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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Sixty-eighth Meeting  
Montreal, 3-7 December 2012

**PROJECT PROPOSAL: MYANMAR**

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)

UNEP/UNIDO

Pre-session documents of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol are without prejudice to any decision that the Executive Committee might take following issuance of the document.

## PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

### Myanmar

<b>(I) PROJECT TITLE</b>	<b>AGENCY</b>
HCFC phase out plan (Stage I)	UNEP (lead), UNIDO

<b>(II) LATEST ARTICLE 7 DATA</b>	Year: 2011	5.75(ODP tonnes)
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<b>(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)</b>								<b>Year: 2011</b>	
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab Use	Total sector consumption
				Manufacturing	Servicing				
HCFC-123									
HCFC-124									
HCFC-141b					0				0
HCFC-142b									
HCFC-22					5.75				5.75

<b>(IV) CONSUMPTION DATA (ODP tonnes)</b>			
2009 - 2010 baseline:	4.30	Starting point for sustained aggregate reductions:	4.30
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	0.0	Remaining:	2.80

<b>(V) BUSINESS PLAN</b>		2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
UNEP	ODS phase-out (ODP tonnes)	0		0						0	
	Funding (US \$)	105,021		38,672		8,460				32,147	184,300
UNIDO	ODS phase-out (ODP tonnes)	0		0.3						0	0.3
	Funding (US \$)	0		40,229						0	40,229

<b>(VI) PROJECT DATA</b>			2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Montreal Protocol consumption limits			n/a	4.30	4.30	3.87	3.87	3.87	3.87	3.87	2.80	n/a
Maximum allowable consumption (ODP tonnes)			n/a	4.30	4.30	3.87	3.87	3.87	3.87	3.87	2.80	n/a
Project Costs requested in principle(US\$)	UNEP	Project costs	159,000			19,000		13,000			29,000	220,000
		Support costs	20,670			2,470		1,690			3,770	28,600
	UNIDO	Project costs				60,000						60,000
		Support costs				5,400						5,400
Total project costs requested in principle (US \$)			159,000			79,000		13,000			29,000	280,000
Total support costs requested in principle (US \$)			20,670			7,870		1,690			3,770	34,000
Total funds requested in principle (US \$)			179,670			86,870		14,690			32,770	314,000

<b>(VII) Request for funding for the first tranche (2012)</b>		
Agency	Funds requested (US \$)	Support costs (US \$)
UNEP	159,000	20,670

<b>Funding request:</b>	<b>Approval of funding for the first tranche (2012) as indicated above</b>
Secretariat's recommendation:	Individual consideration

## PROJECT DESCRIPTION

1. On behalf of the Government of Myanmar UNEP, as the lead implementing agency, has submitted to the 68<sup>th</sup> Meeting of the Executive Committee stage I of an HCFC phase-out management plan (HPMP) at a total cost, as originally submitted, of US \$314,000 consisting of US \$220,000 plus agency support costs of US \$28,600 for UNEP, and US \$60,000 plus agency support cost of US \$5,400 for UNIDO. The HPMP covers strategies and activities to achieve the 35 per cent reduction in HCFC consumption by 2020.
2. The first tranche for stage I being requested at this meeting amounts to US \$159,000 plus agency support costs of US \$20,670 for UNEP, as originally submitted.

### Background

#### ODS regulations

3. The National Ozone Unit (NOU) was initially established under the National Commission for Environmental Affairs (NCEA) in 2004. Due to the recent government restructuring in Myanmar, the National Environmental Conservation Committee (NECC) has been established and taken over responsibilities of NCEA regarding the Montreal Protocol at the policy level. The Ministry of Environmental Conservation and Forestry (MOECAF) is currently the national body responsible for the implementation of the Montreal Protocol in the country. It works in consultation with the NOU at the operational level and is the focal point responsible for coordinating activities between agencies related to the Montreal Protocol. This unique institutional arrangement has provided an advantage to the country and has ensured the continuity of ozone-depleting substances (ODS) phase-out activities despite numerous government restructuring.
4. The lack of a specific regulation on ODS had limited the authority of MOECAF to strictly control and enforce import/export and use of ODS. During CFC phase-out, the Government of Myanmar relied on the Control of Imports and Export (Temporary) Act of 1947, under the Ministry of Commerce, to control ODS imports. Through this Act, any enterprise wishing to import/export any goods is required to get from the Ministry of Commerce an import/export license which is then provided to the Customs Department as part of the customs clearance process. The importer/exporter is required to apply for an endorsement letter from MOECAF, upon receipt of which the Ministry of Commerce could issue a license to import ODS. MOECAF maintains records of imports and checks import data annually submitted by the Customs Department to verify and reconcile the import figures if there are any discrepancies.
5. The final draft of Ozone Order has been approved by the Office of the Union Attorney-General since July 2011. It will be regulated under the Environmental Conservation Law which is planned for approval in 2012. This Ozone Order includes a quota system for ODS, which can be applied to import control on HCFCs. The proposed system also envisages the controls of the imports of HCFC-based equipment and requires labelling of HCFC containers. It also controls the sales of HCFCs and limits the import of HCFC split-type and window-type air-conditioners. This Order will be effective only when the Environmental Conservation Law is signed by the Union Minister of the Ministry of Environmental Conservation and Forestry expected by the end of 2012.

