



**United Nations  
Environment  
Programme**

Distr.  
GENERAL

UNEP/OzL.Pro/ExCom/77/19  
12 November 2016



ORIGINAL: ENGLISH

EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Seventy-seventh Meeting  
Montreal, 28 November - 2 December 2016

**STATUS REPORTS AND REPORTS ON PROJECTS WITH SPECIFIC REPORTING  
REQUIREMENTS**

1. This section addresses the projects and activities for which specific reports were requested in previous meetings and those requiring the Executive Committee attention. These reports are arranged in the following parts:

- Part I: Progress reports related to HCFC phase-out management plans
- Part II: Financial audit reports for the CFC production, halon, polyurethane (PU) foam, process agent II, refrigeration servicing and solvent sectors in China
- Part III: Methyl bromide (MB) phase-out projects

2. Each part contains a brief description on progress, and the Secretariat's comments and recommendations.

**PART I: PROGRESS REPORTS RELATED TO HCFC PHASE-OUT MANAGEMENT PLANS**

*Transfer of the implementation of the first and second tranche of the HCFC phase-out management plan for Afghanistan (decision 76/8(a)(iii))*

3. The HCFC phase-out management plan (HPMP) for Afghanistan was approved at the 63<sup>rd</sup> meeting to reduce 35 per cent of the HCFC baseline consumption at a total cost of US \$679,101 to be implemented by UNEP and the Government of Germany.

4. The implementation of the first tranche progressed as planned and the second tranche was approved at the 72<sup>nd</sup> meeting. The Government of Germany developed documents for conversion of an enterprise Qasri Yakh but subsequently the project was cancelled due to lack of response from the enterprise, and specifications of equipment for reclamation centres. A training workshop for refrigerant recovery and reclamation was prepared; a refrigeration handbook was provided in local language; and experts visited Kabul for preparation of training. However, due to the security situation, it was not

feasible to implement planned activities in Afghanistan. Given the difficulties in implementation, a transfer of Germany's component under the HPMP was discussed in 2015 and the remaining funding of US \$131,938, plus agency support costs of US \$17,152 from the first and the second tranches is being returned by the Government of Germany to the 77<sup>th</sup> meeting. As of the issuance of this document, the transfer was still under discussion between UNEP and the Government as to which agency (UNDP or UNIDO) would take over. An update on this matter will be provided to the Executive Committee at the 77<sup>th</sup> meeting.

*Report on the status of implementation of the conversion of Audivic and Foxman, stage I of the HPMP for Argentina*

## **Background**

5. During the review of the request for the second tranche of the HPMP for Argentina submitted to the 74<sup>th</sup> meeting<sup>1</sup>, UNIDO reported that two enterprises, Audivic and Foxman, included in the room air-conditioning (AC) manufacturing sector plan had not been able to demonstrate financial solvency and therefore no equipment had yet been purchased for them. As it was not possible to have a final decision and the next tranche would only take place in 2017, the Executive Committee requested UNIDO to report to the 77<sup>th</sup> meeting on the status of implementation of the conversion of the two enterprises, on the understanding that the remaining funds from their conversion would be returned to the Fund if they withdrew from the project<sup>2</sup>.

6. Audivic (3.35 ODP tonnes) and Foxman (0.50 ODP tonnes) faced economic difficulties after approval of the project due to, among other things, economy slow down and restriction of imports in 2011. Audivic eventually started to produce R-410A split AC on a toll basis for another manufacturer (BGH), while Foxman ceased production in 2013 and its quotas for HCFC-22 imports and for sale of HCFC-22-based AC equipment were distributed among other enterprises.

## Progress report

7. The funding allocated to Audivic (US \$625,000) and to Foxman (US \$215,496) was not used in the conversion of these enterprises; however, given the complexity of the sector plan US \$339,860 of the funding was used to cover additional technical support, services, monitoring, training, and more expensive equipment for the sustainable conversion of all the AC enterprises. As a result, the balance of the room AC project amounts to US \$500,636, (US \$322,644 with UNIDO and US \$177,992 with Italy).

## **Secretariat's comments**

8. The Secretariat noted the successful completion of the room AC project in Argentina, with a balance of US \$500,636 associated with the two AC manufacturing enterprises, Audivic and Foxman, that ceased production.

9. While the Government of Argentina was considering to reallocate the balance to additional activities in the refrigeration servicing sector in stage I, upon further discussion with UNIDO on the activities to be implemented and the associated HCFC reductions expected, UNIDO informed that the Government of Argentina had decided to return the balance to the Multilateral Fund.

## **Secretariat's recommendations**

10. The Executive Committee may wish:

- (a) To note:

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<sup>1</sup>UNEP/OzL.Pro/ExCom/74/19.

<sup>2</sup>Provision of approvals contained in Annex IV of document UNEP/OzL.Pro/ExCom/74/56.

- (i) The progress report on the status of implementation of the conversion of Audivic and Foxman in Argentina, submitted by UNIDO;
  - (ii) That the room air-conditioning (AC) manufacturing project included in stage I of the HCFC phase-out management plan has been completed, resulting in the phase-out of 53.5 ODP tonnes of HCFC-22;
  - (iii) That the enterprises Audivic and Foxman ceased manufacturing HCFC-22-based-AC equipment resulting in an overall balance of US \$500,636; and
- (b) To request UNIDO to return to the Multilateral Fund at the 78<sup>th</sup> meeting the balance of US \$547,973 consisting of US \$322,644, plus agency support cost of US \$24,198 for UNIDO, and US \$177,992, plus agency support cost of US \$23,139 for the Government of Italy.

