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

**PROJECT PROPOSALS: CHINA**

This document consists of the comments and recommendations of the Fund Secretariat on the following project proposals:

Phase-out

- HCFC phase-out management plan (stage I) UNDP, UNEP, UNIDO, World Bank, Germany, and Japan

Production

- Sector plan for the phase-out of methyl bromide production (phase IV) UNIDO

China: HCFC phase-out management plan (stage I) (UNDP, UNEP, UNIDO, World Bank, Germany, and Japan)

**Note by the Secretariat**

**Background**

1. At its 64<sup>th</sup> meeting, the Executive Committee approved, in principle, stage I of the HPMP for China for the period 2011 to 2015 at the amount of US \$265 million (excluding agency support costs), associated with extruded polystyrene (XPS) foam, polyurethane (PU) foam, industrial and commercial refrigeration and air conditioning (ICR), room air-conditioner manufacturing (RAC) and refrigeration servicing sector plans, the national enabling programme and the national co-ordination plan. The Committee also decided that the solvent sector, at a maximum level of funding of up to US \$5,000,000, plus agency support costs for UNDP, could be considered at the 65<sup>th</sup> meeting (decision 64/49). With the approval of the solvent sector plan at the 65<sup>th</sup> meeting (decision 65/36), the overall funding for stage I of the HPMP for China amounted to US \$270,000,000.

2. To ensure compliance with the Montreal Protocol by China, the 2013 and 2015 HCFC consumption control targets in the six sector plans are shown in Table 1.

**Table 1. HCFC consumption limits and targeted phase-out amount in consumption sectors for stage I of the HPMP for China**

National/Sectoral level	2013 (ODP tonnes)		2015 (ODP tonnes)	
	Max. allowable consumption	Phase-out amount	Max. allowable consumption	Phase-out amount
<b>National</b>	18,865	n/a	16,979	n/a
<b>Sector plans</b>				
XPS	2,540	338	2,286	254
PU	5,392	673	4,450	942
ICR	2,403	224	2,163	240
RAC	4,109	176	3,698	411
Solvent	494	30	455	39
Servicing	n/a	50	n/a	
<b>Total</b>	<b>n/a</b>	<b>1,490</b>	<b>n/a</b>	<b>1,886</b>

3. The Agreement between the Government of China and the Executive Committee for the phase-out of HCFCs was first approved at the 66<sup>th</sup> meeting, and updated at the 67<sup>th</sup> meeting, reflecting the newly established HCFC baseline for compliance in China, the change in responsibility of co-operating agencies, and the established agency support costs (decision 67/20). Since the approval of the HPMP for China, the Executive Committee has approved several tranches associated with the sector plans as listed in Table 2.

**Table 2. Dates of approvals of sector plans of the HPMP for China**

Sector plan	Meeting of the Executive Committee					
	64 <sup>th</sup>	65 <sup>th</sup>	68 <sup>th</sup>	69 <sup>th</sup>	71 <sup>st</sup>	72 <sup>nd</sup>
XPS	First tranche			Second tranche	Third tranche	
PU	First tranche		Second tranche		Third tranche*	
ICR	First tranche		Second tranche		Third tranche	
RAC	First tranche		Second tranche		Third tranche	
Solvent		First tranche			Second tranche	
Servicing	First tranche		Second tranche			Third tranche

\* Approved on an exceptional basis on the understanding that funding would be disbursed by the Treasurer to the World Bank only after the Secretariat had accepted as sufficient information provided by the World Bank to the effect that disbursement of 20 per cent or more of the second tranche to final beneficiaries had been achieved. Funds were transferred from the Treasurer to the World Bank in January 2014.

### Submission to the 73<sup>rd</sup> meeting

4. On behalf of the Government of China UNDP, UNEP, UNIDO, the World Bank and the Government of Japan submitted tranche requests for the sector plans associated with stage I of the HPMP for China as shown in Table 3, together with an independent verification of HCFC production and consumption in 2013 (World Bank), annual implementation reports covering the activities undertaken so far, and annual implementation plans for the activities to be implemented in 2015.

**Table 3. Tranche requests of sector plans submitted to the 73<sup>rd</sup> meeting**

Sector plan (lead and co-operating agency)	Overall funding approved in principle (US \$)	Previously approved funding (US \$)	Previously approved funding as share of overall approved in principle (%)	Funding requested at 73 <sup>rd</sup> meeting (US \$)	Share of funding approved and requested of total approved in principle (%)
XPS (UNIDO, Germany)*	50,000,000	36,437,000	72.9	6,330,000	85.5
PU (World Bank)	73,000,000	57,971,000	79.4	4,079,000	85.0
ICR (UNDP)	61,000,000	40,775,000	66.8	11,075,000	85.0
RAC (UNIDO)	75,000,000	54,125,000	72.2	9,625,000	85.0
Solvent (UNDP)	5,000,000	4,500,000	90.0	0	90.0
Servicing (UNEP, Japan)	5,640,000	3,521,000	62.4	1,253,000**	84.6
<b>Total</b>	<b>269,640,000</b>	<b>197,329,000</b>	<b>73.2</b>	<b>32,362,000</b>	<b>85.2</b>

\* Germany is not requesting funding at the 71<sup>st</sup> meeting.

