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

**PROJECT PROPOSAL: BRAZIL**

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, second tranche) UNDP/Germany

## PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

## Brazil

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

<b>(II) LATEST ARTICLE 7 DATA (Annex C Group I)</b>	Year: 2011	1,046.4 (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			0.0		0.9				0.9
HCFC-124					5.4				5.4
HCFC-141b		406.0				21.4			427.3
HCFC-141b in Imported Pre-blended Polyol									
HCFC-142b		4.5							4.5
HCFC-22		1.9		94.1	531.5				627.5
HCFC-225									

<b>(IV) CONSUMPTION DATA (ODP tonnes)</b>			
2009 - 2010 baseline:	1,327.3	Starting point for sustained aggregate reductions:	1,327.3
<b>CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)</b>			
Already approved:	220.3	Remaining:	1,107.0

<b>(V) BUSINESS PLAN</b>		2012	2013	2014	2015	Total
Germany	ODS phase-out (ODP tonnes)	27.8	0	0	4.6	32.4
	Funding (US \$)	2,734,727	0	0	454,091	3,188,818
UNDP	ODS phase-out (ODP tonnes)	38.2	33.7	33.7	18.5	124.1
	Funding (US \$)	3,655,000	3,225,000	3,225,000	1,773,750	11,878,750

<b>(VI) PROJECT DATA</b>			2011	2012	2013	2014	2015	Total
Montreal Protocol consumption limits			n/a	n/a	1,327.3	1,327.3	1,194.8	n/a
Maximum allowable consumption (ODP tonnes)			n/a	n/a	1,327.3	1,327.3	1,194.8	
Agreed Funding (US\$)	Germany	Project costs	1,209,091	2,472,727	0	0	409,091	4,090,909
		Support costs	153,000	262,000	0	0	45,000	460,000
	UNDP	Project costs	4,456,257	3,400,000	3,000,000	3,000,000	1,650,000	15,506,257
		Support costs	334,219	255,000	225,000	225,000	123,750	1,162,969
Funds approved by ExCom (US\$)	Project Costs	5,665,348	0	0	0	0	5,665,348	
	Support Costs	487,219	0	0	0	0	487,219	
Total funds requested for approval at this meeting (US\$)	Project Costs	0	5,872,727	0	0	0	5,872,727	
	Support Costs	0	517,000	0	0	0	517,000	

<b>Secretariat's recommendation:</b>	For individual consideration
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## PROJECT DESCRIPTION

1. On behalf of the Government of Brazil UNDP, as the lead implementing agency, has submitted to the 68<sup>th</sup> meeting of the Executive Committee a request for funding for the second tranche of stage I of the HCFC phase-out management plan (HPMP) at a total cost of US \$6,389,727, consisting of US \$3,400,000, plus agency support costs of US \$255,000 for UNDP, and US \$2,472,727, plus agency support costs of US \$262,000 for the Government of Germany. The submission includes a progress report on the implementation of the first year of the HPMP together with, the tranche implementation plan for the remaining of 2012 and 2013.

### Background

2. The HPMP for Brazil was approved by the Executive Committee at its 64<sup>th</sup> meeting, to reduce HCFC consumption by 10 per cent of the baseline by the end of 2014, at a total funding level approved in principle of US \$21,220,135, consisting of US \$15,506,257 plus agency support costs of US \$1,162,969 for UNDP, and US \$4,090,909 plus agency support costs of US \$460,000 for the Government of Germany. The Executive Committee also approved the first tranche of stage I of the HPMP, at the amount of US \$6,152,567, consisting of US \$4,456,257, plus agency support costs of US \$334,219, for UNDP, and US \$1,209,091, plus agency support costs of US \$153,000, for the Government of Germany.

### Progress report on the implementation of the first tranche of the HPMP

3. Stage I of the HPMP for Brazil includes phase-out of HCFC-141b used by foam enterprises, support to systems houses and phase-out of HCFC-22 used in the refrigeration servicing sector. In addition, regulatory actions are also included in stage I. The results achieved so far are described below.

#### *Regulatory action*

4. The Government of Brazil has an on-line license system that controls consumption of all ODS. The National Institute of Environment and Natural Renewable Resources (IBAMA) manages this system by monitoring and controlling the consumption of ODS and reporting to the Ozone Unit within the Ministry of Environment. Import quotas for HCFCs involve IBAMA, the Federal Customs of Brazil and the Ministry of Development, Industry and Foreign Trade. IBAMA is responsible for defining the criteria for authorizing quotas to importers and imports as well as inspecting ODS-consuming enterprises. The HCFC export process also involves the above-mentioned governmental authorities, while the on-line system for exports is maintained in the data system of the Central Bank of Brazil.

