UNITED NATIONS

EP

United Nations Environment Programme

Distr.
GENERAL

UNEP/OzL.Pro/ExCom/64/36/Add.1
28 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

Addendum

PROJECT PROPOSAL: JORDAN

This document is issued to:

- **Add** the project evaluation sheet as contained in Annex I to this document
- **Replace** heading and text of paragraph 17 **with** the following:

Accelerated phase-out

17. The HPMP as submitted contained a request in principle, for an accelerated phase-out and the associated costs, with the intention of submitting subsequently sector plans under this agreement that would form part of the HPMP. The Secretariat had advised UNIDO that this concept does not allow for the determination of incremental cost, and is therefore not suitable. The Secretariat advised UNIDO also that the Executive Committee had indicated that, for non-LVC, provided indication that the HPMP stage I submissions should relate to the 2015 reduction step, and that no indication had been given by the Executive Committee that an accelerated phase-out would receive funding. The lead agency, UNIDO, and the Secretariat agreed that the HPMP stage I would focus on Jordan achieving compliance with the 2015 reduction step, but that the Executive Committee would be informed of Jordan's intention to request funding for accelerated phase-out. The Executive Committee would have the option of allowing the country to submit the second stage of the HPMP earlier, including all the information necessary to assess the eligible incremental cost, and with a commitment for a 2019 consumption reduction of 2.9 per cent of the baseline or less.

Priority of the air conditioning sector

18. The sector plan for the air conditioning sector, forming the predominant part of the stage I HPMP submission, had been prepared and will be implemented by the World Bank as the cooperating agency. The Secretariat noted that Jordan has a HCFC consumption baseline of 82.8 ODP tonnes, and that the 2015 reduction step would require the country to reduce its consumption by 8.3 ODP tonnes by the end of 2014; further, the phase-out already funded is 8.1 ODP tonnes, and the remaining reduction to be achieved by the end of 2014 is only 0.2 ODP tonnes plus possibly the growth that the country might experience between 2010 and 2012. The proposed plan for the air conditioning sector is replacing an additional 15.5 ODP tonnes of HCFC-22 and 0.7 ODP tonnes of HCFC-141b leading, in total, to a reduction of 16.1 ODP tonnes. With the already approved project, that amounts to a phase-out of 29.2 per cent of the baseline.

19. The HPMP document includes a description of the foam sector with approximated funding needs, where for the five largest enterprises a consumption of (in total) 17.3 ODP tonnes of HCFC-141b is shown. The Secretariat advised that if Jordan submitted a project phasing out HCFC-141b and replacing it in the five largest foam enterprises, this with the phase-out already funded, would bring the total to 30.7 per cent of the baseline. In terms of cost, UNIDO estimated that US $1 million would be needed to convert the five largest enterprises in the foam sector, an estimate broadly in line with the Secretariat's experience. The funding request for approximately the same level of ODP tonnes in the air conditioning sector was US $2.5 million. The Secretariat also noted that although a project in the foam sector would address only five enterprises, even if one or two of them decided to commit to a phase-out activity at this stage, even any combination of three of those enterprises would still lead to a reduction of at least 10 per cent of the baseline in addition to the almost 10 per cent already funded. The Secretariat noted further that for the five largest enterprises in the foam sector, the replacement technology foreseen is the low-GWP cyclopentane, which has a long history of positive experience in foam blowing and in the implementation of conversion projects. The air conditioning sector on the other hand would convert to a high-GWP technology. The Secretariat therefore suggested re-focusing stage I of the HPMP towards the foam sector, with a view to converting a number of the larger enterprises to the use of cyclopentane, as indicated in the HPMP submission.

