UNITED NATIONS

EP

United Nations Environment Programme

Distr.
GENERAL

UNEP/OzL.Pro/ExCom/73/32
13 October 2014

ORIGINAL: ENGLISH

EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Seventy-third Meeting
Paris, 9-13 November 2014

PROJECT PROPOSAL: BRAZIL

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

Phase-out

- HCFC phase-out management plan (stage I, third tranche) UNDP/Germany

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Brazil

(I) PROJECT TITLE	AGENCY
HCFC phase out plan (Stage I)	UNDP (lead)Germany,

(II) LATEST ARTICLE 7 DATA (Annex C Group l)	Year: 2013	1,189.25 (ODP tonnes)

(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)								Year: 2013	
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-123									
HCFC-124				0.7	3.0				3.7
HCFC-141b		400.6							400.6
HCFC-142b		1.0							1.0
HCFC-22				117.5	666.6				784.1
HCFC-225									

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline:	1,327.3	Starting point for sustained aggregate reductions:	1,327.3
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	220.3	Remaining:	1,107.2

(V) BUSINESS PLAN		2014	2015	Total
UNDP	ODS phase-out (ODP tonnes)	67.4	18.5	86.0
	Funding (US $)	6,450,000	1,773,750	8,223,750
Germany	ODS phase-out (ODP tonnes)	0.0	4.6	4.6
	Funding (US $)	0	454,091	454,091

(VI) PROJECT DATA			2011	2012	2013	2014	2015	Total
Montreal Protocol consumption limits			n/a	n/a	1,327.3	1,327.3	1,194.8	
Maximum allowable consumption (ODP tonnes)			n/a	n/a	1,327.3	1,327.3	1,194.8	
Agreed Funding (US$)	UNDP (lead)	Project costs	4,456,257	3,400,000	3,000,000	3,000,000	818,182	15,506,257
		Support costs	334,219	255,000	225,000	225,000	90,000	1,162,969
	Germany	Project costs	1,209,091	2,472,727	0	0	3,300,000	4,090,909
		Support costs	153,000	262,000	0	0	247,500	460,000
Funds approved by ExCom (US$)		Project Costs	5,665,348	5,872,727	0	0	0	11,538,075
		Support Costs	487,219	517,000	0	0	0	1,004,219
Total funds requested for approval at this meeting (US$)		Project Costs	0	0	0	3,000,000	0	3,000,000
		Support Costs	0	0	0	225,000	0	225,000

Secretariat's recommendation:	Blanket approval

PROJECT DESCRIPTION

1. On behalf of the Government of Brazil, UNDP as the lead implementing agency, has submitted to the 73rd meeting a request for funding for the third tranche of stage I of the HCFC phase-out management plan (HPMP)[1], at the amount of US $3,000,000, plus agency support costs of US $225,000 for UNDP only. The submission includes a progress report on the implementation of the second tranche of the HPMP and the tranche implementation plan for 2015.

Progress report on the implementation of the second tranche of the HPMP

2. Stage I of the HPMP for Brazil includes regulatory actions, phase-out of HCFC-141b used by polyurethane (PU) foam manufacturing enterprises and systems houses and phase-out of HCFC-22 used in the refrigeration servicing sector. The results achieved so far are described below.

HCFC policies and regulations

3. The Government of Brazil enacted the normative that established an operational HCFC import quota system, established a work group to discuss a regulation in the use of disposable cylinders or tanks and held inter-ministerial meetings to discuss the issue of regulating the international trade of HCFC-based equipment.

4. The National Committee on Technical Standards (ABNT) approved and promoted technical standards for design, installation and operation of supermarket refrigeration systems and guidelines for leakage detection, refrigerant containment and maintenance on commercial refrigeration equipment. ABNT is currently discussing a standard on the use of ammonia for design, installation, operation and maintenance of refrigeration and air-conditioning equipment and a standard on safety classification and terminology for refrigerants.

PU foam manufacturing sector

5. *Conversion of four individual PU foam enterprises manufacturing continuous panels (32.4 ODP tonnes):* One enterprise (5.0 ODP tonnes) has completed its conversion to hydrocarbons (HC); one enterprise (16.8 ODP tonnes) is optimizing production with HC and will complete its conversion by the end of 2014; and the remaining two enterprises (10.7 ODP tonnes) are at different stages of implementation and expected to complete their conversions during the second half of 2015.