*Stage I of the HPMP for Brazil (annual progress report)*

11. On behalf of the Government of Brazil, UNDP as the lead implementing agency has submitted to the 77<sup>th</sup> meeting the annual progress report on the implementation of the work programme associated with the fifth tranche of the HCFC phase-out management plan (HPMP)<sup>3,4</sup> in line with decision 75/53(b).

HCFC consumption

12. The Government of Brazil reported HCFC consumption of 1,025.81 ODP tonnes in 2015, which is 14.1 per cent lower than the HPMP target of 1,194.80 ODP tonnes in 2015, and 22.7 per cent lower than the established baseline of 1,327.30 ODP tonnes. The Government also submitted sector consumption data under the 2015 CP implementation report which is consistent with the data reported under Article 7.

Progress report on the implementation of the fifth tranche

*Legal framework*

13. The Government continued to support the Brazilian Association of Technical Standards (ABNT), in establishing technical standards on handling, installation and maintenance of equipment using flammable refrigerants at the national level. This included the review of Standard ABNT NBR 16069 on "security in refrigeration systems" in accordance with the European Standard EN-378 and the development of a standard for the designation and safety classification of refrigerants based on ANSI/ASHRAE 34.

*Polyurethane (PU) foam manufacturing sector*

Conversion of 12 stand-alone PU foam enterprises (79.71 ODP tonnes)

14. Ten enterprises (64.76 ODP tonnes) have completed their conversions and started manufacturing with cyclopentane-foam blowing agent. One enterprise (Espumatec, 11.98 ODP tonnes) is facing economic difficulties that have slowed down its conversion to methyl formate; however, it is expected to complete the conversion during 2017. The last enterprise (Panisol, 3.0 ODP tonnes) is facing difficulties

<sup>3</sup> The fifth and final tranche of stage I of the HPMP was approved at the 75<sup>th</sup> meeting at a total cost of US \$2,035,094, consisting of US \$1,470,700, plus agency support costs of US \$110,313 for UNDP.

<sup>4</sup> As per the letter of 21 September 2016 from the Ministry of Environment of Brazil to UNDP.

due to its location in an urban area, which may preclude the use of hydrocarbon (HC) based-technology. UNDP is assisting the enterprise to seek an alternative technology.

*Conversion of 11 systems houses with close to 380 downstream users (89.1 ODP tonnes)*

15. Seven systems houses have completed conversion of their plants, have developed formulations based on methyl formate and methylal, and are currently assisting downstream foam enterprises in the adoption of these technologies. One systems house has already completed the conversion of all 10 of its downstream foam users. Three additional systems houses will complete their conversion to low-global warming potential (GWP) foam blowing systems (e.g., methyl formate, methylal) between March and December 2017. Only one systems house (Ecopur) is unlikely to participate in the HPMP, if this were the case, the funds allocated for its conversion (US \$135,500) will be returned to the Fund upon confirmation of non-participation in the HPMP. Table 1 summarizes the status of progress.

**Table 1. Implementation status of systems houses and downstream-users**

Approved HPMP					HPMP implementation										
Systems house (SH)	Downstream users (DSU)				DSU identified								Status*		
	FMF/ISF**		PUR ***		Eligible FMF/ISF		Eligible PUR		Total	DSU validated			SH	DSU	
	No	ODP t	No.	ODP t	Yes	No	Yes	No		Eligible	ODP t	Started			
	Amino	49	6.9	98	49.6	28	2	20	1	51	49	11.07	23	COM	ONG
Arinos****	85	10.8	13			-	23	-	-	36	36	1.45	15	COM	ONG
Ariston	7	1.4	4			-	6	1	11	10	4.05	10	COM	COM	
Ecoblaster	17	5.7	20			1	3	1	25	23	8.41	13	COM	ONG	
Purcom	101	11.8	77			1	26	5	109	103	16.49	37	COM	ONG	
Shimtek	14	2.9	3			2	-	-	5	3	2.94	3	COM	ONG	
Ecopur	-	-	-			-	-	-	-	-	-	-	-	TBC	N.S.
M.Cassab	-	-	-			-	15	-	15	-	-	-	-	ONG	N.S.
Polisystem	-	-	-			-	6	-	6	-	-	-	-	ONG	N.S.
Polyurethane	-	-	-			-	15	-	15	15	-	-	-	ONG	N.S.
U-Tech	-	-	-			-	14	-	14	14	0.11	10	COM	ONG	
<b>Grant total</b>	<b>273</b>	<b>39.5</b>	<b>98</b>	<b>49.6</b>	<b>145</b>	<b>6</b>	<b>128</b>	<b>8</b>	<b>287</b>	<b>253</b>	<b>44.52</b>	<b>111</b>	-	-	

\*COM: Completed; ONG: Ongoing; N.S.: Not started; TBC: To be confirmed.

\*\*Flexible moulded foam and integral skin foam.

\*\*\*Rigid PU foam applications (water heater, thermoware, packaging, pipe-in-pipe).