20. The implementing agencies pointed out that the air conditioning sector plan was developed in close consultation with the industry and involved more than a year of consultations and securing agreement to phase-out use of HCFC in the sector by 2015, despite the fact that HCFCs continue to be the technology of choice for air conditioning in developing countries. The high growth in the sector, and the fact that some non- eligible enterprises have made fairly recent investments into HCFC technology was also pointed out. A re-focusing on the foam sector would require additional and time-consuming consultations in a sector where such discussions are presently only at an early stage. The agencies also pointed to the fact that many enterprises in the foam sector use imported pre-blended polyols. Therefore the assumption would be misleading that conversion of the largest five enterprises would lead to consumption reductions, since substantive amounts of imported pre-blended polyols might be still used and these conversions would have only a limited impact on the consumption. Finally, the UNIDO and the World Bank pointed out that the only systems house, being the main importer and consumer, had stated that identifying, testing and introducing alternative blowing agents in pre-blended polyol would take about two years. The agencies also pointed to the difficulties of regulating the foam sector and thus achieving sustainability in the reduction in consumption, which would be achieved in the air conditioning sector. Finally, the agencies pointed to the significant growth in the use of HCFC-22 in air conditioning manufacturing sector, which might be addressed through an approach that would force also the non-eligible manufacturers to convert. The agencies pointed in particular to one enterprise, the ineligible third largest user of HCFC-22 in the country, which has already announced plans for significant growth in HCFC-22 air conditioner production. The agencies point out that without a sector plan the country does not have the legal means to impose restrictions on the sector's use of HCFC-22.

Air conditioning sector plan

21. The Secretariat noted the substantive increase in HCFCs used for the manufacturing of air conditioning units, from 172 mt (2006) to 461 mt (2010), while the capacities seem to have increased only to a limited degree. UNIDO and the World Bank replied that capacities provided for the three eligible enterprises are based on one eight-hour shift of labour per workday. The manufacturers would have the choice to include an additional shift or expand their production lines. The already high and growing demand for air conditioning in Jordan is seen not only by a substantive increase in the manufacturing sector but in light of the fact that these manufacturers are not at full production capacity and export some of their products in the region. Jordan also continues to import a large number of air conditioning units from the major international brands which makes up the balance of the demand in the market. Even the national market can therefore absorb significant national production increases; in addition, the export markets in the region experienced significant growth in the previous years.

22. The Secretariat noted as one of the main characteristics of the sector plan that Jordan will include a ban on the use of HCFC-22 in manufacturing of air conditioners starting no later than 1 January 2015, and informed UNIDO that this would form part of any recommended decision regarding funding of the air conditioning sector plan. The agencies agreed, provided the air conditioning sector plan remains intact in its scope and proposed an implementation timeframe, that funding for the eligible enterprises is sufficient. The Government of Jordan has reiterated its related commitment based on this understanding.

23. The Secretariat had raised the question whether the intended elimination of import quotas for HCFC-22 for the air conditioning producers would suffice to support the production ban, since it would be conceivable that manufacturers might purchase already imported HCFC-22 for the purpose of manufacturing units through traders in Jordan. UNIDO informed that manufacturers would only be able to purchase HCFC-22 on the market for servicing purposes to the extent that these enterprises have servicing workshops. Enforcement of any manufacturing ban might be carried out not only through import restrictions, but also through the issuance of business permits conditional on compliance with environmental, health and safety rules, monitoring the market for consumer products, and site visits that will be an important part of the functions of a project management unit. This is facilitated by the fact that there are only six manufacturers and that the three biggest are all in the same area.

Choice of alternative technology

24. Jordan had selected HFC-410A as a replacement for HCFC-22 in air conditioners. The submission pointed out that HFC-410A is an internationally well-accepted HCFC-22 alternative in the air conditioning sector, and that basically all air conditioning units sold in the United States of America, throughout the European Union and Japan have been HFC-410A based since 1 January 2010. For the air conditioning and refrigeration sectors, unfortunately only HFC based technologies are readily available and used globally. New low-carbon technologies such as CO_2, hydrocarbons (HC) and low and very low GWP HFCs are emerging, but the timeframe for their global penetration seems more likely to be in the order of ten years or more, according to the prediction in the submission. Moreover, in the case of HC technology for air conditioning, its safety and efficiency is yet to be proven in the market. A critical element in the phase-out of HCFC-22 is the availability of compressors for substitute technologies. HFC-410A compressors are currently produced and supplied by all major compressor manufacturers globally, and systems and associated parts are now also available in Article 5 countries. The agencies considered the applicability of HC technology in the country, particularly at the smaller enterprises. They advise that the baseline practices at the manufacturing, installation and servicing stages must be significantly upgraded to ensure the safe use of this technology. Another constraint is the availability of HC compressors. Based on investigations conducted by the manufacturers, they may be available, but not as readily made off-the-shelf products. Moreover, manufacturers do not see a market for HC-based air conditioning equipment in Jordan nor in the region as they would be competing with international suppliers of HFC-410A air conditioners which employ proven technology and are commercially accepted.