6. The Government of Myanmar has ratified all the amendments to the Montreal Protocol.

#### HCFC consumption and sector distribution

7. The two main HCFCs imported into Myanmar are HCFC-22, and HCFC-141b in bulk and in imported pre-blended polyols. In 2009, only HCFC-22 was imported whilst in 2010, HCFC-22 and HCFC-141b were both imported into the country. HCFCs are primarily imported from Singapore, but the

products mainly originate from China and India. Table 1 shows HCFCs imported into Myanmar from 2005-2010.

Table 1: HCFCs imported into Myanmar (Article 7 data)

HCFC	2005		2006		2007		2008		2009		2010		2011	
	mt	ODP tonnes	mt	ODP tonnes	mt	ODP tonnes	mt	ODP tonnes	mt	ODP tonnes	mt	ODP tonnes	mt	ODP tonnes
HCFC-22	3.0	0.2	23.03	1.3	43.16	2.4	35.64	2.0	75.07	4.1	79.79	4.4	104.58	5.75
HCFC-141b											0.75	0.08		0
<b>Sub-Total</b>	3.0	0.2	23.03	1.3	43.16	2.4	35.64	2.0	75.07	4.1	80.54	4.5	104.58	5.75
HCFC-141b in imported pre-blended polyols					14.32	1.58	15.75	1.73	20.04	2.20				

8. The majority of HCFCs imported into Myanmar is used for servicing refrigeration and air-conditioning (RAC) systems. In 2010, HCFC-22 was used as refrigerant in all types of RAC equipment, while bulk HCFC-141b was used as a flushing agent for servicing large RAC equipment like chillers, condensing units, industrial refrigeration and cold storages. According to the survey, it was estimated that about 80 per cent of Myanmar's HCFC-22 consumption was used for servicing (maintenance and repair) of the existing HCFC-based equipment, while about 20 per cent was used for installation of new HCFC-based equipment. The survey did not find any use of bulk HCFCs in foam, fire-fighting or solvent sectors, except for flushing applications during servicing.

9. There are about 436 RAC servicing companies in Myanmar. These are categorized into three groups: (i) dealers and contractors, (ii) large-size servicing workshops and (iii) small and medium-size servicing workshops. Dealers, contractors and large-size servicing workshops provide services to the government agencies and large establishments. Small and medium-size servicing workshops provide service to household sector and small establishments. The total number of technicians working in the RAC servicing sector is estimated at around 1,600 comprising 1,400 RAC technicians working with RAC servicing companies and 200 technicians working in-house with hotels and other establishments to service their own RAC equipment. The table below presents the country's demand for HCFCs in the refrigeration servicing sector.

Table 2: HCFC consumption in the refrigeration servicing sector in 2010

Sub-sector	Existing units as of Dec. 2010			HCFC-22 consumption in 2010					
	No. of Units	Total Refrigerant Installed Capacity (tonnes)		Installation (tonnes)		Maintenance and Repair (tonnes)		Total (tonnes)	
		MT	ODP	MT	ODP	MT	ODP	MT	ODP
<b>Split-type and window-type AC</b>	560,000	563.3	30.98	11.9	0.66	62.6	3.44	74.6	4.10
<b>Packaged AC</b>	520	4.8	0.27	0.16	0.01	0.58	0.03	0.74	0.04
<b>Chiller</b>	680	46.3	2.55	7.4	0.40	9.4	0.52	16.8	0.92

