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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Sixty-fifth Meeting  
Bali, Indonesia, 13-17 November 2011

**PROJECT PROPOSAL: QATAR**

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)

UNIDO and UNEP

## PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

### Qatar

(I) PROJECT TITLE	AGENCY
HCFC phase out plan (Stage I)	UNEP, UNIDO (lead)

(II) LATEST ARTICLE 7 DATA	Year: 2009	79.7 (ODP tonnes)

(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)								Year: 2010	
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab Use	Total sector consumption
				Manufacturing	Servicing				
HCFC-124									
HCFC-141b					0.4				0.4
HCFC-142b		12.5							12.5
HCFC-22		7.0			72.5				79.5

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline (estimate):	86.08	Starting point for sustained aggregate reductions:	86.08
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	0.0	Remaining:	

(V) BUSINESS PLAN		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
UNIDO	ODS phase-out (ODP tonnes)	12.5		1.3	0.4							14.1
	Funding (US \$)	1,059,329	0	109,759	32,928	0	0	0	0	0	0	1,202,016
UNEP	ODS phase-out (ODP tonnes)	1.8		1.8								3.5
	Funding (US \$)	183,782	0	153,152	0	0	0	0	0	0	0	336,934

(VI) PROJECT DATA			2011	2012	2013	2014	2015	Total
Montreal Protocol consumption limits (estimate)			n/a	n/a	86.08	86.08	77.5	n/a
Maximum allowable consumption (ODP tonnes)			n/a	n/a	86.08	86.08	77.5	n/a
Project Costs requested in principle(US\$)	UNEP	Project costs	105,000	0	150,000	0	55,000	310,000
		Support costs	13,650	0	19,500	0	7,150	40,300
	UNIDO	Project costs	1,045,907	0	532,033	0	148,660	1,726,600
		Support costs	78,443	0	39,902	0	11,150	129,495
Total project costs requested in principle (US \$)			1,150,907	0	682,033	0	203,660	2,036,600
Total support costs requested in principle (US \$)			92,093	0	59,402	0	18,300	169,795
Total funds requested in principle (US \$)			1,243,000	0	741,435	0	221,960	2,206,395

(VII) Request for funding for the first tranche (2011)		
Agency	Funds requested (US \$)	Support costs (US \$)
UNEP	105,000	13,650
UNIDO	1,045,907	78,443

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

## PROJECT DESCRIPTION

1. On behalf of the Government of Qatar UNIDO, as the designated implementing agency, has submitted to the 65<sup>th</sup> meeting of the Executive Committee an HCFC phase-out management plan (HPMP) at a total cost, as originally submitted, of US \$2,819,272 plus agency support costs of US \$211,445 for UNIDO and US \$310,000 plus agency support costs of US \$40,300 for UNEP as a co-implementing agency. The HPMP proposes strategies and activities to achieve a 10 per cent phase-out of HCFC consumption by 2015.
2. The first tranche being requested for the HPMP at this meeting, as originally submitted, amounts to US \$2,218,418 plus agency support costs of US \$166,386 for UNIDO and US \$140,000 plus agency support costs of US \$18,200 for UNEP.

### Background

3. Qatar with a population of 1.7 million has acceded to or ratified the Vienna Convention, the Montreal Protocol, as well as the London, Copenhagen, Montreal, and Beijing amendments.

### ODS regulations

4. The Ministry of Environment is the national body responsible for the implementation of the Montreal Protocol in Qatar. The National Ozone Unit (NOU) is established in the Undersecretary's office at the same ministry. The Government of Qatar established regulations through the Royal law 21/2007, based on the Gulf Corporation Council (GCC) unified ODS regulations of 2005. The Royal law includes controls related to import, export and re-export of ODS, and licensing and quota systems. The law bans the import and export of ODS-based products without the prior approval of the Ministry of Environment; it further places limits on a number of harmful activities such as venting of ODS from refrigeration equipment. Current regulations include HCFCs and bans on imports of CFC-containing equipment. The quota system on HCFCs would be implemented from 2012 onwards.

### HCFC consumption

5. All HCFCs used in Qatar are imported as the country does not have any HCFC production capacity. The HCFC consumption has increased substantially in the last years, from 14.97 ODP tonnes in 2006 to 92.41 ODP tonnes in 2010. An overview of the consumption from 2006 to 2009 that has been reported under Article 7 of the Montreal Protocol to the Ozone Secretariat and consumption data determined by the survey for 2010 is provided in Table 1.

Table 1: Consumption of HCFCs as per Article 7

Substance		2006	2007	2008	2009	2010*	Baseline
HCFC-22	mt	272.22	427.78	603.80	1,225.00	1,446.00	1,335.5
	ODP	14.97	23.53	33.21	67.38	79.53	73.45
HCFC-141b	mt	0.00	0.00	0.00	6.80	3.68	5.24
	ODP	0.00	0.00	0.00	0.75	0.40	0.58
HCFC-142b	mt	0.00	0.00	85.00	178.80	192.00	185.4
	ODP	0.00	0.00	5.53	11.62	12.48	12.05
Total	mt	272.22	427.78	688.80	1,410.60	1,641.68	1,526.14
	ODP	14.97	23.53	38.73	79.75	92.41	86.08
	increase (%)	n/a	57.1%	64.6%	105.9%	15.9%	n/a

\*Survey data

6. During the preparation of the HPMP, a survey was undertaken based on questionnaires, subsequent follow-up meetings and cross-referencing of the data collected with statistics from the Ministry of Environment. All foam manufacturing companies were visited or contacted to verify the questionnaire data. The consumption of HCFCs by sector for 2009 and 2010 is shown in Table 2.