Phase-out of imported pre-blended polyol at Abu Haltam Group for Investments

25. The submission proposes to include in stage I of the HPMP the phase-out of the use of pre-blended HCFC-141b polyol at Abu Haltam Group to be replaced by pre-blended polyol with HFC-245fa as foam blowing agent. The enterprise is the only one in the domestic refrigeration sector in Jordan using HFC-141b, and the same enterprise, with its air conditioning manufacturing operations, is also participating in the air conditioning sector plan. Including this enterprise in the sector plan ensures that it will phase out all uses of HCFCs in one conversion. This will also simplify implementation of the planned ban on manufacturing with HCFCs in the air conditioning sector. The Abu Haltam Group had previously received support from the Multilateral Fund for the conversion from CFC-11 to HCFC-141b, and the activity constitutes therefore a case of second conversion. The pre-blended polyol containing HCFC-141b is imported from the Syrian Arab Republic. The Secretariat advised the World Bank of decision 60/44 (b) (i) of the Executive Committee, specifying that full funding of eligible incremental costs of second-stage conversion projects will be considered in those cases where such projects are necessary to comply with early Montreal Protocol HCFC compliance targets and/or are the most cost effective activities that Jordan can undertake to comply with these targets. The Secretariat noted that the calculated costs for this activity had been US $78,340, but had been capped by the cost-effectiveness threshold at US $26,751. The Secretariat pointed to the fact that activities at the cost-effectiveness threshold are by definition not particularly cost effective, and the conversion is not necessary for compliance. However, given the limited funding need and in view of the other characteristics of the case, the agencies and the Secretariat agreed to retain this enterprise in the plan.

Activities related to service enterprises

26. The proposal foresees a number of activities related to refrigeration service providers linked to the different manufacturers. Activities include a workshop for service technicians as well as a number of servicing kits for the service stations operated by the different manufacturers. The proposal also advises on the relatively small use of HCFC-22 by these service providers. The Secretariat accepted as such the concept to support the service enterprises at this time, but requested the costs and impact of the activities to be separated from those of the conversion, so treating them as belonging to the service sector, funding them completely and applying the cost effectiveness of US $4.50 per kg. The World Bank pointed out that the activities are not related to the service of existing equipment, but to enable the sustainable introduction of new technology into the market, in particular the installation of the equipment; thus, the related costs should be accounted for as part of the conversion costs.

Other cost items

27. The Secretariat discussed the incrementality of a number of cost items with the agencies, and agreed on the removal of funding for a national testing capacity and certain measurement equipment.

Pre-blended polyol

28. Jordan is importing pre-blended polyol containing HCFC-141b as a foam blowing agent, but has so far not reported this use under Article 7 as consumption. There is also a systems house producing pre-blended polyols in the country. UNIDO provided a list of enterprises manufacturing foam with 155 entries in the foam, domestic refrigeration, air conditioning and commercial refrigeration sectors; of these entries, 122 enterprises with very little consumption are subsumed in two groups with a consumption of 33.97 mt (82 enterprises) and 35.82 mt (40 enterprises) (based on the average 2007-2009 consumption). The list includes, for the entries in most sectors, the consumption since 2006 and estimated figures for 2010, so allowing a good understanding whether capacity had been established before the cut-off date. As far as it is currently known, all of these enterprises are consuming pre-blended polyols, which are partially imported and partially produced domestically by the system house. Since the

exact distribution of the imported pre-blended polyol and polyol blended in Jordan to the different companies is difficult to assess, UNIDO and the Secretariat have agreed to use an approximation. The 2010 use of HCFC-141b in imported pre-blended polyols in the country had been 120 mt (13.20 ODP tonnes); distributing the use of imported pre-blended polyols between the companies and based on their use in the previous years, the average 2007-2009 consumption of HCFC-141b in pre-blended polyols in these enterprises is 102.9 mt (11.31 ODP tonnes).