5. IBAMA has published a draft normative instruction proposing HCFC quotas for the period 2013-2015 for public consultations with the private and public sectors. The draft instruction proposes that the 2013 and 2014 quotas be based on the 2009-2010 average consumption of each HCFC consumed by each enterprise, while the quota for 2015 be based on a reduction of the baselines of HCFC-22 and HCFC-141b by 6.51 per cent and 32.36 per cent, respectively by each enterprise. This will result in a total reduction of 220.30 ODP tonnes from the baseline by 2015 as proposed in stage I of the HPMP. Based on this consultative process, the actual quotas systems will be established in December 2012 and will be effective from 1 January 2013.

#### *Activities in the foam manufacturing sector*

6. Several meetings were held with foam enterprises to establish objectives, implementation criteria and project workflow according to the approved project. Terms of reference on the mechanisms for the implementation of the investment projects were defined and target plans, timetables, and verification modalities to be used by UNDP were agreed on while technical specifications of the equipment to be

purchased or retrofitted, and the engineering plans for the adjustment/conversion of the production lines was also discussed.

7. Implementation of the five stand-alone foam enterprises to be converted with the funding approved in the first tranche is progressing well. In Frisokar and Lugez, pilot trials with methyl formate and methylal, respectively, are under implementation and will be fully converted during the last quarter of 2013. Pilot trials with hydrocarbon have been performed in Isoeste, Danica and MBP Isoblock and will be fully converted by February 2013 and December 2013 respectively.

8. The conversion of the 274 small and medium size enterprises (SMEs) manufacturing integral skin or flexible moulded foam products is being undertaken with technical assistance from their six systems houses. With the funding approved for the first tranche, pilot trials with methyl formate have been completed at Purcom, the blending tank for integral skin has already been retrofitted while that for rigid foam will be retrofitted by April 2013. Twenty integral skin downstream foam users will be converted by August 2013 while conversion of the 82 remaining enterprises will be initiated soon after. Pilot trials with methylal have been completed at Arinos and safety systems have been upgraded while blending tanks for integral skin and rigid foams will be retrofitted by March 2013. Twenty integral skin downstream foam users will be converted to methylal technology by July 2013, and conversion of the 65 remaining ones will be initiated soon after.

#### *Activities in the refrigeration servicing sector*

9. Several activities in the refrigeration and air-conditioning servicing sector are being implemented with assistance from the Government of Germany, including: the organization of a stakeholders coordination meeting with representatives from the Government and the refrigeration servicing sector; a national team of experts with representatives from the Government and the refrigeration servicing sector was established and is to review awareness raising and training materials. The terms of reference and criteria for the selection of demonstration projects on better containment of HCFCs and technical assistance in at least five supermarkets have been elaborated in close cooperation with sector experts. A training concept and best practice guidelines on the safe use of refrigerants, recovery, recycling and reclaim leakage control, sealed system design and planned preventive maintenance are being reviewed by experts.

#### *Project implementation and monitoring unit*

10. The project implementation and monitoring unit has become operational. Staff of the unit participated in two HCFC sector meetings, as well as with foam enterprises to be converted during first tranche of the HPMP. Project documents were signed, the terms of reference for industrial conversions were finalized, the HCFC-141b reduction targets were defined and implementation contracts are under consideration.

#### Status of fund disbursement

11. As of October 2012, of the US \$5,665,348 approved for the first tranche, US \$2,358,557 had been disbursed or committed. The balance of US \$3,306,791 will be disbursed in the remainder of 2012 and in 2013.

#### Annual plans for the second tranche of the HPMP

12. In addition to the completion of the activities initiated with the first tranche of the HPMP for Brazil, the following phase-out activities in the foam sector associated with the second tranche of the HPMP will be implemented:

- (a) Enforcement of the quota system and the quota system regulatory framework as well as inspections of imported cargos. Assessment of the current framework and definition of norms and standards needed during stage I of the HPMP;
  - (b) Continue the conversion of foam enterprises to non-HCFC-141b by retrofitting systems houses to allow the production of non-HCFC-141b based blowing technologies and conversion of downstream foam enterprises (US \$3,400,000);
  - (c) Development of training material and procurement of mobile training equipment and basic service tools; training of 40 technicians that will train service technicians in the country; and training of 3,200 technicians focussing on the domestic (split air-conditioning units) and commercial refrigeration sectors; (US \$1,048,800);
  - (d) Implementation of demonstration projects on better containment of HCFCs and technical assistance in at least five supermarkets, including an assessment of the main causes of leakage of refrigerant and loss of efficiency in equipment, purchase of retrofitting tools and testing instruments and finalization of technical standards (US \$702,600);
  - (e) Full implementation of the on-line application for the administration, documentation and maintenance of refrigeration equipment in commercial installations (US \$80,000); and
  - (f) Outreach and awareness-raising activities supporting the establishment of the refrigeration servicing programme, including updates on new refrigerants, implemented in close cooperation with the Brazilian Supermarket Association (US \$491,327).
13. The project implementation and monitoring unit will continue to be operational (US \$150,000).