**Table 2: 2009-2010 sectoral distribution of HCFCs**

Substance		Foams		RAC Servicing		Total	
Year		2009	2010	2009	2010	2009	2010
HCFC-22	mt	119.20	128.00	1,105.80	1,318.00	1,225.00	1,446.00
HCFC-141b	mt	0.00	0.00	6.80	3.68	6.80	3.68
HCFC-142b	mt	178.80	192.00	0.00	0.00	178.80	192.00
Total HCFC	mt	298.00	320.00	1,112.60	1,321.68	1,410.60	1,641.68
	ODP t	18.18	19.52	61.57	72.89	79.75	92.41
	%	23%	21%	77%	79%	100%	100%

#### Estimated baseline for HCFC consumption

7. The estimated baseline for HCFC consumption is calculated as 86.08 ODP tonnes (1,526.14 metric tonnes) (mt), based on a consumption of 79.75 ODP tonnes for 2009 as reported under Article 7 of the Montreal Protocol, and an estimated consumption for 2010 of 92.41 ODP tonnes as provided in the HPMP. In line with decision 60/44 (e), this preliminary baseline will be adjusted accordingly should the actual consumption for 2010 deviate from the estimated consumption. The baseline consumption consists of 73.45 ODP tonnes of HCFC-22, 0.58 tonnes of HCFC-141b, and 12.05 ODP tonnes of HCFC-142b.

#### Forecast for future HCFC consumption

8. The Government of Qatar forecast of for the extruded polystyrene (XPS) foam sector and the associated consumption of HCFC-22 and HCFC-142b at a growth rate of 6.3 per cent for 2010, 5.0 per cent for 2011, and 5.0 per cent for 2012. For the consumption in the refrigeration service sector, a constant increase of 10 per cent per year is predicted. Assuming the successful implementation of the HPMP, it is expected that HCFC consumption will peak in 2012 then freeze to the baseline level in 2013 and reduce to 90 per cent of the baseline level in 2015. The table below provides a summary of the HCFC consumption forecast in Qatar for both a constraint scenario under an HPMP, as well as for unconstrained growth.

**Table 3: Forecast consumption of HCFC**

Year		2010	2011	2012	2013	2014	2015	
Montreal Protocol limits		ODP t	n/a	n/a	n/a	86.08	86.08	77.47
Constraint HCFC consumption	HCFC-22	mt	1,446.00	1,522.40	1,667.10	1,500.00	1,400.00	1,300.00
		ODP t	79.53	83.73	91.69	82.50	77.00	71.50
	HCFC-141b	mt	6.80	4.03	4.41	0.00	0.00	0.00
		ODP t	0.75	0.44	0.49	0.00	0.00	0.00
	HCFC-142b	mt	192.00	201.60	211.70	0.00	0.00	0.00
		ODP t	12.48	13.10	13.76	0.00	0.00	0.00
Total		ODP t	92.76	97.28	105.94	82.50	77.00	71.50
Unconstraint HCFC consumption	HCFC-22	mt	1,446.00	1,522.40	1,667.10	1,687.19	1,855.60	2,041.03
		ODP t	79.53	83.73	91.69	92.80	102.06	112.26
	HCFC-141b	mt	6.80	4.03	4.41	4.47	4.91	5.40
		ODP t	0.75	0.44	0.49	0.49	0.54	0.59
	HCFC-142b	mt	192.00	201.60	211.70	222.29	233.40	245.07
		ODP t	12.48	13.10	13.76	14.45	15.17	15.93
Total		ODP t	92.76	97.28	105.94	107.74	117.77	128.78

HCFC phase-out strategy

9. The Government of Qatar is proposing to follow the Montreal Protocol schedule and adopt a staged approach to achieve complete phase-out of HCFC by 2030. The current submission only contains stage I of the HPMP to achieve a 10 per cent reduction by 2015 and focuses on activities in the XPS foam and refrigeration servicing sectors.

10. In stage I of the HPMP the country will strongly focus on the phase-out of HCFC-22 and HCFC-141b in the XPS foam sector, foreseen investment activities. Based on 2010 data, 19.5 per cent of the HCFC consumption of Qatar is in the XPS foam sector, with the remainder in the servicing sector. The summary of activities, tranche distribution and overall cost requested is shown in Table 4.

Table 4: Specific activities of the HPMP, budget and tranche distribution

<b>Activity</b>	<b>Total Funding (US \$)</b>	<b>Tranche 2011 (US \$)</b>	<b>Tranche 2013 (US \$)</b>	<b>Tranche 2015 (US \$)</b>	<b>Agency</b>
<b>Assistance to the foam sector</b>					
Investment projects at three XPS foam manufacturers	2,404,272	1,923,418	480,854	0	UNIDO
<b>Updating policy and regulatory activities</b>					
Establishment of committee, task forces, national legal consultant	30,000	10,000	10,000	10,000	UNEP
E-licensing system	40,000	30,000	10,000	0	UNEP
<b>Technical assistance to the servicing sector</b>					
Development of codes and related implementation: national code of good practice; certification programme development; introduction of codes for labelling, record keeping; codes for equipments, installations operating with, servicing of HC and ammonia; handling cylinders	100,000	40,000	40,000	20,000	UNEP
Consultancy, exposure and training on availability of alternatives for different R&AC applications	60,000	20,000	20,000	20,000	UNEP
<b>National HCFC reclamation programme</b>					
Development of national guidelines to promote establishment of refrigerants reclamation centres	25,000	25,000	0	0	UNIDO
Equipment for reclamation centre	210,000	210,000	0	0	UNIDO
<b>Project implementation, monitoring &amp; verification</b>					
Consultancy services (legal and technical) for project implementation	80,000	40,000	30,000	10,000	UNEP
Project implementation, monitoring	90,000	30,000	30,000	30,000	UNIDO
Verification	90,000	30,000	30,000	30,000	UNIDO
<b>Total</b>	<b>3,129,272</b>	<b>2,358,418</b>	<b>650,854</b>	<b>120,000</b>	

11. The total cost of the HPMP for Qatar has been estimated at US \$3,129,272 to achieve a 10 per cent reduction in HCFC consumption by 2015. This will result in a phase-out of 400.3 mt (23.87 ODP tonnes) of HCFCs.