Sub-sector	Existing units as of Dec. 2010		HCFC-22 consumption in 2010						
	No. of Units	Total Refrigerant Installed Capacity (tonnes)	Installation (tonnes)		Maintenance and Repair (tonnes)		Total (tonnes)		
		MT	ODP	MT	ODP	MT	ODP	MT	ODP
Condensing unit and freezer	220	10.1	0.55	0.5	0.03	1.5	0.08	2.0	0.11
Industrial refrigeration & cold storage	110	5.3	0.29	0.0	0.00	2.0	0.11	2.0	0.11
<b>Total</b>	<b>561,530</b>	<b>629.8</b>	<b>34.64</b>	<b>20.0</b>	<b>1.10</b>	<b>76.1</b>	<b>4.19</b>	<b>96.1</b>	<b>5.28</b>

10. In addition to bulk HCFCs, the survey also found that pre-blended polyols containing HCFC-141b as foam blowing agent are being used for production of rigid polyurethane foam sandwich panels by one enterprise, Shanghai Shuangzheng Developing Co, Ltd. This enterprise was established in 2003, and has 100 per cent Chinese ownership. It manufactures rigid polyurethane foams for sandwich panels, and had an annual average production of 58,333 cubic meters of foam between 2007-2009. These pre-blended polyols containing HCFC-141b are imported from China by the enterprise. The Government of Myanmar has never reported the quantities of HCFC-141b contained in pre-blended polyols to the Ozone Secretariat under Article 7. The company used an average of 16.70 metric tonnes (mt) or 1.83 ODP tonnes of HCFC-141b contained in pre-blended polyols during the period 2007-2009 as detailed in the table below.

Table 3: Imports of HCFC-141b in fully formulated polyol systems (2007-2009)

Year	HCFC-141b	
	mt	ODP tonnes
2007	14.32	1.58
2008	15.75	1.73
2009	20.04	2.20
<b>Average</b>	<b>16.70</b>	<b>1.83</b>

11. The 2011-2020 forecast for HCFC consumption based on projection using a formula from estimated linear trends taken from historical HCFC consumption is shown in Table 4.

Table 4: Forecast consumption of HCFCs in Myanmar

		2009*	2010*	2011*	2012	2013	2014	2015	2016	2017	2018	2019	2020
Constrained HCFC consumption	mt	75.07	80.54	104.58	77.80	77.80	77.80	70.02	70.02	70.02	70.02	70.02	50.57
	ODP	4.1	4.5	5.75	4.30	4.30	4.30	3.87	3.87	3.87	3.87	3.87	2.80
Unconstrained HCFC consumption	mt	75.07	80.54	104.58	119.22	135.91	154.94	176.63	201.36	459.1	523.37	596.65	679.04
	ODP	4.1	4.5	5.75	6.56	7.48	8.52	9.71	11.07	25.25	28.78	32.82	37.34

\* based on reported Article 7 data

Baseline/starting point for HCFC consumption

12. The HPMP calculated the baseline for HCFC consumption as 77.80 mt (4.30 ODP tonnes) by using the average of 2009 consumption of 75.07 mt (4.13 ODP tonnes) and 2010 consumption of 80.54 mt (4.5 ODP tonnes) reported under Article 7. The Government of Myanmar added the average consumption of HCFC-141b contained in imported pre-blended polyols for 2007-2009 of 16.70 mt (1.83 ODP tonnes) to the baseline of 77.80 mt to get a value of 94.50 mt (6.13 ODP tonnes) as the starting point for aggregate reduction in HCFC consumption.

HCFC phase-out strategy

13. The Government is proposing to follow the Montreal Protocol schedule and adopt a staged approach to achieve the complete phase-out of HCFCs by 2030 with a service tail to 2040. The current submission consists of stage I of the HPMP to achieve a 35 per cent reduction by 2020, and focuses on activities for the servicing sector using HCFC-22 and bulk HCFC-141b for flushing. The conversion of the single foam enterprise using HCFC-141b in fully formulated polyol systems will be submitted at a later stage, but as part of stage I once economically viable alternatives have been found, in line with decision 63/15.

14. In stage I of the HPMP, Myanmar will be following a three-pronged approach for the HCFC phase-out consisting of the following strategic elements: to limit the supply of HCFCs, reduce the demand of HCFCs for servicing existing equipment and limit new demand for HCFCs. This three-pronged approach aims to reduce the dependence on HCFCs according to the above phase-out schedule. The implementation plan includes measures which are a combination of regulations and economic instruments, training and capacity building, awareness and information outreach, and project initiatives. It is proposed that each strategic element will be implemented at different periods as described below.