6. *Conversion of eight individual PU foam enterprises manufacturing integral skin (47.3 ODP tonnes):* Two enterprises completed their conversion to methylal and methyl formate (16.2 ODP tonnes); one enterprise (4.4 ODP tonnes) is undertaking a final safety audit to complete its conversion to methylal by the end of 2014; and the remaining five (26.7 ODP tonnes) are at different stages of implementation and are expected to complete their conversions during 2015.

7. *Conversion of 11 systems houses with close to 300 downstream foam users (39.5 ODP tonnes):* Two systems houses have already installed all equipment and finalized all related work to produce methyl formate formulations; four systems houses are at different stages of project implementation and are expected to start producing mostly methyl formate and methylal-based polyol systems by mid-2015. The remaining systems houses are in the process of signing contracts with UNDP and expected to start producing HCFC-free polyols by the second half of 2015 (one of them may decline participation in the plan as indicated in Table 1). Three systems houses have already started to provide assistance to downstream foam users to complete their conversions; and two have completed HCFC-free polyols

[1] The HPMP for Brazil was approved by the Executive Committee at 64th meeting to reduce HCFC consumption by 10 per cent of the baseline by 1 January 2015. The third tranche was originally planned for 2013 but only submitted to the 73rd meeting.

systems optimization at downstream foam users level and will start assisting them on their conversions. Based on the information received, a summary of the implementation of the PU foam sector plan in Brazil is presented in Table 1.

Table 1. Status of implementation PU foam sector plan Brazil

Group	Enterprises	ODP tonnes	Status of implementation	Expected date of completion
Individual PU foam enterprises (continuous panels, integral skin and flexible moulded)	3	21.2	Completed	2014
	2	21.2	Equipment installed	2014
	1	7.7	Equipment procured	2015
	4	14.7	In procurement process	2015
	2	15.0	Have not signed implementation contracts	2015
Systems houses	2	13.2	Completed plant conversion. Formulations developed	2014
	4	26.2	Plant conversion ongoing. Formulations developed or being developed	2015
	4	tbd	Have not signed implementation contracts	2015
	1	tbd	May decline participation (Ecopur)	tbd
Downstream foam users (associated to the systems houses)	76	(*)	Currently being assisted by systems houses to convert and adopt new formulations	2015
	(estimated) 250	(*)	Not being assisted yet	2015
SMEs (PU rigid foam)	98	49.6	One being converted, eligibility being verified for the remaining 97	2015
Total	tbd	tbd		

(*) Included in the systems houses consumption

8. *Rigid PU foam individual small and medium-sized enterprises (SMEs):* Stage I also includes the conversion of 98 SMEs consuming 49.6 ODP tonnes. Implementation during the first two tranches has focused on converting the largest enterprises in the groups described above. Only one enterprise from this group has started to convert to methyl formate technology. UNDP is verifying eligibility and HCFC consumption on the remaining enterprises.

Refrigeration servicing sector

9. Activities implemented in the refrigeration servicing sector include:

(a) Training and capacity building: training programme developed, booklet on good practices published, five regional training institutions selected through a selection process based on technical capacity, experience and infra-structure, mobile training units (training kits) procured, and 41 trainers and 155 technicians trained thus far;

(b) Demonstration projects: scope of the demonstration identified, technical visits to 20 supermarkets completed with three of them selected for demonstration on improvement of containment practices for existing HCFC systems, several standards prepared or under discussion in commercial refrigeration, supermarkets, mini-splits, ammonia systems and central air-conditioning;

(c) Internet-based documentation system: institution for the administration of the system identified, expert committee created, system presented to the committee, discussed, translated and adapted to the specific needs raised;

(d) Awareness-raising campaign: publication on the application of natural refrigerants in supermarkets prepared, website contents prepared, meetings with national stakeholders in

the servicing sector carried out, regional outreach done through local associations and groups, and HPMP promoted at different sector events; and

(e) Management, monitoring and evaluation activities.

Project implementation and monitoring unit (PMU)

10. The PMU continued to support the NOU in implementing the HPMP activities by providing technical advisors; visiting enterprises to review projects; developing technical specifications; organizing seminars on HCFC alternatives in the PU foam sector; issuing, delivering and monitoring 25 service contracts for the implementation of the activities; monitoring implementation and ensuring financial control of the funds according to UNDP rules and regulations.

Verification report of national HCFC consumption targets

11. A verification report for 2013 was submitted along with the tranche request. The report confirmed that the Government is implementing a licensing and quota system for HCFC imports and exports and that the total consumption of HCFCs for 2013 was 1,189.25 ODP tonnes.