Budget

29. UNIDO, the World Bank and the Secretariat agreed on the costs for the overall HPMP stage I. The funding is largely related to the complete phase-out of the air conditioning sector, relating to both eligible and ineligible consumption. At the 60th Meeting, the Executive Committee had already approved the phase-out of HCFC-22 and HCFC-141b from the manufacture of unitary air conditioning equipment at Petra Engineering, referenced in paragraphs 7 and 10, at the amount of US $2,167,033 plus agency support costs for UNIDO of US $162,527; this amount does not include funding for the conversion of heat exchanger manufacturing. This project at Petra Engineering replaces HCFC-22 by HFC-410A and HCFC-141b by cyclopentane. The details are provided in the Table 4 below.

Table 4: Agreed costs for stage I of the HPMP

Item	**Costs (US $)**			**HCFC**	**Phase-out**	
	ICC	IOC	Total		mt	ODP t
Conversions						
Middle East Complex for Engineering, Electronics and heavy Industries PLC. (MEC)	636,350	724,500	1,360,850	HCFC-22	115.0	6.33
National Refrigeration Company (NRC)	230,890	37,800	268,690	HCFC-22	6.0	0.33
Abu Haltam Group	233,310	126,000	359,310	HCFC-22	20.0	1.10
Abu Haltam Group	26,751	-	26,751	HCFC-141b	3.7	0.41
Non-eligible enterprises	0	0	0	HCFC-22	140.0	7.70
Other activities						
Technical assistance and training in the air conditioning sector			90,000	n/a	0.0	0.00
Policy and regulation			58,440	n/a	0.0	0.00
Awareness			33,744	n/a	0.0	0.00
Project management			100,000	n/a	0.0	0.00
Total			**2,297,785**	**n/a**	**284.7**	**15.87**
Petra Engineering (approved at 60th Meeting)	734,811	1,260,622	1,995,433	HCFC-22	125.0	6.88
	147,840	23,735	171,575	HCFC-141b	10.8	1.19
Aggregated			4,464,793	n/a	420.5	23.94

Estimated baseline consumption

30. The Secretariat noted that the consumption in Jordan increased from 2009 to 2010 by 29.4 per cent in mt (33.5 per cent in ODP tonnes), mainly caused by a 55 per cent increase of HCFC-141b use. The HPMP was accompanied by detailed sector data, showing the consumption changes on an enterprise basis in the country; this data included estimated figures for 2010. The data is available for, in total, 155 enterprises with an aggregated 2009 consumption of 257 mt of HCFC-141b, including consumption in pre-blended polyols. The consumption in these enterprises increased by, on average, 48 per cent between 2009 and 2010, the enterprise with the smallest increase showing a 15 per cent increase, and the largest more than a double, albeit from a low basis. UNIDO further pointed out that the company Petra Engineering Industries Co. has substantially increased its consumption of HCFC-141b between 2009 and 2010, but that this consumption will be phased out as part of the conversion project approved at the 60th Meeting of the Executive Committee. The baseline was calculated as shown in Table 5.

Table 5: Calculation of the estimated baseline

	2007 (Article 7)		**2008 (Article 7)**		**2009 (Article 7)**		**2010 (est.)**		**Average 2009/2010**	
	mt	ODP t	Mt	ODP t	mt	ODP t	mt	ODP t	mt	ODP t
HCFC-22	657.0	36.14	685.0	37.68	875.0	48.13	1077.6	59.27	976.3	**53.70**
HCFC-141b	175.0	19.25	190.0	20.90	207.0	22.77	321.0	35.31	264.0	**29.04**
HCFC-142b	0.0	0.00	7.0	0.46	0.0	0.00	1.4	0.09	0.7	**0.05**
Total	**832.0**	**55.39**	**882.0**	**59.03**	**1,082.0**	**70.90**	**1,400.0**	**94.67**	**1,241.0**	**82.79**
Increase p.a.	n/a	n/a	6.0%	6.6%	23.7%	21.0%	29.4%	33.5%	n/a	n/a