\*\* Withdrawn from consideration at the 73<sup>rd</sup> meeting due to zero disbursement of funding from UNEP to FECO from the third tranche.

5. After reviewing the project proposals, the Secretariat concluded that all of the sector plans, except for the refrigeration servicing sector plan, had merits to warrant their submission to the 73<sup>rd</sup> meeting.

### HCFC consumption

6. The Government of China has reported consumption of HCFC under Article 7 of the Montreal Protocol and has also provided country programme data as shown in Table 4.

**Table 4. Consumption of different HCFCs in China (2009 to 2013)**

Year	2009	2010	2011	2012	2013*	Baseline
<b>Metric tonnes</b>						
HCFC-22	209,536.6	220,984.9	213,809.0	237,459.7	195,009.29	215,260.7
HCFC-123	308.6	748.0	772.0	778.4	1,010.97	528.3
HCFC-124	284.7	-14.2	16.8	-5.7	119.89	135.2
HCFC-141b	51,335.9	56,687.7	68,332.2	63,863.9	51,010.33	54,011.8
HCFC-142b	21,810.8	23,530.5	22,241.3	15,274.3	12,855.04	22,670.7
HCFC-225ca	42.2	55.8	59.5	16.2	28.73	49.0
<b>Total</b>	<b>283,318.8</b>	<b>301,992.7</b>	<b>305,230.8</b>	<b>317,386.8</b>	<b>260,034.25</b>	<b>292,655.7</b>
<b>ODP tonnes</b>						
HCFC-22	11,524.51	12,154.17	11,759.49	13,060.28	10,725.51	11,839.34
HCFC-123	6.17	14.96	15.44	15.57	20.22	10.57
HCFC-124	6.26	-0.31	0.37	-0.13	2.64	2.98
HCFC-141b	5,646.95	6,235.64	7,516.55	7,025.03	5,611.14	5,941.30
HCFC-142b	1,417.70	1,529.49	1,445.69	992.83	835.58	1,473.60
HCFC-225ca	1.05	1.40	1.49	0.41	0.72	1.23
<b>Total</b>	<b>18,602.6</b>	<b>19,935.4</b>	<b>20,739.0</b>	<b>21,094.0</b>	<b>17,195.80</b>	<b>19,269.02</b>
Change to previous year	20.9%	7.2%	4.0%	1.7%	-18.5%	n/a

\* Source country programme implementation report

7. The consumption of China continues to be dominated by three substances, HCFC-22, HCFC-141b and HCFC-142b, which collectively account for 99.8 per cent of the country's consumption. Overall HCFC consumption in 2013 was the lowest in the last five years due to reductions in HCFC-22, HCFC-141b and HCFC-142b consumption. There are increases in consumption of HCFC-123, HCFC-124 and HCFC-225ca (these HCFCs represent less than 0.5 per cent of the total consumption).

8. UNDP provided information on HCFC consumption per sector for 2013 to demonstrate compliance with the manufacturing sector consumption limits set out in rows 1.3.1, 1.3.2, 1.3.3, 1.3.4 and 1.3.5 of Appendix 2-A of the Agreement for the HCFC phase-out in China as shown in in Table 5.

**Table 5. Consumption of HCFC (in ODP tonnes) per sector in China in 2013\***

Substance	XPS foam	PU foam	ICR	RAC	Solvent	Servicing
HCFC-22	1,644.50	-	2,206.60	3,789.50	-	2,995.72
HCFC-141b	-	5,097.23	-	-	465.30	-
HCFC-142b	732.16	-	6.50	-	-	96.92
HCFC-123	-	-	11.70	-	-	8.52
HCFC-124	-	-	-	-	-	2.64
HCFC-225ca/cb	-	-	-	-	0.95	-
<b>Total</b>	<b>2,376.66</b>	<b>5,097.23</b>	<b>2,224.80</b>	<b>3,789.50</b>	<b>466.25</b>	<b>3,103.80</b>
<b>Maximum allowable consumption</b>	<b>2,540.00</b>	<b>5,392.20</b>	<b>2,402.80</b>	<b>4,108.50</b>	<b>494.20</b>	<b>n/a</b>

\*Aerosol sector not included as it is not part of stage I of the HPMP.

9. Based on the information provided in Table 5, China is in compliance with the HCFC consumption targets in all sector plans in 2013.

10. UNDP was also requested to provide information on the way China monitors the consumption in the different sectors, to ensure compliance with the targets. Each year, FECO collects data from different sources including beneficiary enterprises, verification report of the production sector, the license system and industrial associations. Data is fully cross verified with the actual consumption in the enterprises only for some sectors and substances, such as the RAC sector (with limited consuming enterprises) and HCFC-123.