Level of fund disbursement

12. As of 31 August 2014, of the US $11,538,075 approved for the first and second tranches, US $3,365,401 had been disbursed (US $2,317,390 for UNDP and US $1,048,011 for the Government of Germany). The balance of US $8,172,674 will be disbursed in the remainder of 2014 and 2015 (Table 2).

Table 2. Financial report of the first and second tranches of the HPMP for Brazil

Agencies	**First tranche**		**Second tranche**		**Total approved**	
	Approved	**Disbursed**	**Approved**	**Disbursed**	**Approved**	**Disbursed**
UNDP	4,456,257	1,373,114	3,400,000	944,276	7,856,257	2,317,390
Germany	1,209,091	444,162	2,472,727	603,849	3,681,818	1,048,011
Total	**5,665,348**	**1,817,276**	**5,872,727**	**1,548,125**	**11,538,075**	**3,365,401**
Disbursement rate	32%		26%		29%	

Implementation plan for the third tranche of the HPMP

13. During the third tranche of the HPMP, the following activities will be implemented:

(a) Enforcing the HCFC licensing and quota system and developing normative instruments for the management of HCFCs (US $30,000);

(b) Finalizing the conversion of the remaining nine individual PU foam enterprises; continuing the conversion of the remaining systems houses and their associated downstream foam users; and continuing the conversion of 98 SMEs in the rigid PU foam sector (US $2,766,552); and

(c) Implementation support and monitoring activities by the PMU (US $203,448).

14. Activities in the refrigeration servicing sector will also continue with funds from previous tranches, including additional training to 4,645 refrigeration technicians, continuation of the

demonstration projects in three supermarkets and awareness activities in the refrigeration servicing sector. The expected training per region for 2014 and 2015 is presented in Table 3.

Table 3. Technicians to be trained by region in Brazil (2014 – 2015)

Region (State)	Technicians to be trained in 2014	Technicians to be trained in 2015	Regional training institute
North (Amazonas)	96	288	SENAI Amazonas (National Service for Industrial Training of Amazonas)
Northeast (Bahia)	256	894	IFBA (Bahia Federal Institute of Education, Science and Technology)
Midwest (Goiás)	384	-	SENAI Goiás (National Service for Industrial Training of Goiás)
Southeast (Minas Gerais) *São Paulo**	224	1808	SENAI Minas Gerais (National Service for Industrial Training of Minas Gerais)
South Rio Grande do Sul	224	471	SENAC/SENAI Rio Grande do Sul (National Service for Commercial Education of Rio Grande do Sul in cooperation with National Service for Industrial Training of Rio Grande do Sul)
TOTAL	**1,184**	**3,461**	

*SENAI Sao Paulo will be added to accelerate the implementation of the training programme.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

Operational licensing system

15. The Government of Brazil has already issued HCFC import quotas for 2014 and 2015 at 1,327.33 ODP tonnes and 1,105.09 ODP tonnes respectively.

HCFC consumption

16. The 2009-2013 HCFC consumption in Brazil is shown in Table 4.

Table 4. HCFC consumption in Brazil (2009-2013 Article 7 data)

HCFC	2009	2010	2011	2012	2013	Baseline
Metric tonnes						
HCFC-22	13,692.7	15,109.3	11,408.80	17,020.03	14,256.36	14,401.0
HCFC-141b	5,903.0	3,579.6	3,710.30	4,027.8	3,641.42	4,741.3
HCFC-142b	67.2	105.3	68.69	12.02	14.92	86.3
HCFC-123	10.0	19.8	44.31	170.79	0.00	14.9
HCFC-124	385.7	316.9	246.94	204.83	164.54	351.3
Total	20,058.6	19,130.9	15,478.99	21,435.47	18,077.27	19,594.8
ODP tonnes						
HCFC-22	753.1	831.0	627.5	936.10	784.10	792.1
HCFC-141b	649.3	393.8	408.1	443.1	400.56	521.5
HCFC-142b	4.4	6.8	4.5	0.78	0.97	5.6
HCFC-123	0.2	0.4	0.9	3.42	0.00	0.3
HCFC-124	8.5	7.0	5.4	4.51	3.62	7.7
Total	1,415.5	1,239.0	1,046.4	1,387.87	1,189.25	1,327.2

17. During the last five years HCFC consumption in Brazil has not shown a clear trend as a whole or by substance. After a peak in 2009, the overall consumption of HCFC decreased for two consecutive years to 1,046.4 ODP tonnes in 2011 to grow again above the baseline level in 2012. In 2013 HCFC consumption decreased again 10.4 per cent lower than the HCFC baseline for compliance. In addition to the conversion activities in the PU foam sector that have phased out 21.2 ODP tonnes so far, UNDP indicated that the awareness raising activities and the training in good refrigeration servicing practices contributed to minimize emissions of HCFC-22 during servicing practices. Import constraints promoted by the HPMP resulted in an increase in the price of HCFC-22.