Table 5: Specific activities of the HPMP and proposed period of implementation

Description of activities	Implementation period
<b>Strategic Element A: Limit the supply of HCFCs</b>	
a) Restrict import of other HCFCs except HCFC-22, HCFC-123 and HCFC-141b	2013-2020
b) HCFC import quota	2013-2020
c) Labeling of HCFC container	2013-2020
d) Reporting requirement for granting the import license	2013-2020
e) Controlling sales of HCFCs	2015-2020
f) Training of enforcement officer	2012-2016
<b>Strategic Element B: Reduce the demand of HCFCs</b>	
a) Certification of refrigeration technician	2013-2020
b) Training of technician on good practice for RAC equipment	2012-2020
c) Recovery and reuse program	2012-2018
d) Pilot retrofit incentive support project for end-users	2015-2019

<b>Strategic Element C: Limit new demand of HCFCs</b>	
a) Restrict establishment of new industrial unit using HCFCs for manufacturing new products	2014-2020
b) Ban the installation of HCFC-based RAC equipment for the government project	2013-2020
c) Ban the import of HCFC-based RAC equipment	2015-2020

### Cost of the HPMP

15. The total required funding of stage I of the HPMP has been estimated at US \$396,500 as the real cost for implementing activities to phase out HCFCs in the servicing sector in Myanmar, excluding the cost of the conversion of the foam manufacturing enterprise. Out of this estimated funding, US \$280,000 was being requested from the Multilateral Fund at this meeting. This will achieve a 35 per cent reduction in HCFC consumption by 2020, resulting in a phase-out of 27.23 mt (1.50 ODP tonnes) of HCFCs. The remaining balance of US \$116,500 will be provided as in-kind contribution from the Government.

Table 6: Total cost stage I of the HPMP

Activity	IA	Requested from MLF (US \$)	In-kind contribution (US \$)	Estimated Total Cost (US \$)
<b>Policy, regulations and enforcement</b>				
a) Policy review and amendments of regulations	UNEP	4,000		4,000
b) Training of enforcement officers	UNEP	76,500		76,500
<b>Refrigeration and air-conditioning servicing</b>		0		
a) Training of technician on good practice	UNEP	69,000		69,000
b) Certification of RAC technician	UNEP	12,500		12,500
c) Acquisition of basic service tools for alternative	UNIDO	60,000	12,500	72,500
<b>Information, education, and communication</b>		0		
a) Information, education, and communication (IEC)	UNEP	28,000	14,000	42,000
<b>Project Management &amp; Monitoring</b>		0		
a) Project management unit	UNEP	30,000	90,000	120,000
<b>TOTAL RAC Servicing Sector</b>		<b>280,000</b>	<b>116,500</b>	<b>396,500</b>
<b>Foam Manufacturing Sector</b>				
a) Conversion to ODS-free technology	UNIDO	TBD	TBD	TBD

## SECRETARIAT COMMENTS AND RECOMMENDATION

### COMMENTS

16. The Secretariat reviewed the HPMP for Myanmar 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 2012-2014 business plan of the Multilateral Fund. The Secretariat discussed with UNEP and UNIDO technical and cost related issues, which were addressed as summarized below.

#### ODS regulations and licensing system

17. The Secretariat noted that the country's Ozone Order, which is the official ozone regulation, has not yet been approved by Myanmar Parliament and passed into law. It noted further that the current control of imports and exports of ODS is done through the use of the Control of Imports and Export Act (Temporary) which has been in place since 1947 covering the import and export of all products entering the country. The Secretariat drew UNEP's attention to decision 54/39(e) that requires confirmation of the implementation of the HCFC control measures in legislation, regulations and licensing systems as a pre-requisite for funding the implementation of the HPMP. It reiterated that while imports and exports of ODS are being monitored through the country's general Import/Export Control Act adopted in 1947, it is unclear how ODS imports and exports are being regulated through this law. Without established ODS legislation, the sustainability of ODS phase-out projects and their timely implementation would be an issue.