## **SECRETARIAT'S COMMENTS AND RECOMMENDATION**

### **COMMENTS**

#### Operational license system

14. In line with decision 63/17 and as required under the Agreement between the Government of Brazil and the Executive Committee, confirmation has been received from the Government that an enforceable national system of licensing and quotas for HCFC imports, production and exports is in place and that the system is capable of ensuring compliance with the Montreal Protocol.

#### HCFC consumption

15. The HCFC baseline for compliance has been established at 1,327.3 ODP tonnes, based on the actual consumption reported under Article 7 of the Montreal Protocol for 2009 and 2010 as shown in Table 2. The established baseline is equal to that in the Agreement between the Government of Brazil and the Executive Committee; therefore, no adjustments to the Agreement are required. HCFC consumption decreased from 1,415.6 ODP tonnes in 2009 to 1,046.40 ODP tonnes in 2011, mainly due to the global economic crises that had an impact on the national production. The HCFC quota for 2012 is based on the GDP growth compared to the previous year (which was at 2.7 per cent). Therefore, import quota for HCFCs in 2012 would be 2.7 per cent of the amount imported in 2011 measured in ODP tonnes.

**Table. 2 HCFC consumption in Brazil (Article 7)**

<b>HCFC</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>Baseline</b>
<b>Metric tonnes</b>						
HCFC-22	10,236.0	10,599.1	13,692.7	15,109.3	11,408.80	14,401.0
HCFC-141b	5,216.8	3,932.8	5,903.0	3,579.7	3,710.25	4,741.4
HCFC-142b	33.0	22.7	67.2	105.3	68.69	86.3
HCFC-123	46.7	20.6	10.0	19.8	44.31	14.9
HCFC-124	520.3	166.5	385.7	316.9	246.94	351.3
Total	16,052.8	14,741.7	20,058.6	19,131.0	15,478.99	19,594.8
<b>ODP tonnes</b>						
HCFC-22	563.0	583.0	753.1	831.0	627.5	792.1
HCFC-141b	573.8	432.6	649.3	393.8	408.1	521.6
HCFC-142b	2.1	1.5	4.4	6.8	4.5	5.6
HCFC-123	0.9	0.4	0.2	0.4	0.9	0.3
HCFC-124	11.4	3.7	8.5	7.0	5.4	7.7
Total (ODP tonnes)	1,151.4	1,021.1	1,415.5	1,239.0	1,046.4	1,327.2

Other issues discussed

16. With regard to the modality of project implementation arrangements (i.e., MOA) with foam enterprises (including systems houses), UNDP explained that the enterprises will take responsibility for the conversion to non-HCFC technologies under strict supervision and guidance from UNDP. The funds will be managed by UNDP, with monitoring by the Government of Brazil and will be transferred to the enterprises in tranches upon verification of specific implementation milestones. Those commitments entail: verification of current consumption and equipment baseline; development of engineering plans, procurement and installation of equipment or retrofit kits; trials, training and safety audit; start of production with alternative blowing agent; verification of total HCFC phase-out and destruction of obsolete equipment; transfer of incremental operating costs and closure of the project. All policies and guidelines of the Fund will be strictly monitored by UNDP during the conversion of the enterprises.

17. The Secretariat notes that the consumption of HCFCs has been progressively reducing since 2009 and that import licensing and quota systems are operational and will enable the Government to continue reducing its consumption in line with the Montreal Protocol's phase-out schedule. Conversion of five stand-alone foam projects is well advanced. It also notes that methyl formate and methylal pre-blended polyols are available in two systems houses which supply their downstream foam users. Several foam enterprises will be converted to alternative technologies.

18. In reviewing the activities in the servicing sector and in further discussions with the Government of Germany (as the agency responsible for this sector), the Secretariat notes that these had been planned and developed with the participation of key stakeholders. The experience gained during the implementation of the national CFC phase-out plan (NPP) had been used for preparing new training and technical materials which are currently under review by local experts. Specifications for mobile training equipment are being developed by local vocational training institutions, which have integrated relevant concepts from the NPP in their regular educational activities.

**RECOMMENDATION**

19. The Executive Committee may wish to:

- (a) Take note of the progress report on the implementation of the first tranche of stage I of the HCFC phase-out management plan of (HPMP) in Brazil; and
- (b) Approve the second tranche of stage I of the HPMP for Brazil, and the corresponding annual implementation plans, at the amount of US \$6,389,727, consisting of US \$3,400,000, plus agency support costs of US \$255,000 for UNDP, and US \$2,472,727, plus agency support costs of US \$262,000 for the Government of Germany.

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