11. For sectors with large number of small and medium-sized enterprises (SMEs) (i.e., XPS foam, PU foam, ICR, and servicing sector) it is not possible to collect all the consumption data from all enterprises through a bottom-up approach. In these cases, consumption is monitored through the national system of licensing and quotas for HCFC imports, exports, production and consumption. The domestic production quotas control HCFC sold in the local market and subsequent consumption in SMEs. Quotas are also issued to enterprises with an annual consumption of HCFCs over 100 mt. In addition, FECO is cooperating with the local Environmental Protection Bureaus (EPBs) to strengthen policies that can support the reduction of HCFC consumption, including the ban for the new HCFC-based facilities and controls on the growth of HCFC consumption.

#### Verification of production and consumption of HCFCs in China

12. The World Bank commissioned an independent verification of 2013 HCFC production and consumption in China. The verification confirmed that the production of HCFC in 2013 is within the limits established by the Agreement between the Government of China and the Executive Committee for the production sector. The verification also verified HCFC consumption data for the various HCFCs.

13. The Secretariat noted a difference of 1,437.93 ODP tonnes between the consumption reported under the Article 7 (15,757.87 ODP tonnes) and that reported under the country programme implementation report and in the verification report (17,195.80 ODP tonnes). The World Bank clarified that China has always used (and will continue using) the customs data to report its consumption and production under Article 7 of the Montreal Protocol. The estimate of HCFC use per sector reported in the country programme implementation report uses information obtained from the verification report. During the verification process to determine the export amount of HCFCs, the producers must provide completed supporting documents for each export (both direct by producer and indirect through dealers). For any exports that producers have no completed supporting documents, the verification team considered those corresponding quantities as domestic sales. Therefore, consumption from the verification report will, in general, be higher than the actual consumption.

#### Verification of manufacturing sector conversions

14. UNIDO submitted a technical verification report to verify the completed conversions in three enterprises (Changhong Mianyang, Chongqing Gree and TCL Wuhan), in line with paragraph 5(b)(i) of the Agreement between the Government of China and the Executive Committee. Additional verification reports for a sample of enterprises in other manufacturing sectors that have completed or are completing their conversions in 2014, will be submitted by relevant implementing agencies along with the request of funds for the next tranche.

#### Disbursement of funds and interest accrued

15. Based on decision 69/24, each of the sector plans submitted included detailed information on funds disbursed and interest accrued, as shown in in the respective sector plans of this document. Table 6 summarizes the level of funds disbursed by the implementing agencies as of 29 September 2014.

**Table 6. Level of disbursement per sector**

<b>XPS foam sector plan (UNIDO/Germany)</b>		<b>Tranche 1</b>	<b>Tranche 2</b>	<b>Tranche 3</b>	<b>Total</b>
Funds approved by the Executive Committee		21,831,023	10,607,977	3,998,000	36,437,000
Disbursements from implementing agencies to FECO	Amount (US \$)	19,693,823	5,499,477	1,199,400	26,392,700
	Disbursement ratio	90%	52%	30%	72%
Disbursements from FECO to beneficiaries	Amount (US \$)	7,473,323	2,711,584	812,859	10,997,766
	Disbursement ratio	34%	26%	20%	30%
<b>PU foam sector plan (the World Bank)</b>					
Funds approved by the Executive Committee		38,859,000	5,520,000	13,592,000	57,971,000
Disbursement from the World Bank to FECO	Amount (US \$)	31,087,200	4,416,000	6,796,000	42,299,200
	Disbursement ratio	80%	80%	50%	73%
Disbursement from FECO to beneficiaries	Amount (US \$)	11,048,928	2,134,682	2,728,500	15,912,110
	Disbursement ratio	28%	39%	20%	27%
<b>ICR sector plan (UNDP)</b>					
Funds approved by the Executive Committee		25,380,000	6,900,000	8,495,000	40,775,000
Disbursements from UNDP to FECO	Amount (US \$)	25,380,000	6,900,000	5,897,061	38,177,061
	Disbursement ratio	100%	100%	69%	94%
Disbursements from FECO to beneficiaries	Amount (US \$)	8,038,716	3,148,500	1,749,753	12,936,969
	Disbursement ratio	32%	46%	21%	32%
<b>RAC sector plan (UNIDO)</b>					
Funds approved by the Executive Committee		36,430,000	9,200,000	8,495,000	54,125,000
Disbursement from UNIDO to FECO	Amount (US \$)	18,215,000	4,600,000	2,530,200	25,345,200
	Disbursement ratio	50%	50%	30%	47%
Disbursement from FECO to beneficiaries	Amount (US \$)	11,069,345	2,857,251	1,760,674	15,687,270
	Disbursement ratio	30%	31%	21%	29%

<b>Total all sectors recommended</b>					
Funds approved by the Executive Committee		122,500,023	32,227,977	34,580,000	189,308,000
Disbursements to FECO	Amount (US \$)	94,376,023	21,415,477	16,422,661	132,214,161
	Disbursement ratio	77%	66%	47%	70%
Disbursements from FECO to beneficiaries	Amount (US \$)	37,630,312	10,852,017	7,051,786	55,534,115
	Disbursement ratio	31%	34%	20%	29%

16. The rate of disbursement of funding available from the previously approved tranche is above 20 per cent in all sectors included in Table 6. For the refrigeration servicing sector (not included in Table 6), the agreement between UNEP and FECO for the third tranche has not been signed yet, therefore no funds from this tranche have been made available for implementation.