Starting point for aggregate reduction in HCFC consumption

31. The Government of Jordan agreed to establish as its starting point for sustained aggregate reduction in HCFC consumption the estimated baseline consumption, based on the 2009 data reported under Article 7 and the estimated 2010 data resulting in 82.79 ODP tonnes. The 2011-2014 business plan indicated a baseline of 73.7 ODP tonnes (1,125.3 mt), based on a more conservative growth forecast between 2009 and 2010 than that provided in the HPMP submission. In addition, the starting point also includes the 2007-2009 average use of HCFC-141b in imported pre-blended polyols, with a value of 102.9 mt (11.31 ODP tonnes). The resulting starting point is 94.1 ODP tonnes. The related data is provided in Table 6 below.

Table 6: Calculation of the starting point

Substance	**Basis**	**Starting point (mt)**	**Starting point (ODP t)**
HCFC-22	Baseline	976.3	53.70
HCFC-141b (bulk)	Baseline	264.0	29.04
HCFC-141b (in imported pre-blended polyol)	Aggregated 2007-2009 average use by enterprises	102.9	11.31
HCFC-141b (total	-	366.9	40.35
HCFC-142b	Baseline	0.7	0.05
Total	-	**1,343.9**	**94.10**

Impact on the climate

32. A calculation of the impact on the climate of HCFC consumption through the investment components of stage I of the HPMP in Jordan based on the GWP values of the HCFCs and alternative substances introduced and the same level of consumption before and after conversion has been carried out. The climate impact of the foam sector conversion is determined based on the average consumption in the years 2007-2009 of 3.7 mt of HCFC-141b at Abu Haltam Group, leading to a climate impact of 2,683 tonnes of CO_2 equivalent (note: the latest use data for the enterprise, 2010, shows 6 mt use, with a resulting impact of 4,350 tonnes of CO_2 equivalent). It is intended to use pre-blended polyol with HFC-245fa as foam blowing agent, but this is currently not yet available in the country; consequently, the mixing ratio between HFC-245fa and water as co-blowing agent remains also unknown. On the assumption that, as customary for refrigerator insulation, 5 per cent of water are used in the mix, the replacement technology has a climate impact of 3,620 tonnes of CO_2 equivalent for 3.7 mt phase-out; consequently, the climate impact of the conversion in the foam sector will be an increase of 937 tonnes of CO_2 equivalent. Table 7 presents the Multilateral Fund climate impact indicator (MCII) in the air conditioning sector.

Table 7: Climate impact in the air conditioning sector, calculated using the MCII

Input	**Generic**			
	Country	[-]	**Jordan**	
	Company data (name, location)	[-]	Middle East Complex for Engineering, Electronics and heavy Industries; National Refrigeration Company; Abu Haltam Group for Investments	
	Select system type	[list]	Air conditioning / on-site assembly	Air conditioning / factory assembly
	General refrigeration information			
	HCFC to be replaced	[-]	HCFC-22	HCFC-22
	Amount of refrigerant per unit	[kg]	between 1.05 and 3.42, weight av. 1.69	between 0.62 and 1.9, weight av. 1.08
	No. of units	[-]	50,540	49,785
	Refrigeration capacity	[kW]	between 3.52 and 9.10, weight av. 5.60	between 3.52 and 7.63, weight av. 5.33
	Selection of alternative with minimum environmental impact			
	Share of exports (all countries)	[%]	56.6%	
	Calculation of the climate impact			
	Alternative refrigerant (more than one possible)	[list]	HC-290	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		**Jordan**	
	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 (-25.1%)	HC-600a (-27.0%)
			HC-290 (-21.2%)	HC-290 (-23.9%)
			HFC-134a (-6.4%)	HFC-134a (-6.0%)
			HFC-407C (-0.4%)	HFC-407C (-1.3%)
			HCFC-22	**HCFC-22**
			HFC-410A (5.3%)	HFC-410A (5.2%)
			HFC-404A (21.8%)	HFC-404A (26.7%)
	Calculation of the climate impact			
	Per unit, over lifetime (for information only):		HCFC-22	HCFC-22
	Energy consumption	[kWh]	8951	8439
	Direct climate impact (substance)	[kg CO_2 equiv]	4497	1994
	Indirect climate impact (energy): In country	[kg CO_2 equiv]	7898	7446
	Indirect climate impact (energy): Global average	[kg CO_2 equiv]	9576	9030
	Calculation of the climate impact of the conversion			
	Alternative refrigerant 1		**HFC-410A**	**HFC-410A**
	*Total direct impact (post conversion – baseline)**	*[t CO_2 equiv]*	*6,146*	*2,684*
	*Indirect impact (country)***	*[t CO_2 equiv]*	*23,163*	*21,734*
	*Indirect impact (outside country)***	*[t CO_2 equiv]*	*29,734*	*28,024*
	Total indirect impact	*[t CO_2 equiv]*	*52,897*	*49,758*
	Total impact	**[t CO_2 equiv]**	**59,043**	**52,442**
	Alternative refrigerant 2		**HC-290**	**HC-290**
	*Total direct impact (post conversion – baseline)**	*[t CO_2 equiv]*	*-226,220*	*-98,813*
	*Total indirect impact (country)***	*[t CO_2 equiv]*	*-4,309*	*1,786*
	*Total indirect impact (outside country)***	*[t CO_2 equiv]*	*-5,383*	*2,057*
	*Total indirect impact***	*[t CO_2 equiv]*	*-9,692*	*3,843*
	Total impact	**[t CO_2 equiv]**	**-235,912**	**-94,970**