18. In response, UNEP acknowledged that the Ozone Order, currently included in the Environmental Conservation Law, has not yet entered into force and indicated that this should be done soon. The Environmental Conservation Law was approved by the Parliament in March 2012, and will be the legal base for finalizing the Ozone Order under specific environmental conservation rules. The Secretariat was informed that the final draft of the Ozone Order has been approved by the Office of the Union Attorney-General, and is awaiting the final approval of the environmental regulations, scheduled for December 2012. At this point, the Ozone Order will immediately be effective upon signature of the Union Minister of the Ministry of Environmental Conservation and Forestry.

19. With regards to the licensing system, UNEP also provided the Secretariat with a confirmation in writing from the Government of Myanmar that described rules of procedure for the use of the general Import/Export Act to control ODS imports particularly HCFCs. UNEP maintained that the country is able to control the import and export of ODS by requiring importers to get a license from the Ministry of Commerce before any ODS can be brought into the country. The Government of Myanmar also confirmed that this current regulation is enforceable, and will be sufficient to allow the country to meet the Montreal Protocol control measures on HCFC consumption.

20. The Fund Secretariat sought confirmation from the Ozone Secretariat, which confirmed that Myanmar has an operational licensing system and is in full compliance with Article 4B of the Montreal Protocol. The Ozone Secretariat further explained that as far as Article 4B was concerned, the country's confirmation that the Control of Imports and Export (Temporary) Act of 1947 was the basis for its ODS licensing system made it compliant with the requirements of this specific Montreal Protocol provision. UNEP further indicated that a quota system for HCFC import and export will be in place by 2013.

#### Issue related to HCFC consumption

21. In analyzing the consumption data submitted, the Secretariat noted that while HCFC-22 is the predominant substance used in the country primarily for servicing RAC equipment, in 2010, a small quantity of HCFC-141b was imported presumably for flushing, and sought clarification from UNEP on



the specific reasons for this use. The Secretariat also sought an explanation on the fluctuating use of HCFCs in the country between 2005-2011 as shown in the import figures.

22. UNEP indicated that the use of HCFC-141b was primarily for flushing in the servicing of large RAC equipment such as chillers, condensing units, industrial refrigeration and cold storage. Prior to 2010, dry nitrogen and HCFC-22 were used for cleaning RAC equipment, however the rise in the imports of larger equipment due to the growth in the construction sector required the use of HCFC-141b as the flushing agent for cleaning RAC equipment as it had better results. It also mentioned that the fluctuating imports could be due to undetected shipments, and indicated that in 2005, the Ozone Regulations for control of ODS had not even been initiated; therefore, customs officers at the point of entry were not aware of the need for ODS monitoring. UNEP also reiterated that the increase in HCFC imports could be due to growth in the construction sector related to the establishment of new facilities in the country's new capital city.

23. The Secretariat also sought additional information about the single foam manufacturing enterprise that used imported pre-blended polyols containing HCFC-141b for the manufacture of rigid polyurethane foam. It asked for data on the production capacity of the enterprise, the production output for years 2003 up to present. According to UNEP, this information is being collected by the Government and full details will be provided once the proposal for the conversion of this enterprise is submitted, as part of stage I of the HPMP.

24. The Secretariat also indicated that as far as funding eligibility for the conversion of the enterprise is concerned, the consumption eligible for funding would not be more than 1.8 ODP tonnes, which, if calculated at the cost-effectiveness of US \$7.83/kg for the foam sector will result in a maximum eligible funding of US \$130,761 plus an additional 25 per cent if the enterprise uses a low-GWP alternative for the conversion. The Secretariat noted that this funding level is the maximum estimate based on current guidelines and the final amount would be based on the final proposal submitted for this enterprise. It also drew UNEP's attention to decision 61/47 and the required commitment to include regulations that will phase out the imports of pre-blended polyol systems once the conversion project is completed, and sought a commitment from the Government that this will be in place as soon as possible. UNEP confirmed the Government's commitment to ban the import of bulk HCFC-141b as well as in pre-blended polyols in line with decision 61/47.

#### Starting point for aggregate reduction in HCFC consumption

25. The Government of Myanmar agreed to establish as its starting point for sustained aggregate reduction in HCFC consumption the baseline of 4.30 ODP tonnes, calculated using actual consumption of 4.1 ODP tonnes and 4.5 ODP tonnes reported for 2009 and 2010, respectively, under Article 7 of the Montreal Protocol, plus 1.83 ODP tonnes of HCFC-141b contained in imported pre-blended polyol systems, resulting in 6.13 ODP tonnes.