17. The implementing agencies provided the information on interest accrued as of the end of 2013 as shown in Table 7. The information on interest is supported by an audit report submitted by the World Bank on the disbursement for stage I of the HPMP sector plans of 2013.

**Table 7. Information provided by implementing agencies on interest accrued**

Sector plan	Interest accrued (US \$)		
	As of 31 December 2012	As of 31 December 2013	Total
XPS (UNIDO, Germany)	12,583*	43,153	55,737
PU (World Bank)	0.00**	5,194	5,194
ICR (UNDP)	70,628	87,093	157,721
RAC (UNIDO)	10,016***	66,791	76,806
Solvent (UNDP)	2,289	5,293	7,582
Servicing (UNEP, Japan)	642****	1,427	2,069
<b>Total</b>	<b>96,158</b>	<b>208,951</b>	<b>305,109</b>

\* US \$11,955 reported at the 71<sup>st</sup> meeting. Difference: US \$628

\*\* All agencies receive their information on interest accrued from annual audits, relevant for the status as of 31 December of a given year. Since no funds were transferred before 1 January 2013 from the World Bank to FECO, no interest was accrued before 2013 and the World Bank contribution was not included in the annual audit.

\*\*\* US \$9,513 reported at the 71<sup>st</sup> meeting. Difference: US \$503

\*\*\*\* No interest reported at the 71<sup>st</sup> meeting. Difference: US \$642

18. The recommendation for approval for each sector plan by the Executive Committee includes a request to the Treasurer to offset future transfers to the implementing agencies by the amount of interest accrued by the Government of China up to 31 December 2013. In the cases of XPS, RAC and the servicing sectors the amount of interest accrued in 2012 reported in the audit submitted to this meeting is higher than the levels reported at the 71<sup>st</sup> meeting. The differences will be added to the amount to be offsetted in each sector (details in footnote in Table 7) in the recommendation for approval of funding related to the tranches (recommendations for approval of funding related to the XPS and RAC sector tranches are included in corresponding sections of the present document).

#### Refrigeration servicing sector and enabling programme

19. The third tranche for the refrigeration servicing sector plan and national enabling programme related to stage I of the HPMP for China was approved by the Executive Committee only at the 72<sup>nd</sup> meeting, having been deferred at the 71<sup>st</sup> meeting in line with decision 71/35(g), due to zero disbursement from the previous tranche.

20. In reviewing the request for the release of the fourth tranche of the refrigeration servicing sector, the Secretariat noted that while this component had demonstrated significant progress in the implementation of its activities, UNEP and FECO had not yet signed the revised agreement that would

enable disbursement from the third tranche. Taking into account decision 72/24<sup>1</sup>, the Secretariat informed UNEP that the tranche request could not be considered by the Executive Committee.

21. UNEP however reported that disbursements were made (in the amount of US \$360,250, representing over 30 per cent of the total funding of the US \$1,184,000 of the third tranche) from previous tranches approved, to commence implementation of activities associated with the third tranche. UNEP expressed the view that China understands the 20 per cent disbursement to be actual expenditures incurred by FECO from its accounts on the approved activities. While the Secretariat appreciates that additional disbursements have been made from previously approved tranches, as there was no disbursement from UNEP to FECO from the third tranche as of the six week deadline, the requirement of the disbursement threshold of 20 per cent from the last tranche approved had not been met.

22. While acknowledging that the disbursement threshold from UNEP to FECO had not been met as of the writing of this document, UNEP, in response to a request from the Government of China is seeking the Executive Committee's endorsement of the 2015 work plan for the refrigeration servicing sector and enabling activities associated with the fourth tranche (Table 8) without prejudice to the requirement of the 20 per cent disbursement threshold established in the Agreement. UNEP reported that it is important for China to have the Committee's agreement to proceed with activities planned for 2015 while waiting for the fourth tranche approval at the 74<sup>th</sup> meeting in order not to further interrupt any activities that are planned for the year. UNEP has also committed to ensuring that disbursement from the third tranche will be expedited to enable the transfer of funds without delay.

