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 (The Targets, and Funding") 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. 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 ("The Targets, and Funding") 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 60 days prior to the applicable Executive Committee meeting set out in the Funding Approval Schedule:

(a) That the Country has met the Targets for all relevant years. Relevant years are all years since the year in which the hydrochlorofluorocarbons phase-out management plan (HPMP) was approved. Exempt are years for which no obligation for reporting of country programme data exists at the date of the Executive Committee Meeting at which the funding request is being presented;

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

(c) That the Country had submitted annual implementation reports in the form of Appendix 4-A ("Format of 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;

(d) That the Country has submitted and received approval from the Executive Committee for an annual implementation plan in the form of Appendix 4-A ("Format of Implementation Reports and Plans") 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; and

(e) That, for all submissions from the 68th Meeting onwards, confirmation has been received from the Government 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 Country's compliance with the Montreal Protocol HCFC phase-out schedule for the duration of this Agreement.

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 annual 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 the approved funds, or part of the 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 in an annual implementation plan and approved by the Executive Committee as described in sub-paragraph 5(d) above. Major changes would relate to issues potentially concerning the rules and policies of the Multilateral Fund; changes which would modify any clause of this Agreement; changes in the annual levels of funding allocated to individual bilateral or implementing agencies for the different tranches; and provision of funding for programmes or activities not included in the current endorsed annual implementation plan, or removal of an activity in the annual implementation plan, with a cost greater than 30 per cent of the total cost of the tranche;

(b) Reallocations not categorized as major changes may be incorporated in the approved annual implementation plan, under implementation at the time, and reported to the Executive Committee in the annual implementation report; and

(c) Any remaining funds will be returned to the Multilateral Fund upon closure of the last tranche of the plan.

8. Specific attention will be paid to the execution of the activities in the refrigeration servicing sub-sector, 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 bilateral and implementing agencies involved will take full account of the requirements of decisions 41/100 and 49/6 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. UNDP has agreed to be the lead implementing agency (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 any of the agencies taking part in this Agreement.

10. The Lead IA will be responsible for carrying out the activities of the overall plan with the changes approved as part of the subsequent submissions, including but not limited to independent verification as per sub-paragraph 5(b). The Executive Committee agrees, in principle, to provide the Lead IA with the fees set out in row 2.2 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 in respect of each ODP kg 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 these decisions are taken, this specific case will not be an impediment 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 and the Lead IA to facilitate implementation of this Agreement. In particular, it will provide the Lead IA with access to information necessary to verify compliance with this Agreement.

14. The completion of the HPMP and the associated Agreement will take place at the end of the year following the last year for which a maximum allowable total consumption has been specified in Appendix 2-A. Should at that time activities be still outstanding which were foreseen in the Plan and its subsequent revisions as per sub-paragraph 5(d) and paragraph 7, the completion 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 continue until the time of the completion if not specified by the Executive Committee otherwise.

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: SUBSTANCES

Substance	Annex	Group	Starting point for aggregate reductions in consumption (ODP tonnes)
HCFC-22	C	I	35.40
HCFC-123	C	I	0.05
HCFC-141b	C	I	37.32
Total			72.77

APPENDIX 2-A: THE TARGETS, AND FUNDING

Row	Particulars	2011	2012	2013	2014	2015	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	n/a	n/a	72.8	72.8	65.5	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	n/a	n/a	72.77	72.77	65.49	n/a
2.1	Lead IA UNDP agreed funding (US $)	1,500,000	0	745,589	0	249,520	2,495,109
2.2	Support costs for Lead IA (US $)	112,500	0	55,919	0	18,714	187,133
3.1	Total agreed funding (US $)	1,500,000	0	745,589	0	249,520	2,495,109
3.2	Total support cost (US $)	112,500	0	55,919	0	18,714	187,133
3.3	Total agreed costs (US $)	1,612,500	0	801,508	0	268,234	2,682,242
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this Agreement (ODP tonnes)						4.92
4.1.2	Phase-out of HCFC-22 to be achieved in previously approved projects (ODP tonnes)						0
4.1.3	Remaining eligible consumption for HCFC-22 (ODP tonnes)						30.48
4.3.1	Total phase-out of HCFC-123 agreed to be achieved under this Agreement (ODP tonnes)						0
4.3.2	Phase-out of HCFC-123 to be achieved in previously approved projects (ODP tonnes)						0
4.3.3	Remaining eligible consumption for HCFC-123 (ODP tonnes)						0.05
4.2.1	Total phase-out of HCFC-141b agreed to be achieved under this Agreement (ODP tonnes)						15.08
4.2.2	Phase-out of HCFC-141b to be achieved in previously approved projects (ODP tonnes)						0
4.2.3	Remaining eligible consumption for HCFC-141b (ODP tonnes)						22.24