## SECRETARIAT'S COMMENTS AND RECOMMENDATION

### COMMENTS

12. The Secretariat reviewed the HPMP for Qatar 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 60<sup>th</sup> meeting (decision 60/44), subsequent decisions on HPMPs and the 2011-2014 business plan of the Multilateral Fund.

#### Remaining funds from the implementation of the TPMP

13. A terminal CFC phase-out management plan (TPMP), was approved for Qatar at the 53<sup>rd</sup> meeting of the Executive Committee in 2007 at a level of US \$432,500, with UNIDO and UNEP being the implementing agencies. At the 59<sup>th</sup> meeting, the final tranche of the TPMP was approved, however, for a number of reasons, implementation of certain components of the TPMP proved difficult. One of the important impediments was an issue of identifying a suitable institution to carry out technical training, which was further compounded by the fact that the majority of refrigeration technicians in Qatar appeared to be foreign workers, partly not speaking neither Arabic nor English. Consequently severe difficulties were experienced in the set up. As a result of this and other difficulties, funding of US \$170,000 (39.4 per cent of the originally approved budget) has not yet been committed. The Secretariat and the implementing agencies agreed to reprogramme the funds and use them for activities under the HPMP. These funds, which have been originally related to the eligibility of the country for support to phase-out CFCs, were not taken into account when the Secretariat calculated the remaining eligible funding for Qatar after approval of stage I of the HPMP.

#### Consumption in the servicing sector

14. According to the information from the HPMP, and consistent with the overall consumption data, the servicing sector in Qatar appears to have a HCFC-22 consumption of 1,318 mt (72.49 ODP tonnes) in 2010. The HPMP included the results of the recently completed census of Qatar, which informs that Qatar is inhabited by 1.7 million people, including both citizens of Qatar as well as foreign workers. It appeared to the Secretariat that the consumption might be uncommonly high given the number of inhabitants. The Secretariat therefore looked at a number of other countries that might experience, due to their level of economic development and climatic conditions, a high consumption of HCFCs in the refrigeration air conditioning servicing sector. A number of examples are shown in Table 5.

Table 5: Consumption and per capita consumption of HCFC-22 in the refrigeration and air conditioning servicing sector for several countries

Country	Service sector consumption (mt)	Population	Year of maximum consumption	Per capita consumption in the service sector (kg)
Qatar	1,318	1,699,435	2010	0.776
Panama	200	3,460,000	2010	0.058
Bahrain	294	1,215,000	2010	0.242
Saudi Arabia	513	26,132,000	2010	0.020
Oman	29	3,028,000	2010	0.010
United States of America	68,000	310,000,000	2007	0.219

15. It is evident that the consumption of HCFC-22 per capita in Qatar is more than three times higher than that of any other country considered in the table above. The Secretariat sought clarification from the implementing agencies on the reasons for such a high consumption. The implementing agencies advised that the servicing quality might be low due to the specific circumstances in the country, namely very hot weather when servicing equipment outside, and use of poorly trained personnel for servicing of refrigeration and air conditioning equipment. The implementing agencies also advised that a number of large infrastructure projects had been undertaken in Qatar in previous years, of which some were related to the construction of major-on-site air conditioning plants. The initial charge for such plants might have substantially increased the consumption in the servicing sector, without actually being related to emissions of refrigerant during operation and service of refrigeration and air conditioning equipment. However, there was only anecdotal evidence for these occurrences and it was not possible to quantify how much HCFC might have been used as an initial charge in large refrigeration and air conditioning infrastructure projects. However, UNIDO informed the Secretariat that the amount of air conditioning equipment in Qatar is high on a per capita basis, that the leakage rates are also very high, and the consumption is therefore credible. In the opinion of the Secretariat, the consumption level in the servicing sector indicates that technicians use HCFCs inappropriately, and disregard good practice to an extent uncommon in other countries.

16. When assessing the incrementality of activities to be funded by the Multilateral Fund, one of the important tools to gain an understanding of an appropriate funding level is to define a baseline from which onward improvements are funded, many of these improvements being in terms of investment activities such as equipment replacement, or of non-investment activities such as additional training. For example, for the funding of training for refrigeration technicians, it would be assumed that only an upgrade of their abilities is necessary to perform good practices and to handle alternative refrigerants; the Multilateral Fund would not fully fund the basic education of such technicians, hence their basic training or experience would constitute the baseline.

17. The Secretariat sees a similar issue of baseline arising from the extraordinarily high per capita consumption in the servicing sector of Qatar, which leads to a very high eligibility for future support for Qatar, expressed by its starting point. When determining the starting point based, *inter alia*, on the level of consumption in the servicing sector, the Executive Committee will accept that this level is principally eligible for funding, although there are strong indications that it may not be based on reasonable practices in the refrigeration and air conditioning sector.