\*\*\*\*Non-eligible enterprise (non-Article 5 ownership) converted to methylal and methyl formate with its own resources. Associated funds (US \$179,300 plus agency support cost of US \$13,448) were returned to the Fund by deducting them from the fifth tranche approved at the 75<sup>th</sup> meeting.

16. In summary, so far 10 individual enterprises, seven systems houses and 67 downstream users have completed their conversions to low-GWP alternatives, phasing out 108.87 ODP tonnes of HCFC-141b.

*Refrigeration servicing sector*

17. A total of 4,800 technicians have been trained in best practices for commercial refrigeration and 100 technicians have been trained in best practices for split air-conditioning systems; there have been demonstrations on the improvement of containment practices for existing HCFC systems in three supermarkets; technical standards are being revised or developed (including commercial refrigeration, refrigeration systems for supermarkets, residential air conditioning systems, and pressure vessels for refrigeration); an on-line documentation system has been developed; and awareness activities continue to be implemented (e.g., publications, meetings with stakeholders, participation in sector events and industry fairs).

*Project implementation and monitoring unit (PMU)*

18. The PMU continued to support the National Ozone Unit (NOU) in implementing the HPMP activities by providing technical analysis of the products presented; visiting enterprises to review projects;

visiting training institutes; developing technical specifications; facilitating the preparation of service agreements; and ensuring financial control of the funds according to UNDP rules and regulations.

#### Level of fund disbursement

19. As of September 2016, of the US \$19,417,866 approved so far, US \$12,295,242 (63.3 per cent) had been disbursed (US \$9,195,606 for UNDP and US \$3,099,636 for the Government of Germany). The balance of US \$7,122,624 will be disbursed in 2016 and 2017 (Table 2).

**Table 2. Financial report of stage I of the HPMP for Brazil (US \$)**

Implementing/ bilateral agency	Funds approved (US \$)	Funds disbursed		Balance (US \$)
		(US \$)	(%)	
UNDP	15,326,957	9,195,606	60.0	6,131,351
Government of Germany	4,090,909	3,099,636	75.8	991,273
<b>Total</b>	<b>19,417,866</b>	<b>12,295,242</b>	<b>63.3</b>	<b>7,122,624</b>

#### **Secretariat's comments**

20. In line with paragraph 7(c) of the Agreement, UNDP submitted a list of downstream foam enterprises for which eligibility has been validated in the field. As there are still downstream foam users to be validated and to start their conversions, the Secretariat and UNDP agreed that an updated list will be included in the next annual tranche implementation report to be submitted in 2017.

21. With regard to the two foam enterprises that had not initiated their conversion, UNDP indicated the following:

- (a) The systems house Ecopur is not interested in participating in the plan and the funds associated with this enterprise (US \$135,500) will be returned to the Fund. However, UNDP believes that with the approval of the stage II and a complete phase-out of HCFC-141b in the near future, Ecopur might consider participating in the project. As the funds for Ecopur cannot be reallocated to another foam enterprise because all eligible enterprises have already been funded in stage I or stage II, it was agreed to continue monitoring the situation of Ecopur. In case the systems house decides not to participate in the project, the funds associated with this enterprise will be returned to the Multilateral Fund when the next progress report of the implementation of the fifth tranche of the HPMP is submitted in 2017; and
- (b) With regard to Panisol, UNDP intends to continue monitoring the situation closely and assisting the enterprise in seeking a feasible alternative before completion of stage I, in December 2017.

22. On the availability and use of alternative refrigerants, UNDP reported that an increasing number of CO<sub>2</sub>-based installations have been observed, and that the commercial refrigeration sector's interest in adopting this technology has increased. In 2016, there were more than 100 Brazilian stores working with CO<sub>2</sub>, including the first two transcritical stores in the state of Sao Paulo. The main challenges encountered in adopting CO<sub>2</sub>, ammonia and HCs have been the high initial investment cost; availability of skilled technicians trained on new alternatives guaranteeing the quality and safety of installation, operation and maintenance; and the review, adaptation and amendment of local standards and codes of practice. The demonstration in supermarkets, combined with the capacity building, technicians training, awareness campaigns and continuous cooperation with the development of standards, are expected to significantly increase the market penetration of low-GWP alternatives (e.g. HCs, CO<sub>2</sub>) over the next 3 years.

23. The Secretariat enquired whether the extended date of completion of December 2017 agreed at the 75<sup>th</sup> meeting would still be met. UNDP explained that although implementation in the PU foam sector has slowed down due to the current economic crisis, the date of operational completion of stage I of the HPMP continues to be December 2017. Of the total unspent balance in UNDP activities (US \$6.1 million), US \$5.2 million are already committed in contracts with, mainly, systems houses for the conversion of downstream foam enterprises. Activities in the servicing sector are also expected to be completed by the end of 2017.

### Secretariat's recommendation

24. The Executive Committee may wish:

- (a) To take note of the 2016 progress report on the implementation of the HCFC phase-out management plan (stage I) for Brazil, submitted by UNDP; and
- (b) To request UNDP to include in the next progress report to be submitted to the last Executive Committee meeting in 2017:
  - (i) The complete list of downstream foam enterprises assisted by the Multilateral Fund under stage I, including their HCFC-141b consumption phased out, subsector, baseline equipment and technology adopted; and
  - (ii) The status of implementation of the conversion of the enterprises Ecopur and Panisol, on the understanding that the remaining funds from the conversion of Ecopur will be returned to the Multilateral Fund, in the event that the enterprise should withdraw from the project.