*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.

33. The value for the MCII for the conversion in three enterprises, on the basis of the 2010 production figures, resulting in an increase of climate relevant emissions by 111,485 tonnes of CO_2 equivalent for the choice of HFC-410A as a refrigerant, on the assumption of similar component quality, and for the lifetime of the amount of air conditioning equipment produced in one year in these three factories. As an alternative, a conversion towards HC-290 was calculated, resulting in reductions in climate relevant emissions of 330,882 tonnes of CO_2 equivalent.

34. The HPMP included only a limited amount of technical assistance activities, targeting to sustain the conversion in the air conditioning sector by making available the necessary technology to service this equipment. The related climate impact has already been calculated in the climate impact of the air conditioning equipment from the manufacturing lines to be converted. It is possible, but uncertain whether additional effects such as the introduction of better servicing practices for HCFC-containing equipment might occur; these would reduce the amount of HCFC-22 used for refrigeration servicing.

Co-financing

35. 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, the World Bank, in carrying out the preparation of the sector plan, explained that it is working with Jordan through a GEF project to create an energy efficiency investment support framework. The main element of this work is the Jordan Renewable Energy and Efficiency Fund (JREEF). The GEF proposal originally envisioned US $40 million in co-financing that would come in the form of a "clean energy" credit line dedicated to energy efficiency projects. Agence Française de Développement (AFD) is one of the primary partners for this support. JREEF would permit energy efficiency measures to be scaled up in the residential, commercial and industrial sectors.

2011-2014 business plan of the Multilateral Fund

36. UNIDO and the World Bank are requesting US $2,297,785 plus support costs for implementation of stage I of the HPMP. The total value requested for the period 2011-2014 of US $1,516,580 including support costs is below the total amount in the business plan, indicated as US $6.166 million. The difference in the figures is related to the high phase-out assumed in the business plan of 33.0 ODP tonnes following an estimated baseline level of 73.7 ODP tonnes. This high figure in the business plan referred to the intention of Jordan to substantially accelerate the phase-out until 2019, which would have led to an according high phase-out in the years until and including 2014. However, the Secretariat advised UNIDO to disaggregate the overall HPMP into more stages, and to submit at this point in time only activities meant to ensure the compliance with the 2015 reduction step.

Draft Agreement

37. A draft Agreement between the Government of Jordan and the Executive Committee for HCFCs phase-out is contained in Annex II to the present document.