**Table 8. Work plan and budget associated with the fourth tranche of the servicing sector plan**

Activities	Budget (US \$)	Activities planned
<b>Servicing sector</b>		
Training of technicians including training material	300,000	Develop and sign the training contract with the selected training centers; organize the train-the-trainer workshops in national training centers as planned in HPMP; Training programme for about 1,200 servicing technicians in ten regional training centres in 2014.
Equipment	264,500	Use the equipment effectively for training programme
policy implementation and monitoring	50,000	Support on qualification certification system in servicing sector
Outreach	100,000	Select an advertising agency to develop and broadcast the advertisement for refrigerant disposal; publish and distribute training materials to training centres and other vocational schools.
Experts cost	36,000	Training support; relevant study support
<b>Subtotal</b>	<b>750,500</b>	
<b>Capacity-building of national and local authorities</b>		
National consultants	10,000	Training support
Policy training	90,000	Policy training for local Ozone officers (Provincial/cities/county levels)
Co-ordination meetings of ministries	15,000	Co-ordination meetings for officers from relevant ministries
<b>Subtotal</b>	<b>115,000</b>	

<sup>1</sup> The Executive Committee reiterated, *inter alia*, the requirement of meeting the 20 per cent disbursement threshold for the approval of tranches of HPMPs and, allowing the bilateral and implementing agencies to submit information on disbursements related to tranches submitted to the 73<sup>rd</sup> and 74<sup>th</sup> meetings up to six weeks prior to these meetings.

Activities	Budget (US \$)	Activities planned
<b>Strengthen the import/export controls</b>		
National consultants	25,000	Individual consultant (support the implementation); regulation development
Updating of the administrative system	20,000	Develop the electronic data exchange system with State Custom
Compilation of training materials	30,000	Compile the training material for guideline of enforcement; compile the import/export policies and regulations of other countries
Train the trainer workshops	55,000	Training for exporters/importers
China enforcement award	10,000	Awards for the anti-illegal activity of 2014
<b>Subtotal</b>	<b>140,000</b>	
<b>Outreach and communication strategy</b>		
Design, produce, conduct and maintain the social media/website campaign	50,000	Outreach advertisement publishing and dissemination
Design and produce celebrities ad campaigns, and cover travel, hospitality for the involvement in public events	25,000	Ozone messaging as part of the World Environmental Day campaign
International Ozone Day celebrations	50,000	International Ozone Day celebrations
Workshops to update knowledge on HCFC phase out of key influencer groups	7,500	One workshop of awareness
Development and printing of publicity materials	15,000	Brochures, flyers, CDs, and posters with simple message and information
<b>Subtotal</b>	<b>147,500</b>	
Operation of the Working Group	80,000	
UNEP technical assistance	20,000	
<b>Total budget requested (US \$)</b>	<b>1,253,000</b>	

23. The Executive Committee may wish:

- (a) To note, on an exceptional basis, the work plan for 2015 for the refrigeration servicing sector and enabling activities associated with the fourth tranche of stage I of the HCFC phase-out management plan (HPMP) of China; and
- (b) To request UNEP to re-submit the request for the fourth tranche of stage I of the HPMP for China for the servicing sector and enabling activities to the 74<sup>th</sup> meeting, on the condition that it meets the requirements of the 20 per cent fund disbursement of the third tranche from UNEP to the Foreign Economic Cooperation Office of the Government of China.



**PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS**
**China**

<b>(I) PROJECT TITLE</b>	<b>AGENCY</b>
HCFC phase out plan (stage I) XPS foam	Germany, UNIDO (lead)

<b>(II) LATEST ARTICLE 7 DATA (Annex C Group I)</b>	Year: 2013	15,757.87 (ODP tonnes)
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<b>(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)</b>							<b>Year: 2013</b>		
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-123				11.7	8.5				20.2
HCFC-124					2.6				2.6
HCFC-141b	48.6	5,097.2				465.3			5,611.1
HCFC-142b		732.2		6.5	96.9				835.6
HCFC-22	89.2	1,644.5		5,996.1	2,995.7				10,725.5
HCFC-225ca						0.7			0.7

<b>(IV) CONSUMPTION DATA (ODP tonnes)</b>			
2009 - 2010 baseline:	19,269.0	Starting point for sustained aggregate reductions:	18,865.44
<b>CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)</b>			
Already approved:	3,445.19	Remaining:	15,420.25

<b>(V) BUSINESS PLAN</b>		<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>Total</b>
UNIDO	ODS phase-out (ODP tonnes)	79.4	84.4	0.0	163.8
	Funding (US \$)	6,773,100	7,204,310	0	13,977,410
Germany	ODS phase-out (ODP tonnes)	0.0	0.0	6.3	6.3
	Funding (US \$)	0	0	560,181	560,181

<b>(VI) PROJECT DATA</b>			<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>Total</b>
Montreal Protocol consumption limits			n/a	n/a	19,269.0	19,269.0	17,342.1	n/a
Maximum allowable consumption (ODP tonnes)			n/a	n/a	18,865.4	18,865.4	16,978.9	n/a
Agreed funding (US \$)	Germany	Project costs	459,023	390,977			500,000	1,350,000
		Support costs	51,260	47,059			60,181	158,500
	UNIDO	Project costs	21,372,000	10,217,000	3,998,000	6,330,000	6,733,000	48,650,000
		Support costs	1,602,900	715,190	279,860	443,100	471,310	3,512,360
Funds approved by ExCom (US \$)	Project costs		21,831,023	10,607,977	3,998,000	0.0	0.0	36,437,000
	Support costs		1,654,160	762,249	279,860	0.0	0.0	2,696,269
Total funds requested for approval at this meeting (US \$)	Project costs		0	0	0	6,330,000	0	6,330,000
	Support costs		0	0	0	443,100	0	443,100

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

24. On behalf of the Government of China, UNIDO as the lead implementing agency, has submitted to the 73<sup>rd</sup> meeting a request for funding for the fourth tranche of the extruded polystyrene (XPS) foam sector plan<sup>2</sup> of stage I of the HCFC phase out management plan (HPMP), at the amount of US \$6,330,000, plus agency support costs of US \$443,100 for UNIDO only. The submission includes a progress report on the implementation of the third tranche of the HPMP, together with the tranche implementation plan for 2015.