### *Stage I of HPMPs for China, India, Jordan, and Mexico (annual progress reports and verification reports)*

25. On behalf of the Governments of the China, India, Jordan and Mexico, the relevant lead implementing agency, has submitted to the 77<sup>th</sup> meeting the annual progress report on the implementation of the work programme of stage of I the HPMP and the report on the verification of 2015 HCFC consumption. The relevant reports and the Secretariat's comments and recommendations can be found in the documents listed in Table 3.

**Table 3: Annual progress reports and verification reports**

Country	Project title	Agency	Decision	Document Number	Recommendation
China	HCFC phase-out management plan (stage I) (2015-2016 progress report and 2017 work programme) (extruded polystyrene foam sector plan)	UNIDO	75/54(b)	77/37	Para. 35
China	HCFC phase-out management plan (stage I) (2015-2016 progress report and 2017 work programme) (polyurethane rigid foam sector plan)	IBRD	75/55(b)	77/37	Para. 54
China	HCFC phase-out management plan (stage I) (2015-2016 progress report and 2017 work programme) (industrial and commercial refrigeration and air conditioning sector plan)	UNDP	75/56(b)	77/37	Para. 73
China	HCFC phase-out management plan (stage I, 2015 verification, 2015-2016 progress report and 2017 work programme) (room air-conditioner manufacturing sector plan)	UNIDO	75/57(b)	77/37	Para. 96

Country	Project title	Agency	Decision	Document Number	Recommendation
China	HCFC phase-out management plan (stage I) (2015-2016 progress report and 2017 work programme) (solvent sector plan)	UNDP	75/29(a)	77/37	Para. 107
China	HCFC phase-out management plan (stage I) (2015-2016 progress report and 2017 work programme) (refrigeration servicing sector including enabling programme)	UNEP	75/29(a)	77/37	Para. 116
India	HCFC phase-out management plan (stage I) (2015 verification, 2015-2016 progress report and 2017 work programme)	UNDP	75/29(a)	77/37	Para. 20
Jordan	HCFC phase-out management plan (stage I) 2015-2016 progress report and 2015 verification report	UNIDO	75/60(c)	77/51	Para. 16
Mexico	HCFC phase-out management plan (stage I) (2016 progress report and 2017 work programme)	UNIDO	75/29(a)	77/55	Para. 24

26. The Executive Committee may wish to consider the recommendation of the Secretariat as set out in the relevant document in Table 3.

## **PART II: FINANCIAL AUDIT REPORTS FOR THE CFC PRODUCTION, HALON, POLYURETHANE (PU) FOAM, PROCESS AGENT II, REFRIGERATION SERVICING AND SOLVENT SECTORS IN CHINA**

### **Background**

27. In line with decisions 71/12(b), 72/13, 73/20(b) and 75/18, the Government of China submitted through the relevant bilateral and implementing agencies annual progress reports, audit reports, and interest accrued during the implementation of the CFC production, halon, polyurethane (PU) foam, process agent II, refrigeration servicing sector and solvent sector plans to the 77<sup>th</sup> meeting.

### Planned budgets and progress reports

28. Table 4 presents the information provided with respect to funding as at 31 December 2009, the balances reported as at 30 June 2015 and 2016, the disbursement between 1 July 2015 and 30 June 2016 and the planned completion dates per activity.

**Table 4: Planned budgets for the use of remaining funds, progress reports, and completion dates**

Item	Agency	Activity	Funding as at 31 December 2009 (US\$)	Balance as at 30 June 2015	Disbursement (July 2015-June 2016)	Balance as at 30 June 2016	Planned completion date
<b>CFC production</b>		<b>Total approved: US \$150,000,000</b>					
1	World Bank	Recruitment for technical support, and organization of technology workshop on alternatives, etc.	500,000	0	0	0	2014
2	World Bank	ODS import & export management MIS	500,000				2015
3	World Bank	Research and development on ODS alternatives	4,200,000	2,209,127	411,250	1,797,877	2016
4	World Bank	Supervision and management	0	201,898	-	201,898	2018
5	World Bank	Operation cost for China Compliance Centre (CCC)	3,300,000	-	-	-	N/p
<b>Total</b>			<b>8,500,000</b>	<b>2,411,025</b>	<b>411,250</b>	<b>1,999,775</b>	
<b>Halon sector</b>		<b>Total approved: US \$62,000,000</b>					
1	World Bank	Halon 1211 stock maintenance and leakage prevention	0	1,500,000	0	1,500,000	2017
2	World Bank	Halon banking management center establishment and operation	0	1,000,000	289,100	710,900	2016
3	World Bank	Establishment and capacity building for halon 1301 recycling center	0	1,000,000	178,586	821,414	2017
4	World Bank	Upgrade and improve halon 1211 recycling demonstration center	0	300,000	0	300,000	2016
5	World Bank	Develop management information system for halon banking	0	300,000	0	300,000	2017
6	World Bank	Inventory investigation and registration of halon users nationwide	0	2,000,000	0	2,000,000	2016
7	World Bank	Operation cost for collection transportation, recycling and reclamation	0	2,000,000	0	2,000,000	2018
8	World Bank	Disposal costs of contaminated halon and residue	0	1,408,397	0	1,408,397	2018
9	World Bank	Establishment of overall ODS MIS	0	500,000	0	500,000	2017
10	World Bank	Supervision, management, and technical assistance	1,500,000	2,169,267	0	2,169,267	2018
<b>Total</b>			<b>11,695,640</b>	<b>12,177,664</b>	<b>467,686</b>	<b>11,709,978</b>	
<b>Process agent II</b>		<b>Total approved: US \$46,500,000</b>					
1	World Bank	On-going phase-out contract		0	0	0	N/p
2	World Bank	Capacity building for local EPBs		1,112,831	728,029	384,802	2017