APPENDIX 3-A: FUNDING APPROVAL SCHEDULE

1. Funding for the future tranches will be considered for approval not earlier than the second meeting of the year specified in Appendix 2-A.

APPENDIX 4-A: FORMAT OF IMPLEMENTATION REPORTS AND PLANS

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

(a) A narrative report regarding the progress since the approval of the previous tranche, reflecting on 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 further highlight successes, experiences and challenges related to the different activities included in the Plan, reflecting on changes in the circumstances in the Country, and providing other relevant information. The report should also include information about and justification for any changes vis-à-vis the previously submitted tranche plan, 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 about activities in the current year;

(b) A verification report of the HPMP 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 the planned submission of the next tranche request, highlighting their interdependence, and taking into account experiences made and progress achieved in the implementation of earlier tranches. The description should also include a reference to the overall plan and progress achieved, as well as any possible changes to the overall plan foreseen. The description should cover the years specified in sub-paragraph 5(d) of the Agreement. The description should also specify and explain any revisions to the overall plan which were found to be necessary;

(d) A set of quantitative information for the report and plan, submitted into a database. As per the relevant decisions of the Executive Committee in respect to the format required, the data should be submitted online. 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), and will cover the same time periods and activities; it will also capture the quantitative information regarding any necessary revisions of the overall plan as per sub-paragraph 1(c) above. While the quantitative information is required only for previous and future years, the format will include the option to submit in addition information regarding the current year if desired by the Country and the Lead IA; and

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

APPENDIX 5-A: MONITORING INSTITUTIONS AND ROLES

1. The monitoring process will be managed by the Ministry of Environment through the National Ozone Unit (NOU) with the assistance of the Lead IA.

2. The consumption will be monitored and determined based on official import and export data for the Substances recorded by relevant government departments.

3. The NOU shall compile and report the following data and information on an annual basis on or before the relevant due dates:

(a) Annual reports on consumption of the Substances to be submitted to the Ozone Secretariat; and

(b) Annual reports on progress of implementation of the HPMP to be submitted to the Executive Committee of the Multilateral Fund.

4. The NOU and Lead IA will engage an independent and qualified entity to carry out a qualitative and quantitative performance evaluation of the HPMP implementation.

5. The evaluating entity shall have full access to relevant technical and financial information related to implementation of the HPMP.

6. The evaluating entity shall prepare and submit to the NOU and the Lead IA, a consolidated draft report at the end of each annual implementation plan, comprising of the findings of the evaluation and recommendations for improvements or adjustments, if any. The draft report shall include the status of the Country's compliance with the provisions of this Agreement.

7. Upon incorporating the comments and explanations as may be applicable, from the NOU and Lead IA, the evaluating entity shall finalize the report and submit to the NOU and Lead IA.

8. The NOU shall endorse the final report and the Lead IA shall submit the same to the relevant meeting of the Executive Committee along with the annual implementation plan and reports.

APPENDIX 6-A: ROLE OF THE LEAD IMPLEMENTING AGENCY

1. The Lead IA will be responsible for a range of activities. These can be specified in the project document further, but include 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 Implementation Plans and subsequent reports as per Appendix 4-A;

(c) Providing verification to the Executive Committee that the Targets have been met and associated annual activities have been completed as indicated in the 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 annual implementation plans consistent with sub-paragraphs 1(c) and 1(d) of Appendix 4-A;

(e) Fulfilling the reporting requirements for the annual implementation reports, annual implementation plans and the overall plan as specified in Appendix 4-A for submission to the Executive Committee;

(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 Implementation Plan and accurate data reporting;

(i) 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, the allocation of the reductions to the different budget items and to the funding of each implementing or bilateral agency involved;

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

(k) 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 organization 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 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 $250 per ODP kg 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.

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