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

25. The Government of China continued implementing the ODS regulations and policies established in previous tranches, including the quota permits to enterprises consuming more than 100 metric tonnes (mt) of HCFCs per year for XPS uses. In addition, a total of 19 XPS foam enterprises are at different stages of implementation, as follows:

- (a) From the first group of 11 XPS foam enterprises (3,802 mt) that had signed contracts with FECO in March 2013, seven have equipment totally or partially delivered to their plants, two have ordered their equipment and only two have not signed equipment procurement contracts yet;
- (b) From the second group of seven XPS foam enterprises (2,018 mt) that signed contracts with FECO in late 2013, two have ordered their equipment and the remaining five are at different stages of their procurement process; and
- (c) One additional large XPS foam enterprise consuming 1,059 mt of HCFCs signed a contract with FECO in late 2013, signed a contract with suppliers and has partially received equipment.

26. An overall progress in the implementation of the XPS foam sector plan in China is presented in Table 1.

**Table 1. Progress in the implementation of the XPS foam sector plan in China per tranche**

XPS foam enterprises	Number of enterprises	HCFC to be phased out (mt)	Contract signature	Required to stop using HCFCs	Phase-out as share of plan phase-out (%)
<b>Ongoing conversions funded by the first three tranches</b>					
First group	11	3,802	Mar-2013	Mar-2015	38
Second group	7	2,018	Oct-2013 Dec-2013	Oct-2015 Dec-2015	20
Third group	1	1,059	Dec 2013	Dec 2015	11
<b>Sub-total</b>	<b>19</b>	<b>6,879</b>			<b>69</b>
<b>Conversions to be funded from the fourth tranche being requested at the 73<sup>rd</sup> meeting</b>					
Fourth group	7	2,735	End 2014*	End 2016	27
<b>Conversions to be funded by the fifth tranche</b>					
Fifth group	Up to 7	417**	To be determined	To be determined	4
<b>Total</b>	<b>Up to 33</b>	<b>10,031</b>			<b>100</b>

\* Estimated date.

\*\* Additional HCFC reductions required to reach the stage I reduction target of 10,031 mt (592 ODP tonnes). HCFC reductions from the fifth group could be larger.

<sup>2</sup> The XPS foam sector plan of the HPMP for China was approved by the Executive Committee at its 64<sup>th</sup> meeting to reduce HCFC consumption to a sustained level of 2,286 ODP tonnes by 1 January 2015.

27. In addition, FECO published a new invitation to additional XPS foam enterprises to submit project applications, pre-selected five enterprises, and verified their baseline consumption and eligibility. These five enterprises together with other two that had already been verified in 2013 will form the fourth group that will be converted with funds from the fourth tranche.

28. Additional technical assistance activities implemented include:

- (a) Formulation and revision of technical standards in the XPS foam sector, including the drafting of two new standards for panels used in cold storage and civil engineering by March 2014;
- (b) Workshop to discuss the draft technical standards and collect comments from enterprises, and revision of the standards based on feedback received;
- (c) Selection of an independent accounting firm to verify financial documentation and accomplishment of milestones when enterprises request payments;
- (d) Workshop on guidance and technical assistance upon verification of equipment delivery and commissioning; and
- (e) Research on CO<sub>2</sub> technology optimization in XPS foam applications (e.g., thermal conductivity, flame-retardant and additives to improve stability and cell size).

29. The Government of Germany is also implementing a technical assistance activity (not funded by the HPMP) to demonstrate the use of CO<sub>2</sub> as blowing agent in the manufacturing of XPS foam.

#### Level of fund disbursement

30. As of 29 September 2014, of the US \$3,998,000 approved for the third tranche, US \$1,199,400 had been disbursed from UNIDO to FECO, and US \$812,859 (20.33 per cent) had been disbursed by FECO to beneficiaries. Table 2 shows the status of disbursement.