RECOMMENDATION

38. The Secretariat has reservations regarding the prioritisation of funding for the air conditioning sector in the HPMP stage I, despite its good preparation and the much earlier stage of readiness compared to, in particular, activities in the foam sector; prioritising the air conditioning sector appears to be in conflict with the priority for addressing HCFC-141b first. In addition, the air conditioning sector has no technological choice other than employing a high GWP HFC as the alternative technology. As a result, the Secretariat has refrained from a positive recommendation in this case. The Executive Committee might also wish to consider whether to allow the Government of Jordan to come forward at a future

meeting with a request for an accelerated phase-out. Such a decision, meaningful only in conjunction with an approval of stage I of the HPMP as described in this document, might allow some of the environmental disadvantages that the air conditioning sector plan will bring to be reversed, and might set a precedent for other countries.

39. The Executive Committee may wish to consider whether to:

(a) Approve, in principle, stage I of the HCFC phase-out management plan (HPMP) for Jordan for the period 2011 to 2015, at the amount of US $2,471,503, consisting of US $92,184 and agency support costs of US $8,297 for UNIDO, and US $2,205,601 and agency support costs of US $165,421 for the World Bank, on the understanding that consumption in the air conditioning manufacturing sector would be completely phased out and that Jordan will introduce a ban on the use of HCFC-22 in manufacturing of air conditioners and import of air conditioners containing HCFC-22 effective no later than 1 January 2015;

(b) Note that the Government of Jordan had agreed at the 64th Meeting to establish as its starting point for sustained aggregate reduction in HCFC consumption the estimated baseline of 82.79 ODP tonnes, calculated using actual consumption for 2009 and estimated consumption for 2010 plus 11.31 ODP tonnes of HCFC-141b contained in imported pre-blended polyol systems, resulting in 94.10 ODP tonnes;

(c) Note the deduction of 8.06 ODP tonnes of HCFCs (125 mt of HCFC-22 and 10.8 mt of HCFC-141b) from the starting point for sustained aggregate reduction in HCFC consumption for a project approved at the 60th Meeting of the Executive Committee, and to deduct a further 15.86 ODP tonnes of HCFCs (281 mt of HCFC-22 and 3.7 mt of HCFC-141b) for the implementation of stage I of the HPMP;

(d) Approve the draft Agreement between the Government of Jordan and the Executive Committee for the reduction in consumption of HCFCs, as contained in Annex II to the present document;

(e) Request the Fund Secretariat, once the baseline data were known, to update Appendix 2-A to the draft Agreement to include the figures for maximum allowable consumption, and to notify the Executive Committee of the resulting 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;

(f) Approve the first tranche of stage I of the HPMP for Jordan, and the corresponding implementation plan, at the amount of US $1,113,698, consisting of US $50,000 and agency support costs of US $4,500 for UNIDO, and US $985,300 and agency support costs of US $73,898 for the World Bank;

And whether to

(g) Allow the Government of Jordan to submit to a future meeting, without setting a precedent, stage II of the HPMP with a commitment for a reduction of HCFC consumption to a maximum 2.9 per cent of the baseline by 1 January 2019.

- **Add** the draft HPMP agreement as Annex II to this document

Annex I

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Jordan

(I) PROJECT TITLE	AGENCY
HPMP	UNIDO (lead)

(II) LATEST ARTICLE 7 DATA	Year: 2009	70.9 (ODP tonnes)

(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)									Year: 2009
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab Use	Total sector consumption
				Manufacturing	Servicing				
HCFC141b				22.8					22.8
HCFC141b in				13.2					13.2
HCFC142b				0.6					0.6
HCFC22				27.5	20.6				48.1

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline (estimate):	82.8	Starting point for sustained aggregate reductions:	94.1
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	8.1	Remaining:	70.16

(V) BUSINESS PLAN		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
UNIDO	ODS phase-out (ODP tonnes)	0.5	0.5	6.5	0.5							8.0
	Funding (US $)	43,000	43,000	550,204	43,000	0	0	0	0	0	0	679,204
IBRD	ODS phase-out (ODP tonnes)	16.6	0.0	4.2	4.2							25.0
	Funding (US $)	3,604,765	0	941,192	941,192	0	0	0	0	0	0	5,487,150