Item	Agency	Activity	Funding as at 31 December 2009 (US\$)	Balance as at 30 June 2015	Disbursement (July 2015-June 2016)	Balance as at 30 June 2016	Planned completion date
3	World Bank	Research on ODS substitution and development of trends of alternative technologies		916,799	67,407	849,391	2018
4	World Bank	CTC residue disposal		6,341,544	13,200	6,328,344	2018
5	World Bank	Monitoring, management and post evaluation		300,000	0	300,000	2018
<b>Total</b>			<b>N/p</b>	<b>8,671,174</b>	<b>808,636</b>	<b>7,862,538</b>	
		<b>CTC residue disposal</b>					
<b>PU foam</b>		<b>Total approved: US \$53,846,000</b>					
1	World Bank	Screening and evaluation of CFC-free substitutes and development of new substitutes	2,660,000	1,312,048	100,000	1,212,048	2016-2017
2	World Bank	Additional provincial foam activities (capacity building for 11 provinces)	3,100,000	1,555,296	524,764	1,030,532	2016-2017
3	World Bank	Technical service for the foam enterprise for better application of new alternatives	1,400,000	1,128,015	384,505	743,510	2016-2017
4	World Bank	Continue monitoring of CFC phase-out in the foam sector	1,050,000	884,227	380,422	503,806	2017-2018
5	World Bank	Project monitoring and management		679,873	13,950	665,922	2017-2018
<b>Total</b>			<b>8,210,000</b>	<b>5,559,459</b>	<b>1,403,641</b>	<b>4,155,818</b>	
<b>Refrigeration servicing</b>		<b>Total approved: US \$7,884,853</b>					
1	Japan, UNEP and UNIDO	Training programme		N/p	N/p	N/p	N/p
2	Japan, UNEP and UNIDO	Evaluation effects for training program		N/p	N/p	N/p	N/p
3	Japan, UNEP and UNIDO	ODS treatment		N/p	N/p	N/p	N/p
4	Japan, UNEP and UNIDO	Data survey		N/p	N/p	N/p	N/p
5	UNIDO	Monitoring and management		N/p	N/p	N/p	N/p
6	Japan, UNEP and UNIDO	Ongoing Contracts		N/p	N/p	N/p	N/p
<b>Total</b>			<b>746,313</b>	<b>2,110,272</b>	<b>204,300</b>	<b>1,905,972</b>	
<b>Solvent sector</b>		<b>Total approved: US \$52,000,000</b>					
1	UNDP	Combating ODS illegal activities: capacity building for 10 local customs offices		658,150	244,845	413,305	2017

<b>Item</b>	<b>Agency</b>	<b>Activity</b>	<b>Funding as at 31 December 2009 (US\$)</b>	<b>Balance as at 30 June 2015</b>	<b>Disbursement (July 2015- June 2016)</b>	<b>Balance as at 30 June 2016</b>	<b>Planned completion date</b>
2	UNDP	Capacity building for ODS related personnel at 14 provinces		1,772,500	975,000	797,500	2018
3	UNDP	Public awareness and publicity activities		221,428	27,588	193,840	2018
4	UNDP	Policy research and publication					
5	UNDP	Alternative technology assessment and research		910,242	703,159	207,083	2017
6	UNDP	Electronic file management system		400,000	0	400,000	2018
7	UNDP	Project management and monitoring		1,166,985	598,515	568,470	2018
<b>Total</b>			<b>12,712,381</b>	<b>5,129,306</b>	<b>2,549,107</b>	<b>2,580,199</b>	

29. Financial audits were conducted by Daxin Certified Public Accounts LLP according to national standards. The audit opinion was that the grant and expenditures statements were in compliance with the Chinese accounting standards and have been fairly and justly presented in all material with respect to 1 July 2015 to 30 June 2016 by the Foreign Economic Cooperation Office/Ministry of Environmental Protection (FECO/MEP) in China. The auditors confirmed the balances as at 30 June 2016 that are presented in Table 1.

#### CFC production sector

30. US \$411,250 was disbursed since the last progress report. The balance for supervision as at 30 June 2016 (US \$201,898) was increased by US \$12,197 from funds not needed for research and development that was decreased by the same amount. The Government of China indicated that it had completed the project components concerning the recruitment for technical support, and organization of technology workshop on alternatives and the dedicated optical data transmission system between ODS Import/Export Management Office and the Customs. No funding was disbursed for monitoring and supervision from this account noting that monitoring includes the cost of verification. Of the 13 activities (Table 5) selected to assess the technical viability of adopting and applying low-carbon ODS alternative technologies in the applications where CFCs were used, three projects have been completed with the remaining activities to be completed in 2016.