#### Technical and cost-related issues associated with the servicing sector

26. The Secretariat raised issues concerning some components in the HPMP for instance, under the policy and enforcement component. It also queried the high cost of the identifiers, and requested details about the equipment to be provided to the service shops, some budgetary requests for the training programme that required clarification, and some issues related to the sustainability of the technicians certification programme. It also sought information on the co-funding requirement under decision 54/39.

27. In response to the Secretariat's comments, UNEP provided additional information and justification for the policy and enforcement component, mentioning that the Ozone Order is in its final stage of approval, and is expected to be signed before the end of December 2012. UNEP also provided clarification on some budget items on the technician and customs training programme, as well as the cost

of identifiers and equipment, and a list of the tools that will be supplied to the service technicians and training centres.

28. With regard to the certification of technicians, UNEP mentioned that the current Ozone Order does not include technician certification, however, the sustainability of the programme will be ensured as it will be linked to the renewal of business licenses of the service workshops from 2015 onwards. The information provided satisfactory responses to the Secretariat's comments and observations.

29. The Secretariat also noted that the funding requested for the HPMP (US \$280,000 as shown in Table 6) is consistent with decision 60/44. It noted further that while the total cost of the HPMP was higher than the amount eligible under decision 60/44, the Government of Myanmar will provide co-financing both in cash and in kind to enable the country to comply with the Montreal Protocol control measures.

#### Impact on the climate estimated by the country in its HPMP

30. The proposed technical assistance activities in the HPMP, which include the introduction of better servicing practices and enforcement of HCFC import controls, will reduce the amount of HCFC-22 used for refrigeration servicing. Each kilogram (kg) of HCFC-22 not emitted due to better refrigeration practices results in the savings of approximately 1.8 CO<sub>2</sub>-equivalent tonnes saved. Although a calculation of the impact on the climate was not included in the HPMP, the activities planned by Myanmar in particular training for technicians on improved servicing practices, and refrigerant recovery and reuse, indicate that the implementation of the HPMP will reduce the emission of refrigerants into atmosphere therefore resulting in benefits in climate. However, at this time, the Secretariat is not in a position to quantitatively estimate the impact on the climate. The impact might be established through an assessment of implementation reports by, *inter alia*, comparing the levels of refrigerants used annually from the commencement of the implementation of the HPMP, the reported amounts of refrigerants being recovered and recycled, the number of technicians trained and the HCFC-22 based equipment being retrofitted.

#### Co-financing

31. 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, UNEP explained that the Government of Myanmar will provide personnel and other resources as an in-kind contribution, which could be considered as the Government's share of co-financing for the HPMP, amounting to US \$116,500 (Table 7). The Secretariat proposed that UNEP should encourage Myanmar to explore other co-financing opportunities especially for stage II of the HPMP.

#### 2012-2014 Business plan of the Multilateral Fund

32. UNEP and UNIDO are requesting US \$280,000 plus support costs for implementation of stage I of the HPMP. The total value requested for the period 2012-2014 of US \$179,670 including support cost is within the total amount in the business plan. Based on the HCFC baseline consumption in the servicing sector of 77.80 mt, Myanmar's allocation up to the 2020 phase-out should be US \$280,000 in line with decision 60/44 plus funding for the investment project for which it is eligible.

#### Draft Agreement

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

**RECOMMENDATION**

34. The Executive Committee may wish to consider, having noted the status of legislation on HCFCs as outlined in paragraphs 17 – 20 above:

- (a) Approving, in principle, stage I of the HCFC phase-out management plan (HPMP) for Myanmar for the period 2012 to 2020 to reduce HCFC consumption by 35 per cent of the baseline, at the amount of US \$314,000, consisting of US \$220,000, plus agency support costs of US \$28,600 for UNEP, and US \$60,000, plus agency support costs of US \$5,400 for UNIDO;
- (b) Noting that the Government of Myanmar had agreed to establish as its starting point for sustained aggregate reduction in HCFC consumption the baseline of 4.30 ODP tonnes, calculated using actual consumption of 4.1 ODP tonnes and 4.5 ODP tonnes reported for 2009 and 2010, respectively, under Article 7 of the Montreal Protocol; plus 1.83 ODP tonnes of HCFC-141b contained in imported pre-blended polyol systems, resulting in 6.13 ODP tonnes;
- (c) Deducting 1.50 ODP tonnes of HCFCs from the starting point for sustained aggregate reduction in HCFC consumption;
- (d) Approving the draft Agreement between the Government of Myanmar and the Executive Committee for the reduction in consumption of HCFCs, as contained in Annex I to the present document;
- (e) Approving the first tranche of stage I of the HPMP for Myanmar, and the corresponding implementation plan, at the amount of US \$159,000 plus agency support costs of US \$20,670 for UNEP; and
- (f) Allowing Myanmar to submit the foam project for phasing out the HCFC-141b contained in imported pre-blended polyols during the implementation of stage I of the HPMP.