Verification report of national HCFC consumption targets

18. UNDP submitted an independent verification of 2013 consumption. The verification concluded that the data reported by the Government was supported with adequate documentation about imports and exports and the methodological procedures employed were consistent. The existing controls minimize the risk of errors in the consumption reported. The verifier recommended to maintain the control procedures established.

Issues discussed

19. The Secretariat noted that the plan is progressing and some enterprises have already phased out HCFCs. However, not all the conversions of systems houses, downstream foam users and individual foam enterprises have been implemented at the expected speed and several of the enterprises took a long time to select the alternative technologies to introduce. UNDP explained that due to the implementation modality used in Brazil the conversion contracts for the enterprises had to be signed by UNDP instead of the Government. This required changes in UNDP's internal procedures, generating a delay. However, this issue was resolved last year and since then the implementation modality is functioning effectively.

20. With regard to alternative technologies, most PU foam enterprises and system houses made a significant effort to evaluate several substances and formulations before making a final decision on what technology to select. This represented more work than originally anticipated resulting in delays in the implementation of the conversion. However, the majority of enterprises have selected alternative technologies (mostly HC for continuous panels and methyl formate and methylal for integral skin and flexible molded applications), and conversions in several large enterprises, systems houses and downstream foam users are being completed.

21. Based on the information received, enterprises representing close to 60 per cent of the HCFC-141b reductions expected from the PU foam sector plan have signed contracts and started their conversions and will complete them during 2014 or 2015. The remaining, which include five systems houses and their downstream foam users as well as 97 of the SMEs included in stage I, will need to start implementation as soon as possible in order to achieve the remaining reductions in 2015 or 2016 at the latest.

22. As the eligibility of all SMEs could not be verified at the time of submission of the HPMP, UNDP indicated that this would be validated in the field during implementation of the project and any enterprise found to be ineligible would not receive assistance from the Multilateral Fund. This information would be reported to the Executive Committee as indicated in clause 7(c) of the Agreement. In this regard, UNDP informed that when the fourth tranche is requested it will be in a position to report the identified and verified eligible SMEs and downstream foam users to be included in stage I. UNDP reiterated that the funding eligibility criterion of the Multilateral Fund will be maintained.

23. Some of the challenges and lessons learnt identified so far in the refrigeration servicing sector are the need to begin awareness-raising and training activities as early as possible as it may take years for technicians to incorporate changes in their daily routine; the additional work required to establish

cooperation networks with supermarkets as they were not addressed previously; the different characteristics of the servicing workshops operating in supermarkets; the unforeseen complexities of establishing formal cooperation agreements with associations and training institutes; and the difficulty in finding suitable components and suppliers to assemble the mobile training units that simulate supermarket refrigeration systems for training purposes. All these issues are being addressed by the Government of Brazil and the Government of Germany during the implementation of activities in the servicing sector.

Conclusion

24. The Secretariat notes that HCFC consumption in 2013 is already 10.4 per cent below the consumption baseline and the implementation of the HPMP for Brazil is progressing. Administrative issues have been satisfactorily addressed. Three PU foam enterprises completed their conversion to non-HCFC technologies and most of the on-going conversions are expected to be completed in 2014 and 2015, representing around 60 per cent of the HCFC reductions expected for the sector. Activities in the refrigeration servicing sector continue to be implemented as planned. In view of the activities underway; the operational licensing and quota system in place; the reasonable progress achieved during the first two tranches; and the level of disbursement, the Secretariat recommends approval of the funding for the tranche.

RECOMMENDATION

25. The Fund Secretariat recommends that the Executive Committee takes note of the progress report on the implementation of the second tranche of stage I of the HCFC phase-out management plan of (HPMP) in Brazil, and further recommends blanket approval of the third tranche of stage I of the HPMP and the corresponding 2015 tranche implementation plan, with associated support costs at the funding level shown in the table below:

	Project title	Project funding (US $)	Support cost (US $)	Implementing agency
(a)	HCFC phase-out management plan (stage I, third tranche)	3,000,000	225,000	UNDP