**Table 2. Status of disbursements as of 29 September 2014**

<b>XPS foam sector plan</b>	<b>Agency</b>	<b>Tranche 1 (US \$)</b>	<b>Tranche 2 (US \$)</b>	<b>Tranche 3 (US \$)</b>	<b>Total (%)</b>
Funds approved by the Executive Committee	UNIDO	21,372,000	10,217,000	3,998,000	35,587,000
	Germany	459,023	390,977	-	850,000
	<b>Total</b>	<b>21,831,023</b>	<b>10,607,977</b>	<b>3,998,000</b>	<b>36,437,000</b>
Disbursements from implementing agencies to FECO	UNIDO	19,234,800	5,108,500	1,199,400	25,542,700
	Germany	459,023	390,977	-	850,000
	<b>Total</b>	<b>19,693,823</b>	<b>5,499,477</b>	<b>1,199,400</b>	<b>26,392,700</b>
	Disbursement ratio	90.21%	51.84%	30.00%	72.43%
Disbursements from FECO to beneficiaries	UNIDO	7,258,133	2,461,307	812,859	10,532,299
	Germany	215,190	250,277	-	465,467
	<b>Total</b>	<b>7,473,323</b>	<b>2,711,584</b>	<b>812,859</b>	<b>10,997,766</b>
	Disbursement ratio	34.23%	25.56%	20.33%	30.18%

#### Implementation plan for the fourth tranche of the XPS foam sector plan

31. In 2015, FECO will start the screening process of up to seven additional enterprises consuming up to 1,271 mt (74.99 ODP tonnes) to assess their eligibility and HCFC consumption, and to sign phase-out contracts. Upon selection of the beneficiary enterprises, FECO will verify their baseline equipment, review their implementation plans, assess their procurement capacity, and sign phase-out contracts.

32. Technical assistance activities will continue supporting conversions of enterprises through training workshops on procurement and financial aspects; baseline verification; and monitoring and support on day-to-day operational management. The budget for activities in the fourth tranche is shown in Table 3.

**Table 3. Budget for the fourth tranche of the XPS foam sector plan in China**

Activity	Budget (US \$)
Conversion of XPS foam enterprises to non-HCFC technology	5,918,550
Technical assistance activities and project monitoring	411,450
<b>Total fourth tranche</b>	<b>6,330,000</b>

## SECRETARIAT'S COMMENTS AND RECOMMENDATION

### COMMENTS

#### HCFC consumption and reductions in consumption

33. Consumption of HCFCs in the XPS foam manufacturing sector in 2013 was 41,164 mt (2,376.66 ODP tonnes), which is lower than the maximum allowable consumption established for the same year in the Agreement between the Government of China and the Executive Committee (Table 4). Given that it takes about two years to complete the conversion of enterprises to alternative technologies, the reduction in consumption has been initially achieved through the application of the HCFC production quota and domestic sale quota issued for each producer, as well as HCFC consumption quotas to manufacturing enterprises using more than 100 mt. It is noted that most of the enterprises being assisted will finalize their conversions in 2015, which will make these reductions sustainable.

**Table 4. Consumption of HCFCs in the XPS foam sector\***

XPS foam sector		2009	2010	2011	2012	2013	2014	2015
Consumption**	Mt	41,000	45,100	43,905	44,200	41,164	n/a.	n/a
	ODP t	2,419	2,661	2,583	2,529	2,377	n/a.	n/a
Maximum allowable consumption ***	Mt	n/a.	n/a.	n/a.	n/a.	43,051	43,051	38,746
	ODP t	n/a.	n/a.	n/a.	n/a.	2,540	2,540	2,286
Phase-out target****	Mt	n/a.	n/a.	n/a.	n/a.	5,726		4,305
	ODP t	n/a.	n/a.	n/a.	n/a.	338		254

\* The XPS foam sector in China uses HCFC-22 (in average 60 per cent) and HCFC-142b (in average 40 per cent).

\*\* As per the country programme implementation report.

\*\*\* As per Agreement signed at the 67<sup>th</sup> meeting of the Executive Committee.

#### Level of implementation of activities achieved

34. Currently there are 19 XPS foam enterprises consuming 6,879.51 mt of HCFCs (405.89 ODP tonnes) undertaking conversions, the status of which as of mid-August is summarized in Table 5. UNIDO informed that all the enterprises in this group are progressing in their conversions and does not foresee any delay in their completion.

**Table 5. Overall status of conversions of XPS foam enterprises currently assisted**

Status of implementation	Number of enterprises	HCFC consumption (mt)	Expected date of completion	Share of stage I target (%)
<b>Ongoing conversions</b>				
Equipment partially or totally delivered	8	3,655.75	2015	36
Procurement contracts with suppliers signed	4	1,347.17	2015	13

Preparing procurement	7	1,866.59	2015	19
<b>Sub-total</b>	<b>19</b>	<b>6,879.51</b>		<b>69</b>
<b>Conversions still to be funded</b>				
To be addressed by 4 <sup>th</sup> and 5 <sup>th</sup> tranches	To be determined	3,151.49	To be determined	31
<b>Total</b>		<b>10,031.00</b>		<b>100</b>

35. The Secretariat noted that the first 11 enterprises will be entitled to request HCFC quota allocation for 2015, but only in the amount required until their expected completion date of March 2015. The remaining eight enterprises with ongoing conversions will be entitled to request HCFC quota for 2015 in the amount required until their expected completion date (October to December 2015, depending on the enterprise). By 2016, none of these 19 enterprises will be allowed to use HCFC, representing a sustained reduction of 6,879.51 mt (405.89 ODP tonnes) in HCFC consumption in the XPS foam sector or 69 per cent of the HCFC reduction target for stage I.