18. The situation was discussed with UNIDO, and the Secretariat suggested to lower the requested starting point to decrease the eligibility of Qatar, and in order to achieve a higher degree of equity between Article 5 Parties, avoiding perverse incentives. The Secretariat informed UNIDO that the outcome of the discussion would solely impact on the eligibility of Qatar for future support after the implementation of stage I of the HPMP. UNIDO advised that the Government of Qatar is, at this point in time, not in a position to reconsider the starting point at a level below the baseline consumption. The Secretariat noted that the baseline consumption represented a considerably higher level of consumption per capita than the 0.3 kg that had applied to CFCs under Article 5 of the Montreal Protocol. Consequently, the Secretariat carried out a calculation of a possible revised starting point, using consumption of 0.3 kg of HCFC-22 per capita in the servicing sector only, leading to an eligible servicing sector consumption of Qatar of 509.8 mt of HCFC-22; this would still translate into a level of support of more than US \$2 million for servicing sector activities alone. To this level, the HCFC-22 consumption in the manufacturing sector would be added, which is 123.6 mt of HCFC-22 as co-blowing agent in the manufacture of XPS foam. Finally, the starting point would also include HCFC-141b and HCFC-142b, other chemicals consumed in the country. The resulting starting point calculation is shown in Table 6.

Table 6: Possible calculation of a revised starting point for reduction in HCFC consumption

<b>Substance / use</b>		<b>mt</b>	<b>ODP t</b>
HCFC-22	Manufacturing	123.60	6.80
	Service	509.83	28.04
HCFC-141b		5.24	0.58
HCFC-142b		185.40	12.05
Possible revised starting point		824.07	47.47

Starting point for aggregate reduction in HCFC consumption

19. The Government of Qatar proposed to establish as its starting point for sustained aggregate reduction an HCFC consumption the estimated baseline, calculated based on the average of the actual reported consumption of 79.75 ODP tonnes in 2009 and an estimated consumption of 92.41 ODP tonnes in 2010, amounting to 86.08 ODP tonnes. The business plan indicated a baseline of 80.7 ODP tonnes.

XPS foam sector activities

20. In Qatar there are three enterprises producing XPS foam, namely Qatar Insulation Factory (QIF), Orient Insulation Factory (Orient) and Al Kawthar Insulation Factory (Al Kawthar). The three enterprises use in total 320 mt of a mixture of HCFC-142b and HCFC-22. The original request for funding, as submitted, for this activity was US \$2.404 million for the combination of incremental capital cost (ICC) and incremental operating cost (IOC). All of the three enterprises are fully locally owned, and export only to Article 5 countries. As an alternative technology, the use of isobutene was selected for the conversion. Isobutene is a flammable hydrocarbon with a low-global warming potential (GWP).

21. The enterprises QIF and Al Kawthar both have two production lines for XPS foam. In both cases, one of the production lines was established before September 2007, and one after September 2007. Orient has only one production line. Table 7 shows the related consumption of the enterprises, differentiated by eligibility.

Table 7: Consumption and eligible consumption of three foam enterprises

<b>Consumption</b>	<b>Eligible (mt)</b>	<b>Ineligible (mt)</b>	<b>Total (mt)</b>
Al Kawthar	90	110	200
QIF	90	10	100
Orient	20	0	20
Total	200	120	320

22. The conversion foresees a retrofit of the three eligible lines to isobutene which includes retrofit of foam production equipment and, in particular, a large number of modifications and amendments to ensure the safe use of a flammable blowing agent in the production. The Secretariat and UNIDO discussed at length and in detail certain cost aspects, such as: the necessity of different equipment upgrades; the safety concept and the associated costs; potential saving resulting from the fact that, in parallel to the conversions funded by the Multilateral Fund, the other lines that will also be converted. The Secretariat and UNIDO agreed on the ICC cost of US \$1,350,000 and IOC of US \$160,000 for the conversion of the three eligible lines for the manufacture of XPS foam, and the complete elimination of the use of HCFCs in the XPS foam sector.



### Servicing sector activities

23. In the servicing sector, it is planned that both UNIDO and UNEP will implementing activities. The Secretariat and the agencies concentrated their discussions on four main items, namely the concept of a reclamation center for Qatar and the associated cost; the amount of direct interaction with the refrigeration servicing technicians included in the HPMP; the participation of Qatar in a regional effort to establish an e-licensing system; and the combination of already approved, redirected funding from the TPMP and new funding required under the HPMP.

24. The HPMP for Qatar included as one component the establishment of a reclamation center for HCFCs. The funding originally requested was US \$210,000, to cover not only the actual reclamation equipment (US \$15,000) but also items such as elaborated testing equipment to ensure refrigerant quality, refrigerant storage facilities, refrigerant cylinders to enable selling of refrigerant after reclamation and to be returned later, recovery machines to be provided to technicians to carry out recovery of refrigerant in installations, refrigerant bottle cleaning and control equipment and several other items. The Secretariat raised a number of issues with UNIDO, based on an underlying scepticism whether a reclamation center would be a meaningful use of funds at a time when HCFC-22 is still abundant in supply. A second major concern was whether the associated costs actually constitute incremental costs in light of the fact that the reclamation facility should be associated with an existing entity with principally similar tasks, such as a refrigerant or a technical gases supplier; which appeared to render a number of the costs ineligible.