**Table 5: Research and development activities (US \$)**

No.	Project application unit	Chemicals related to the study	Contract Amount	Disbursement during reporting period	Accumulated disbursement	Status
1	Zhejiang Lantian Environmental Protection High-tech Ltd. and Zhejiang Xindakeen Fire Industrial Co., Ltd.	Perfluoro ketone, Fire-extinguish agent, 1 GWP. Develop on new production technology and application research.	657,900	328,950	657,900	Completed
2	Sinochem Jindai Environmental protection Co., Ltd., Zhejiang Research Institute of Chemical Industry and Nanjing Forestry University	HFC-1234ze, 6 GWP, refrigerant and blowing agent. Research and develop on new production technology of HFC-1234ze.	657,900		328,950	Ongoing
3	Zhejiang Huanxin Fluoro Materials Ltd.	HFC-1234yf, 4 GWP, refrigerant for automotive air-conditioning. Research and develop on new production technology of HFC-1234yf.	657,900		328,950	Ongoing
4	Changshu 3F Zhonghao new Chemical Material Co., LTD	HFC-1234yf, 4 GWP, refrigerant for automotive air conditioning. Research and develop on another new production technology of HFC-1234yf.	643,997		321,999	Ongoing

No.	Project application unit	Chemicals related to the study	Contract Amount	Disbursement during reporting period	Accumulated disbursement	Status
5	Zhejiang Research Institute of Chemical Industry	Survey on current situation evaluation system on ODS alternative performance, analyses and evaluate domestic current situation evaluation system on ODS alternative performance, and finalize Chinese ODS alternative performance evaluation system proposal.	82,300	41,150	82,300	Completed
6	Zhejiang Lantian Environmental Protection High-tech Ltd. and Zhejiang University	HFC-41, 0 ODP, 92 GWP, refrigerant. HFC-41 refining technology and its application study.	82,300	41,150	82,300	Completed
7	Beijing University of Chemical Technology	Study and select new production process on HFC-1234yf and HFC-1234ze in laboratory through testing on different technical processes.	80,499		40,250	Ongoing
8	Electrochemical Factory of Zhejiang Juhua Co., Ltd. and Technical Center of Zhejiang Juhua Group	Foaming agent HFE-254pc, 0 ODP, 25 GWP. Research and develop new production technology of HFE-254pc.	321,998		160,999	Ongoing
9	Zhejiang Quhua Fluoro Chemical Ltd. and Technical Center of Juhua Group	Research of blends of HFC-1234yf and HFC-1234ze, 0 ODP, low-GWP, refrigerants. New application study.	321,999		160,999	Ongoing
10	Technical Center of Juhua Group And Electrochemical Factory of Zhejiang Juhua Co., Ltd.	Research and develop the preparative technique of HFC-1336mzz	299,806		149,903	Ongoing
11	Zhejiang Research Institute of Chemical Industry	Research and develop on the analytical method and related professional standard of HFOs	49,968		24,984	Ongoing
12	Shandong Hua'an New Material Ltd.	Research and develop on design and magnification of HFO-1234yf equipment	299,806		149,903	Ongoing
13	Sinochem Jindai Environmental protection Co., Ltd.	Research and develop on gaseous phase catalytic synthesis technology of HFO-1234yf and development of catalysts	261,877		130,939	Ongoing
<b>Total</b>			<b>4,418,250</b>	<b>411,250</b>	<b>2,620,377</b>	

31. The Government of China summarized the results of the three completed projects as follows:

- Project no.1: The perfluorinated ketone pilot production line was established with a 100 metric tonne (mt)/year capacity. The pilot production process was optimized and the stability test was completed. The application technology research of perfluorinated ketone was completed. Perfluorinated ketone performance was developed. The project resulted in the development of a prototype of fire-extinguishing system with perfluorine ketone.

- Project no.5: A research report was completed on an evaluation system for the performance of ODS substitutes in and outside of China. The report proposed suggestions on the establishment of China's ODS substitute performance evaluation system, index parameters for each evaluation phase, and presented a construction scheme for the evaluation system.
- Project no.6: Research and development on HFC-41 production refining technology was developed and optimized using multiple HFC-41 mixture refrigerants.

32. The Executive Committee may wish to request final studies on these 13 research and development projects to the 78<sup>th</sup> meeting since they are planned to be completed in December 2016.

#### Halon sector

33. US \$467,686 was disbursed since the last progress report. The policy research to assess the hazardous waste nature of halon recycling to overcome the previously reported project implementation obstacle of not being able to transport halon for recycling due to halon classification as a hazardous waste, has been completed. The technical assistance proved that it was not a hazardous waste. Based on the study results, with further consultation and technical support of Chinese Research Academy of Environmental Sciences, the provincial Environment Protection Bureaus (EPBs) have agreed to treat recycled halon as non-hazardous waste and the transportation of halon was no longer an issue at this time.

34. At its 75<sup>th</sup> meeting, the Executive Committee requested that information should be collected where available on halon recovery as part of its collection of information on CFC recovery on ship dismantling during visits to ship dismantling centres. The Government of China indicated that the information on halon recovery will be collected during the investigation where available.