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## Annex I

### **DRAFT AGREEMENT BETWEEN THE GOVERNMENT OF THE REPUBLIC OF THE UNION OF MYANMAR 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 Republic of the Union of Myanmar (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 2.80 ODP tonnes prior to 1 January 2020 in compliance with Montreal Protocol schedules.
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; and

- (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.

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; and
- (c) 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. UNEP has agreed to be the lead implementing agency (the “Lead IA”) and UNIDO has agreed to be the cooperating implementing agency/agencies (the “Cooperating IA”) under the lead of the Lead IA in respect of the Country’s activities under this Agreement. The Country agrees to evaluations,

which might be carried out under the monitoring and evaluation work programmes of the Multilateral Fund or under the evaluation programme of 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	4.26
HCFC-141b	C	I	0.04
<b>Sub-total</b>			<b>4.30</b>
HCFC-141b in pre-blended polyols	C	I	1.83
<b>Total</b>			<b>6.13</b>

### APPENDIX 2-A: THE TARGETS, AND FUNDING\*

		2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	n/a	4.30	4.30	3.87	3.87	3.87	3.87	3.87	2.80	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	n/a	4.30	4.30	3.87	3.87	3.87	3.87	3.87	2.80	n/a
2.1	Lead IA - UNEP agreed funding(US \$)	159,000	0	0	19,000	0	13,000	0	0	29,000	220,000
2.2	Support costs for Lead IA - UNEP (US \$)	20,670	0	0	2,470	0	1,690	0	0	3,770	28,600
2.3	Cooperating IA - UNIDO agreed funding (US \$)	0	0	0	60,000	0	0	0	0	0	60,000
2.4	Support costs for Cooperating IA - UNIDO (US \$)	0	0	0	5,400	0	0	0	0	0	5,400
3.1	Total agreed funding (US \$)	159,000	0	0	79,000	0	13,000	0	0	29,000	280,000
3.2	Total support cost (US \$)	20,670	0	0	7,870	0	1,690	0	0	3,770	34,000
3.3	Total agreed costs (US \$)	179,670	0	0	86,870	0	14,690	0	0	32,770	314,000
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this agreement (ODP tonnes)										1.50
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)										2.76
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)										0.04
4.3.1	Total phase-out of HCFC-141b in pre-blended polyols agreed to be achieved under this agreement (ODP tonnes)										0
4.3.2	Phase-out of HCFC-141b in pre-blended polyols to be achieved in previously approved projects (ODP tonnes)										0
4.3.3	Remaining eligible consumption for HCFC-141b in pre-blended polyols (ODP tonnes)										1.83

\* Excludes funding for conversion of HCFC-141b contained in pre-blended polyol

### **APPENDIX 3-A: FUNDING APPROVAL SCHEDULE**

1. 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. Annual consumption of HCFCs and other ODS will be monitored through the Ministry of Environmental Conservation and Forestry (MOECAF) with collaboration from the Customs Department and the Ministry of Commerce. MOECAF is responsible for reviewing application before providing endorsement to importer, while the Ministry of Commerce is a licensing authority to issue import license upon endorsement from MOECAF. The Customs Department will control and monitor the import of ODS at the point of entry.
2. MOECAF will liaise with importers and retailers of ODS to obtain HCFC consumption data and cross-check with data from the Customs Department. MOECAF will undertake regular review on list of HCFC customers to enforce the control on sale of HCFCs. MOECAF will also undertake market survey to gauge the penetration of non-HCFC substitutes and alternative technologies in the refrigeration and air-conditioning (RAC) sector.
3. MOECAF will monitor the implementation of capacity building activities with relevant agencies e.g. RAC technician training (training centers); enforcement officers training (the Customs Department and the Ministry of Commerce).

#### **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 \$180 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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