25. UNIDO advised that in the case of Qatar it is possible to establish a reclamation centre geographically close to a very large amount of air conditioning equipment with a similarly large amount of HCFC contained therein. The close vicinity and the level of economic development of Qatar includes the possibility to transport refrigerant and equipment easily making it feasible for refrigeration technicians to utilise the facility frequently, borrow recovery equipment, provide recovered refrigerant, and purchase reclaimed refrigerant of high quality. Despite the still moderate price of HCFC-22, UNIDO is convinced that it is possible to establish a self-sustained operation once the initial set up cost has been covered. UNIDO advised that, contrary to typical implementation during CFC phase-out when equipment was frequently delivered to national institutions with little interest in reclaiming high amounts of refrigerants, the operation of the centre will be awarded to companies as a result of a competitive bidding process, which will increase dramatically the likelihood of economic sustainability of the undertaking. The equipment has, according to UNIDO, been selected based on the experience with reclamation centres during the time of CFC phase-out. UNIDO advised that it turned out to be necessary to pay close attention to the surrounding details to make a reclamation centre logistically and economically sustainable as well as acceptable to the refrigeration technicians. The use of over-simplified and non-adapted concepts led to unsatisfactory results of projects focussing on reclamation. The agency advised that the reason for the comparatively long list of equipment required was a result of an analysis of the shortcomings of the previous attempts, and that the new approach is meant to address these shortcomings. The Secretariat and UNIDO agreed on a funding level for this component of US \$146,600, of which US \$95,000 (65 per cent) are covered by funds remaining from the implementation of the previous TPMP.

26. The original submission included, for the implementation in the servicing sector, a large number of what the Secretariat considered preparatory activities such as development of national codes of good practice, development and introduction of national standards and codes, and consultancy support to a national ozone committee. The Secretariat requested the submission of quantifiable targets which would identify clearly that activities directly related to service technicians are actually taking place; this appeared particularly important to the Secretariat since the servicing sector consumption of Qatar suggested a very poor quality of service, and the related possibility to reduce the use of HCFC-22 dramatically by improving the observance of good practices during the servicing of refrigeration and air conditioning equipment. The agencies advised that the quantified targets had simply not been sufficiently visible in the submission and specified that, inter alia, 1,000 technicians are to be trained as part of stage I. They advised further that the development of a national code of good practices and an associated

certification programme will include training materials and testing modules, in at least, two languages, one of which will be English, and the other either Arabic or Urdu. This will significantly increase the ability of the training activities to reach large parts of the technician population active in the country, and will thus draw conclusions from one of the lessons learned from the implementation of the TPMP.

27. An e-licensing system is proposed within the HPMP stage I in Qatar to ensure real-time registry and recording of all ODS shipments, in order to address shortfalls in import monitoring and feedback from the use of licences. UNEP advised that this is part of a regional activity in the West Asia region and is a regional effort to enhance the monitoring of ODS trade by accelerating data reporting and compilation, facilitate the identification of gaps between licensed and imported shipments soon after they might occur, support the local and regional efforts to monitor and curb illegal trade, and facilitate the process of ODS licensing in a large country like Iraq through proper share of information amongst NOUs, importers, exporters and boarders' authorities. Moreover, the e-licensing system is already included or will be part of the HPMPs for Bahrain, Iraq, Kuwait, Saudi Arabia, the Syrian Arab Republic and Yemen. Part of the funds for the e-licensing system are pooled between all participating countries to enable cost effective programming of a generic system catered to the needs in the region, and remaining funds are used for each country to customize the generic version to its particular needs and establish the conditions for its use. The funds for the e-licensing system are part of the overall HPMP funding for the servicing sector and subject to the cost effectiveness value established in decision 60/44(f)(xv).

28. The Secretariat and the agencies agreed on a reprogramming of US \$170,000 remaining from the implementation of the TPMP for activities under the HPMP. This reprogramming will make these activities part of the HPMP. The different activities, the associated cost and the distribution of these costs between agencies and HPMP/TPMP are shown in Table 8:

Table 8: Cost of the service component of the HPMP, and its distribution between agencies and sources of funding

<b>Activity</b>	<b>HPMP (US \$)</b>	<b>TPMP (US \$)</b>	<b>Total funding (US \$)</b>	<b>Agency</b>
Legal; and various other support pertaining to update of national legislation, National Ozone Committee and other items	30,000	0	30,000	UNEP
E-licensing system	25,000	15,000	40,000	UNEP
Development of codes and related implementation: national code of good practice; certification programme development; introduction of codes for labelling, record keeping; codes for equipments, installations operating with, servicing of HC and ammonia; handling cylinders.	45,000	10,000	55,000	UNEP
Development of code of good practice, translation, certification module development	50,000	0	50,000	UNEP
National training programme, incl. train the trainers and training of 1,000 technicians	70,000	35,000	105,000	UNEP
Specialized technical assistance and training on availability selection of alternatives for different R&AC stakeholders i.e. consultants/consultancy services, contractors, end-users, etc.	30,000	0	30,000	UNEP
National reclamation center	51,600	95,000	146,600	UNIDO
Consultancy services	60,000	0	60,000	UNEP
PMU	75,000	15,000	90,000	UNIDO
Verification	90,000	0	90,000	UNIDO
<b>Total</b>	<b>526,600</b>	<b>170,000</b>	<b>696,600</b>	

29. Based on the discussions reflected in the above paragraphs, the total funding for the HPMP stage I for Qatar was agreed at US \$2,036,600 as shown in Table 9 below, plus US \$170,000 from remaining funding under the previously approved TPMP. This will assist the country to meet a 10 per cent reduction in consumption by 2015 and phase-out 23.87 ODP tonnes of HCFCs equal to 27.7 per cent of the baseline by 2015.