35. The Government provided a work plan for the remaining balance of funds which has been reallocated to specific activities as indicated in Table 1. The first payment has been disbursed to restart the halon-1211 recycling management center and for the establishment of a halon-1301 recycling center. No funds were disbursed during the reporting period on any other component. The Government indicated that no funds had been disbursed for supervision as no verification had been undertaken during the reporting period, but that an investigation on halon feedstock uses is planned in 2017.

#### Process agent II

36. US \$808,636 was disbursed since the last progress report. Five of the six EPBs with CTC and other ODS producers have submitted final reports with the remaining EPB to submit by the end of 2016. Most of the funding disbursed (US \$728,029) in the reporting period was associated with this component of the sector plan.

37. The other disbursements were associated with the research and development on ODS alternatives where five contracts to evaluate future demand for CTC and associated leakage and assess the environmental impact of CTC emissions were signed and paid by June 2015, but there was limited disbursement (US \$67,407) in the current reporting period. These projects will review and evaluate substitutes and alternatives technologies in the production, foam and refrigeration sectors.

38. US \$13,200 was disbursed for the CTC residue disposal. A technical team visited CTC residue producers, an incinerator, and local EPBs and obtained relevant data and information and submitted an investigation report. An appropriate disposal system will be selected and a project implementing proposal will be finalized based on the report of the technical team.

39. No funding was disbursed for monitoring and supervision from this account noting that monitoring includes the cost of verification. The funds of this item were planned to be used for daily monitoring and management, including the occasional verification and site visit; however, there have not been any verifications in the past two years.

40. At its 75<sup>th</sup> meeting, the Executive Committee requested the Government of China to undertake a study on production of CTC and use for feedstock applications and to make the results of the study available to the Executive Committee by the end of 2018. The Government indicated that the terms of reference (TORs) for this activity were under preparation. Funds for capacity building had been double-counted in the 2014 report. The Government revised that report. However, it allocated those funds plus US \$200,000 from capacity building to CTC residue disposal to cover costs for the study requested by the Executive Committee.

#### PU foam

41. US \$1,403,641 was disbursed since the last progress reports. Funds were used against all budget items. The Government reported two years ago that ten contracts were signed for research on foam blowing agents with zero ODP and low-global warming potential (GWP), and low-GWP pre-blended polyol formulations containing to optimize the stability and performance of polyols and improve the thermal conductivity of the foam. The Government reported that independent experts reviewed the progress reports and initial research outcomes for all of the projects. The experts made suggestions for finalizing the reports.

42. Activities with foam enterprises in 11 provinces have been implemented to ensure the sustainability of the CFC phase-out through data collection, training, site visits, enforcement inspections and public awareness.

43. Four system houses are working on the trial and testing of new formulations for their downstream enterprises. Procurement of production facilities and laboratory equipment has been completed.

44. Under the fourth budget item of continued monitoring of CFC phase-out, EPBs of four provinces (Hebei, Henan, Shandong and Tianjin) visited the chemical dealers, system houses and foam enterprises collecting sample of blowing agents, pre-blended polyols and foam produced to ensure that CFCs are not being used. The Government had organized training meetings, and technical workshops, and cooperated with financial and technical experts to conduct on-site verification missions.

#### CFC refrigeration servicing sector

45. US \$204,300 was disbursed since the last progress reports, and a balance of US \$1,905,972 remained as at 30 June 2016. For the ongoing activities, the Government of China completed the procurement of CFC recovery and recycling equipment. This equipment was distributed to enterprises in the servicing and ship dismantling sector. Outreach activities were undertaken in exhibitions and with the publication of booklets. Eight training centres were established and are currently operating. More than 1,000 technicians and students were trained.

46. The Government of China awarded a contract to conduct a performance evaluation of the training centres in October 2015. The comprehensive evaluation report of all training centres is expected to be completed by March 2017.

Solvent sector

47. US \$2,549,107 was disbursed since the last progress report. Ten customs units trained more than 3,500 officers during the reporting period with ODS testing equipment having been allocated to each customs unit that had made the ODS monitoring a part of their regular works.

48. The Government of China helped 14 provinces develop implementation plans and train the local EPB officers in the past year; developed a video for the introduction of compliance achievements in China and future prospects for ozone layer protection. FECO published two books and one supplementary issue on compliance achievements and implementation experience of the Montreal Protocol in China promulgating the scientific knowledge of ozone layer protection.

49. The Government signed contracts with four beneficiaries and signed the fifth contract in 2015 on new alternative solvents and research on the optimization of silicone oil.

50. In the past few decades, the Government of China has developed and implemented 25 sector plans, accumulating several project documents. In order to facilitate the tracking and inquiry of these documents, an electronic management system for ODS related documents will be established. US \$400,000 is allocated to this activity. The TORs and procurement have been completed, and the contract for the establishment of this system is under preparation. US \$598,515 was disbursed on project management and monitoring from this sector plan.

51. The components of budget relating to supervision activities, review meetings and policy workshops that were originally budgeted under categories 2, 3 and 4, have now been budgeted under “Activities Management and Monitoring” while the overall remaining balance as of 30 June 2015 remains unchanged. It is anticipated that the new electronic management information system for ODS related documents that will come into service in 2017 will require significant system adjustments and maintenance that will require greater funding in the category “Activities Management and Monitoring” to support the system.