(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	82.8	82.8	74.5	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	n/a	n/a	82.79	82.79	74.51	n/a
2.1	Lead IA UNIDO agreed funding (US $)	50,000	0	42,184	0	0	92,184
2.2	Support costs for Lead IA (US $)	4,500	0	3,797	0	0	8,297
2.3	Cooperating IA World Bank agreed funding (US $)	985,300	0	332,001	0	888,300	2,205,601
2.4	Support costs for Cooperating IA (US $)	73,898	0	24,900	0	66,623	165,421
3.1	Total agreed funding (US $)	1,035,300	0	374,185	0	888,300	2,297,785
3.2	Total support cost (US $)	78,398	0	28,697	0	66,623	173,718
3.3	Total agreed costs (US$)	1,113,698	0	402,882	0	954,923	2,471,503

(VII) Request for funding for the first tranche (2011)		
Agency	**Funds requested (US $)**	**Support costs (US $)**
UNIDO	50,000	4,500
World Bank	985,300	73,898

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

Annex II

DRAFT AGREEMENT BETWEEN THE GOVERNMENT OF THE HASHEMITE KINGDOM OF JORDAN AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE REDUCTION IN CONSUMPTION OF HYDROCHLOROFLUOROCARBONS

1. This Agreement represents the understanding of the Government of The Hashemite Kingdom of Jordan (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 74.5 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.

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, 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 for each 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. UNIDO has agreed to be the lead implementing agency (the "Lead IA") and the World Bank has agreed to be the cooperating implementing agency (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 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 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 have reached consensus on the arrangements regarding inter-agency planning, reporting and responsibilities under this Agreement to facilitate a co-ordinated implementation of the Plan, including regular co ordination meetings 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 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, 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 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: THE SUBSTANCES

Substance	Annex	Group	Starting point for aggregate reductions in consumption (ODP tonnes)
HCFC-22	C	I	53.70
HCFC-141b	C	I	40.35
HCFC-142b	C	I	0.05
Total			94.10

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	82.8	82.8	74.5	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	n/a	n/a	82.79	82.79	74.51	n/a
2.1	Lead IA UNIDO agreed funding (US $)	50,000	0	42,184	0	0	92,184
2.2	Support costs for Lead IA (US $)	4,500	0	3,797	0	0	8,297
2.3	Cooperating IA World Bank agreed funding (US $)	985,300	0	332,001	0	888,300	2,205,601
2.4	Support costs for Cooperating IA (US $)	73,898	0	24,900	0	66,623	165,421
3.1	Total agreed funding (US $)	1,035,300	0	374,185	0	888,300	2,297,785
3.2	Total support cost (US $)	78,398	0	28,697	0	66,623	173,718
3.3	Total agreed costs (US$)	1,113,698	0	402,882	0	954,923	2,471,503
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this Agreement (ODP tonnes)						15.46
4.1.2	Phase-out of HCFC-22 to be achieved in previously approved projects (ODP tonnes)						6.88*
4.1.3	Remaining eligible consumption for HCFC-22 (ODP tonnes)						31.36
4.2.1	Total phase-out of HCFC-141b agreed to be achieved under this Agreement (ODP tonnes)						0.41
4.2.2	Phase-out of HCFC-141b to be achieved in previously approved projects (ODP tonnes)						1.19*
4.2.3	Remaining eligible consumption for HCFC-141b (ODP tonnes)						38.75
4.3.1	Total phase-out of HCFC-142b agreed to be achieved under this Agreement (ODP tonnes)						0
4.3.2	Phase-out of HCFC-142b to be achieved in previously approved projects (ODP tonnes)						0
4.3.3	Remaining eligible consumption for HCFC-142b (ODP tonnes)						0.05

*US $2,167,033 and agency support costs of US $162,527 for UNIDO was approved at the 60th Meeting

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 year 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 implementation and monitoring of this HPMP will be co-ordinated by the National Ozone Unit in cooperation with respective governmental bodies and also national experts recruited for particular tasks which would arose in the course of the project implementation. An independent chartered national auditing organization will be recruited by the Lead IA to verify consumption.

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 undertaken by the Lead IA;

(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 and the Cooperating IA, 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 6-B: ROLE OF THE COOPERATING IMPLEMENTING AGENCY

1. The Cooperating IA will be responsible for a range of activities. These activities are specified in the overall plan further, but include at least the following:

(a) Providing policy development assistance 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 $290 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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