Table 9: Agreed level funding of the HPMP

Activity	Substance	Cost (US \$)	Phase-out		Cost effectiveness (US \$/kg)
			mt	ODP t	
XPS foam sector conversion	HCFC-22	1,510,000	134.60	7.4	4.72
	HCFC-142b		185.40	12.05	
Servicing sector activities	HCFC-22	361,600	80.4	4.42	4.5
PMU, verification		165,000			n/a
Total		2,036,600	400.40	23.87	n/a

#### Impact on the climate

30. The conversion of three eligible and two non-eligible production lines for XPS foam under the HPMP, consuming, in total, 134.6 mt of HCFC-22 and 185.4 mt of HCFC-142b will lead to a substantial reduction in the climate impact of the blowing agent. The replacement technology, isobutene, was considered, with a GWP of 20, and the same total use in mt as today's mixture. The calculation of the climate impact of the conversion in the foam sector results in a reduction of emissions of 665,500 tonnes CO<sub>2</sub> equivalent, as shown in Table 10:

Table 10: Calculation of climate impact for the conversion of three XPS foam manufacturers

Status	Substance	Use (mt)	GWP	Climate impact (mt CO <sub>2</sub> equiv)
Phase out	HCFC-22	134.60	1810	- 243,626
	HCFC-142b	185.40	2310	- 428,274
Phase in	Isobutene	320.00	20	6400
Total climate impact (- reduction / + increase in impact)				- 665,500

31. The project proposal includes the establishment of a reclamation center with a capacity of 50 tonnes per year. Reclamation, as opposed to emitting the same amount of substance into the atmosphere, decreases the climate impact substantially. For the calculation of the climate impact of the HPMP of Qatar, a utilisation of the reclamation center of 50 per cent of its capacity was assumed. The remaining proposed technical assistance activities in the HPMP, which includes the introduction of better servicing practices and enforcement of HCFC import controls, will further reduce the amount of HCFC-22 used for refrigeration servicing. Each kilogramme of HCFC-22 not emitted due to better refrigeration practices results in the savings of approximately 1.8 CO<sub>2</sub> equivalent tonnes.

32. Although a calculation of the impact on the climate related to the activities in the servicing sector was not indicated in the HPMP, the activities planned by Qatar, in particular the training of 1,000 technicians in good practices in combination with the excessive current refrigerant emissions indicate that it is likely that the country will achieve the 11,647 CO<sub>2</sub> equivalent tonnes saved in emissions into the atmosphere estimated in 2011-2014 business plan for servicing sector activities other than the operation of the reclamation centre. An assessment of the future implementation reports by, *inter alia*, comparing the levels of refrigerant used annually from the commencement of the HPMP, the reported amount of refrigerant being recovered and recycled, the number of technicians trained and the HCFC-22

based equipment being retrofitted might provide further data on the impact of this HPMP stage I on the climate. The described impact of the HPMP stage I for Qatar from the different types of activities shown in Table 11:

Table 11: Impact of different activities under the HPMP stage I on the climate

Activity	Impact on the climate (- reduction / + increase in impact) in mt of CO <sub>2</sub> equiv.	
	Business plan	Actual
Conversion in the XPS foam sector	- 344,392	- 665,500
Establishment of a reclamation center	- 13,489	- 45,250
Various service sector activities	- 11,647	
Total	- 369,528	- 722,397

### Co-financing

33. 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 19<sup>th</sup> Meeting of the Parties, UNIDO advised that elaborate considerations on the side of the Government of Qatar on the provision of co-financing for the HPMP had been done. The HPMP advises of the principle availability of the available public finance instruments in Qatar, such as investment grants, interest subsidies on commercial loans and public-backed guarantees. The HPMP included a detailed, four-page consideration of a possible co-funding scheme, in particular to cover additional costs at the manufacturers of the XPS foam, which are only partially eligible under the Multilateral Fund due to establishment of manufacturing facilities after the cut-off date. The amount of additional funding which might support further the HCFC phase-out of Qatar until 2020, outside the assumed eligibility for Multilateral Fund support, is in the order of US \$2 million. However, while the HPMP considered various possibilities of co-funding, no concrete commitments were included.

### 2011-2014 business plan of the Multilateral Fund

34. UNIDO is requesting US \$2,036,600 plus agency support costs for the implementation of the HPMP. The funding requested for 2011, US \$1,243,000 are consistent with the business plan values for 2011, where an amount of US \$1,243,111 is foreseen. The funding envisaged for the HPMP until 2014, including agency support costs, is US \$1,984,435, while the business plan foresees funding of US \$1,538,949; the funding requested is therefore 29 per cent higher than that in the business plan until 2014. The difference in funding is related to the higher phase-out requested under the HPMP. While the business plan foresees the phase-out of 17.6 ODP tonnes by 2014, the phase-out plan for under the HPMP amounts to 23.87 ODP tonnes, an increase over the business plan value of 35 per cent. The reason lies in the concept of the sector approach for XPS foam, where the sector is completely phased out and accounted for, with a deduction of 320 mt (19.45 ODP tonnes). A limited amount of activities in the servicing sector, resulting in a consumption reduction of 4.42 ODP tonnes (6.6 per cent of the sector baseline) appear to be meaningful in light of the obvious challenges in that sector.

### Draft Agreement

35. A draft Agreement between the Government of Qatar and the Executive Committee for HCFC phase-out is contained in Annex I to the present document.

**RECOMMENDATION**

36. The Executive Committee may wish to consider:

(a) Whether:

(i) To accept the request from the Government of Qatar to establish as its starting point for sustained aggregate reduction in HCFC consumption an estimated baseline of 86.08 ODP tonnes, calculated using the actual consumption of 79.75 ODP tonnes reported for 2009 under Article 7 and estimated consumption of 92.41 ODP tonnes for 2010;

Or

(ii) To establish a threshold for the maximum eligible consumption in the servicing sector on a per capita basis and to determine the starting point for Qatar on these grounds;

(b) Approving, in principle, stage I of the HCFC phase-out management plan (HPMP) for Qatar for the period 2011 to 2015 to meet the 10 per cent reduction in HCFC consumption, at the amount of US \$2,206,395, consisting of US \$1,726,600 plus agency support costs of US \$129,495 for UNIDO and US \$310,000 plus agency support costs of US \$40,300 for UNEP;