**Interest**

52. Table 6 presents the amount of interest collected.

**Table 6: Interest reported from sector plans in China (US \$)**

Sector	1 June 2015 to 30 June 2016	1 July 2014 to 30 June 2015	1 January to 30 June 2014	2010-2013	Total
CFC production, halon, process agent II, and PU foam	2,842	2,833	1,412	8,350	15,436
Refrigeration servicing	8,265	11,856	6,732	54,482	81,335
Solvent	19,726	35,298	22,832	212,267	290,124
<b>Total</b>	<b>30,834</b>	<b>49,987</b>	<b>30,976</b>	<b>275,099</b>	<b>386,895</b>

53. The level of interest received was US \$30,834 since the last progress report. The interest accrued for the solvent sector is significantly higher than that accrued for the other sectors since interest from RMB accounts is much higher than in US dollar accounts.

**Secretariat’s comments**

54. There has been progress in implementing activities in the different sector plans associated with fund balance; however, there remain significant fund available for disbursement. A total of

US \$5,844,620 was disbursed during the reporting period (1 July 2015 to 30 June 2016) and there remains a balance of US \$30,214,281 from these sector plans which had an estimated balance of US \$52 million<sup>5</sup> available as at 31 December 2009 of the US \$372,230,853 originally approved for these sector plans.

55. Three research and development activities have been completed and an additional ten are underway. Article 5 countries, implementing agencies and the Executive Committee could benefit from the results of these studies.

56. Data was not provided by activity for the refrigeration servicing sector as it has been in the past and as it has for the other sector plans.

#### **Secretariat's recommendations**

57. The Executive Committee may wish:

- (a) To note, with appreciation, the financial audit reports for the CFC production, halon, polyurethane (PU) foam, process agent II, refrigeration servicing sector and solvent sector in China, contained in document UNEP/OzL.Pro/ExCom/77/19; and
- (b) To request the Government of China to provide final study reports on all research and development projects undertaken with funds from the Multilateral Fund under the CFC production sector to the 78<sup>th</sup> meeting.

### **PART III: METHYL BROMIDE (MB) PHASE-OUT PROJECTS**

#### *MB phase-out plan in Argentina*

##### **Background**

58. At the 30<sup>th</sup> meeting, the Executive Committee approved the project for the phase-out of MB in strawberry, protected vegetables and cut flower production in Argentina, and at the 36<sup>th</sup> meeting, the Executive Committee approved the project for the phase-out of MB for soil fumigation in tobacco and non-protected vegetable seed-beds. The Agreement between the Government of Argentina and the Executive Committee was subsequently modified at the 45<sup>th</sup> meeting of the Executive Committee. While the Agreement between Argentina and the Executive Committee explicitly excluded quarantine and pre-shipment applications from the targets for national MB consumption, the Agreement did not include an exclusion for critical-use exemptions the Parties to the Montreal Protocol may authorize and instead specified zero national consumption of MB by 2015. The Parties authorized critical-use exemptions for Argentina at the 26<sup>th</sup>, 27<sup>th</sup>, and 28<sup>th</sup> Meeting of the Parties for use in 2015, 2016, and 2017, respectively.

59. Argentina reported consumption of MB in 2015 consistent with the authorized critical-use exemptions. Accordingly, the Secretariat considers that the maximum level of consumption of MB for Argentina in 2015 was zero, as in the Agreement, except for any critical-use exemptions approved by the Parties.

##### **Secretariat's recommendations**

60. The Executive Committee may wish to consider noting that the maximum level of consumption of methyl bromide for Argentina in 2015 was zero, as in the Agreement between the Government and the Executive Committee, except for any critical-use exemptions approved by the Parties to the Montreal Protocol.

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<sup>5</sup> The figure is estimated because data as at 31 December 2009 was not provided for the process agent II sector therefore the data from 31 December 2013 was used for that sector's 2009 balance.

*MB phase-out plan in Mexico*

**Background**

61. At the 54<sup>th</sup> meeting, the Executive Committee approved the MB phase-out plan for Mexico. While the Agreement between the Government of Mexico and the Executive Committee explicitly excluded quarantine pre-shipment applications from the targets for national MB consumption, the Agreement did not include an exclusion for critical-use exemptions the Parties to the Montreal Protocol may authorize, and instead specified zero national consumption of MB by 2014. The Parties authorized critical-use exemptions for Mexico at the 26<sup>th</sup> and 27<sup>th</sup> Meeting of the Parties for use in 2015 and 2016, respectively. Mexico did not submit a critical-use nomination to the 28<sup>th</sup> Meeting of the Parties in line with the decision that recognized that each Party should aim to significantly and progressively decreasing its consumption of MB for critical uses with the intention of completely phasing out MB.

62. Mexico reported consumption of MB in 2015 consistent with the authorized critical-use exemptions. Accordingly, the Secretariat considers that the maximum level of consumption of MB for Mexico in 2015 was zero, as in the Agreement, except for any critical-use exemptions approved by the Parties.

**Secretariat's recommendations:**

63. The Executive Committee may wish to consider noting that the maximum level of consumption of methyl bromide for Mexico in 2015 was zero, as in the Agreement between the Government of Mexico and the Executive Committee, except for any critical-use exemptions approved by the Parties.

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