(c) Deducting 23.87 ODP tonnes from the starting point for sustained aggregate reduction in HCFC consumption;

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

(e) Requesting the Fund Secretariat, once the baseline data were known, to update Appendix 2-A to the Agreement to include the figure for maximum allowable consumption, to notify the Executive Committee of the resulting change in the levels of maximum level consumption;

(f) Approving the first tranche of stage I of the HPMP for Qatar, and the corresponding implementation plan, at the amount of US \$1,243,000, consisting of US \$1,045,907 plus agency support costs of US \$78,443 for UNIDO, and US \$105,000 plus agency support costs of US \$13,650 for UNEP; and

(g) Approving the reallocation of funding remaining from the terminal phase-out management plan (TPMP) of US \$110,000 plus agency support costs for UNIDO and US \$60,000 plus agency support costs for UNEP, as agreed under the TPMP, in line with the implementation plans provided.

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## Annex I

### **DRAFT AGREEMENT BETWEEN THE GOVERNMENT OF QATAR 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 Qatar (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 77.47 ODP tonnes by 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 that exceeds the level defined in row 1.2 of Appendix 2-A as the final reduction step under this Agreement for all of the Substances specified in Appendix 1-A, and in respect to any consumption of each of the Substances that exceeds the level defined in rows 4.1.3, 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 to the Country. The Executive Committee will, in principle, provide this funding at the Executive Committee meetings specified in Appendix 3-A (“Funding Approval Schedule”).
4. The Country agrees to implement this Agreement in accordance with the HCFC phase-out sector plans submitted. In accordance with sub-paragraph 5(b) of this Agreement, the Country will accept independent verification of the achievement of the annual consumption limits of the Substances as set out in row 1.2 of Appendix 2-A of this Agreement. The aforementioned verification will be commissioned by the relevant bilateral or implementing agency.
5. The Executive Committee will not provide the Funding in accordance with the Funding Approval Schedule unless the Country satisfies the following conditions at least eight weeks in advance of the applicable Executive Committee meeting set out in the Funding Approval Schedule:
  - (a) That the Country had met the Targets set out in row 1.2 of Appendix 2-A for all relevant years. Relevant years are all years since the year in which this Agreement was approved. Years for which 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 are exempted;
  - (b) That the meeting of these Targets has been independently verified, unless the Executive Committee decided that such verification would not be required;
  - (c) That the Country had submitted 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 an annual implementation plan in the form of Appendix 4-A covering each calendar year until and including the year for which the funding schedule foresees the submission of the next tranche or, in case of the final tranche, until completion of all activities foreseen; and
- (e) That, for all submissions from the 68<sup>th</sup> 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 either in an annual implementation plan submitted as foreseen in sub-paragraph 5(d) above, or as a revision to an existing annual implementation plan to be submitted eight weeks prior to any meeting of the Executive Committee, for its approval. Major changes would relate to:
  - (i) Issues potentially concerning the rules and policies of the Multilateral Fund;
  - (ii) Changes which would modify any clause of this Agreement;
  - (iii) Changes in the annual levels of funding allocated to individual bilateral or implementing agencies for the different tranches; and
  - (iv) Provision of funding for programmes or activities not included in the current endorsed 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 last approved 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 subsequent annual implementation report;
- (c) Should the Country decide during implementation of the agreement to introduce an alternative technology other than that proposed in the approved HPMP, this would require approval by the Executive Committee as part of an Annual Implementation Plan or the revision of the approved plan. Any submission of such a request for change in technology would identify the associated incremental costs, the potential impact to the climate, and any differences in ODP tonnes to be phased out if applicable. The Country agrees that potential savings in incremental costs related to the change of technology would decrease the overall funding level under this Agreement accordingly;

- (d) Any enterprise to be converted to non-HCFC technology included in the approved HPMP and that would be found to be ineligible under the guidelines of the Multilateral Fund (i.e., due to foreign ownership or establishment post the 21 September 2007 cut-off date), will not receive assistance. This information would be reported to the Executive Committee as part of the Annual Implementation Plan;
- (e) The Country commits to examining the possibility of using pre-blended hydrocarbon systems instead of blending them in-house, for those foam enterprises covered under the umbrella project, should this be technically viable, economically feasible and acceptable to the enterprises;
- (f) Any remaining funds will be returned to the Multilateral Fund upon completion of the last tranche foreseen under this Agreement.

8. Specific attention will be paid to the execution of the activities in the refrigeration servicing sub-sector, 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 UNEP 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 ensuring co-ordinated planning, implementation and reporting of all activities under this Agreement, including but not limited to independent verification as per sub-paragraph 5(b). This responsibility includes the necessity to co-ordinate with the Cooperating IA to ensure appropriate timing and sequence of activities in the implementation. The Cooperating IA will support the Lead IA by implementing the activities listed in Appendix 6-B under the overall co-ordination of the Lead IA. The Lead IA and Cooperating IA 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 ("Reductions in Funding for Failure to Comply") 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 the information necessary to verify compliance with this Agreement.

14. The completion of stage I 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 level has been specified in Appendix 2-A. Should there at that time still be activities that are outstanding, and 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 will continue until the time of the completion unless otherwise specified by the Executive Committee.

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

## APPENDICES

### APPENDIX 1-A: THE SUBSTANCES

Substance	Annex	Group	Starting point for Aggregate reductions in consumption (ODP tonnes)
HCFC-22	C	I	73.45
HCFC-141b	C	I	0.58
HCFC-142b	C	I	12.05
Total	C	I	86.08

## 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	86.08	86.08	77.5	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	n/a	n/a	86.08	86.08	77.5	n/a
2.1	Lead IA UNIDO agreed funding (US \$)	1,045,907	0	532,033	0	148,660	1,726,600
2.2	Support costs for Lead IA (US \$)	78,443	0	39,902	0	11,150	129,495
2.3	Cooperating IA UNEP agreed funding (US \$)	105,000	0	150,000	0	55,000	310,000
2.4	Support costs for Cooperating IA (US \$)	13,650	0	19,500	0	7,150	40,300
3.1	Total agreed funding (US \$)	1,150,907	0	682,033	0	203,660	2,036,600
3.2	Total support cost (US \$)	92,093	0	59,402	0	18,300	169,795
3.3	Total agreed costs (US\$)	1,243,000	0	741,435	0	221,960	2,206,395
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this Agreement (ODP tonnes)						11.82
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)						61.63
4.2.1	Total phase-out of HCFC-141b agreed to be achieved under this Agreement (ODP tonnes)						0
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)						0.58
4.3.1	Total phase-out of HCFC-142b agreed to be achieved under this Agreement (ODP tonnes)						12.05
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

## APPENDIX 3-A: FUNDING APPROVAL SCHEDULE

16. Funding for the future tranches will be considered for approval at 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, with data provided by calendar year, regarding the progress since the year prior to the previous report, reflecting the situation of the Country in regard to phase out of the Substances, how the different activities contribute to it, and how they relate to each other. The report should include ODS phase-out as a direct result from the

implementation of activities, by substance, and the alternative technology used and the related phase-in of alternatives, to allow the Secretariat to provide to the Executive Committee information about the resulting change in climate relevant emissions. The report should further highlight successes, experiences, and challenges related to the different activities included in the Plan, reflecting any changes in the circumstances in the Country, and providing other relevant information. The report should also include information on and justification for any changes vis-à-vis the previously submitted Annual Implementation Plan(s), such as delays, uses of the flexibility for reallocation of funds during implementation of a tranche, as provided for in paragraph 7 of this Agreement, or other changes. The narrative report will cover all relevant years specified in sub-paragraph 5(a) of the Agreement and can in addition also include information on activities in the current year;

- (b) 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 and including the year of the planned submission of the next tranche request, highlighting the interdependence of the activities, and taking into account experiences made and progress achieved in the implementation of earlier tranches; the data in the plan will be provided by calendar year. The description should also include a reference to the overall plan and progress achieved, as well as any possible changes to the overall plan that are foreseen. The description should cover the years specified in sub-paragraph 5(d) of the Agreement. The description should also specify and explain in detail such changes to the overall plan. This description of future activities can be submitted as a part of the same document as the narrative report under sub-paragraph (b) above;
- (d) A set of quantitative information for all annual implementation reports and annual implementation plans, submitted through an online database. This quantitative information, to be submitted by calendar year with each tranche request, will be amending the narratives and description for the report (see sub-paragraph 1(a) above) and the plan (see sub-paragraph 1(c) above), the annual implementation plan and any changes to the overall plan, and will cover the same time periods and activities; and
- (e) An Executive Summary of about five paragraphs, summarizing the information of the above sub-paragraphs 1(a) to 1(d).

## **APPENDIX 5-A: MONITORING INSTITUTIONS AND ROLES**

1. The National Ozone Unit (NOU) is the central administrative unit established within the administrative structure of Ministry of Environment, responsible for the co-ordination of governmental activities with respect to the ozone layer protection and facilitation of ODS phase-out.

2. The NOU will be responsible for the overall co-ordination of national activities towards the HPMP implementation.

3. The management of the implementation of the planned project activities will be allocated to the NOU in cooperation with UNIDO as the Lead IA.

#### **APPENDIX 6-A: ROLE OF THE LEAD IMPLEMENTING AGENCY**

1. The Lead IA will be responsible for a range of activities, including at least the following:
  - (a) Ensuring performance and financial verification in accordance with this Agreement and with its specific internal procedures and requirements as set out in the Country's HPMP;
  - (b) Assisting the Country in preparation of the Implementation Plans and subsequent reports as per Appendix 4-A;
  - (c) Providing independent 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. The reporting requirements include the reporting about activities undertaken by the Cooperating IA;
  - (f) Ensuring that appropriate independent technical experts carry out the technical reviews;
  - (g) Carrying out required supervision missions;
  - (h) Ensuring the presence of an operating mechanism to allow effective, transparent implementation of the Implementation Plan and accurate data reporting;
  - (i) Co-ordinating the activities of the Cooperating IA, and ensuring appropriate sequence of activities;
  - (j) In case of reductions in funding for failure to comply in accordance with paragraph 11 of the Agreement, to determine, in consultation with the Country and the Cooperating IA, the allocation of the reductions to the different budget items and to the funding of each implementing or bilateral agency involved;
  - (k) Ensuring that disbursements made to the Country are based on the use of the indicators; and
  - (l) Providing assistance with policy, management and technical support when required.
2. After consultation with the Country and taking into account any views expressed, the Lead IA will select and mandate an independent entity to carry out the verification of the HPMP results and the consumption of the Substances mentioned in Appendix 1-A, as per sub-paragraph 5(b) of the Agreement and sub-paragraph 1(b) of Appendix 4-A.

#### **APPENDIX 6-B: ROLE OF THE COOPERATING IMPLEMENTING AGENCY**

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

- (a) Providing assistance for policy development when required;
- (b) Assisting the Country in the implementation and assessment of the activities funded by the Cooperating IA, and refer to the Lead IA to ensure a co-ordinated sequence in the activities; and
- (c) Providing reports to the Lead IA on these activities, for inclusion in the consolidated reports as per Appendix 4-A.

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

1. In accordance with paragraph 11 of the Agreement, the amount of funding provided may be reduced by US \$170 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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