36. According to preliminary calculations made by UNIDO based on the sub-contracts signed between FECO and enterprises, the 19 beneficiaries assisted with the first three tranches are providing counterpart funding for US \$6,976,975. The specific expenditures related to this funding and the degree to which they may be incremental or not, are not known.

#### Technical issues

37. The Secretariat noted that most of the enterprises have decided to convert to CO<sub>2</sub> and ethanol technology despite the demonstration project implemented by UNDP to replace the use of HCFC by CO<sub>2</sub> and methyl formate in the manufacturing of XPS foam in Feininger (Nanjing)<sup>3</sup>. UNIDO explained that this is due to technical limitations of using methyl formate, which include the need for additional costs to keep methyl formate in liquid form for injection in ambient temperatures above 32°C (the boiling point of methyl formate), and the lack of remarkable improvements showed by boards produced with CO<sub>2</sub>/methyl formate/ethanol over those produced with CO<sub>2</sub> and ethanol only.

38. UNIDO also clarified that the technical assistance being provided under the HPMP to optimize the technology of CO<sub>2</sub> and ethanol does not overlap with the demonstration project implemented by UNDP as it is a different technology. Upon request from the Secretariat, UNIDO agreed to share the results of the optimization of the CO<sub>2</sub> and ethanol technology with the Secretariat and other Article 5 countries.

#### Level of fund disbursement and interest

39. Based on the financial report submitted, the level of disbursement<sup>4</sup> of funds approved in the third tranche is above 20 per cent and the overall level of disbursement is 30.2 per cent. The Secretariat noted that a large portion of the approved funds is already committed in the contracts between FECO and the enterprises, and payments are being released upon completion of implementation milestones. UNIDO informed that several enterprises have a pending payment upon equipment procurement and delivery to the plants, and that additional disbursements of around US \$4.6 million are expected before January 2015.

40. UNIDO informed the Secretariat that FECO has earned a total of US \$55,737 in interest for the XPS foam sector plan (US \$12,583 as of 31 December 2012 and US \$43,153 as of 31 December 2013<sup>5</sup>). The level of interest for 2012 reported to this meeting is slightly larger than that reported during the submission of the last tranche and subsequently offset at the 71<sup>st</sup> meeting (US \$11,955). Therefore, the

<sup>3</sup> A more detailed review of the results of the demonstration project is presented in document UNEP/OzL.Pro/ExCom/73/17.

<sup>4</sup> As confirmed by decision 71/29(a), achievement of the 20 per cent disbursement threshold provision should be determined in terms of the level of disbursement to final beneficiaries.

<sup>5</sup> These figures are supported by an independent audit covering all sectors submitted by the World Bank.

difference of US \$628 will be added to the value of US \$43,153 (from interest accrued in 2013) to be offset from future transfers to UNIDO.

### Conclusion

41. The Secretariat noted that the XPS foam sector plan continues to progress, with 19 enterprises currently working on their conversions to phase out a consumption of 6,879.51 mt of HCFC-22 and HCFC-142b, which represents around 69 per cent of the HCFC reduction target for stage I of the XPS foam sector. Eleven of these enterprises will stop using HCFCs by March 2015 and the remaining eight by the end of the same year. The remaining reductions of 3,151.49 mt will be achieved by the conversion of enterprises to be assisted with funds from the fourth and fifth tranches. The overall level of disbursement is 30 per cent; however, the majority of funds are already committed in ongoing contracts with enterprises and additional payments to enterprises upon their completion of implementation milestones before the end of 2014. The Secretariat will continue monitoring the level of disbursement from previous tranches by the time of the next tranche request. In view of the progress taking place and the newly identified enterprises to be converted, the Secretariat recommends approval of the fourth tranche.

### **RECOMMENDATION**

42. The Executive Committee may wish to consider:

- (a) Noting the progress report on the implementation of the third tranche of stage I of the extruded polystyrene (XPS) foam sector plan for China;
- (b) Approving the fourth tranche of stage I of the XPS foam sector plan for China and the corresponding 2015 tranche implementation plan, at the amount of US \$6,330,000, plus agency support costs of US \$443,100 for UNIDO; and
- (c) Requesting the Treasurer to offset future transfers to UNIDO by US \$43,782 representing additional interest accrued by the Government of China in 2012 and interest accrued up to 31 December 2013 from funds previously transferred for the implementation of the XPS foam sector plan for China in line with decision 69/24.

## PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

## China

<b>(I) PROJECT TITLE</b>	<b>AGENCY</b>
HCFC phase out plan (stage I) PU foam	World Bank (lead)

<b>(II) LATEST ARTICLE 7 DATA (Annex C Group I)</b>	Year: 2013	15,757.87 (ODP tonnes)
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<b>(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)</b>							<b>Year: 2013</b>		
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-123				11.7	8.5				20.2
HCFC-124					2.6				2.6
HCFC-141b	48.6	5,097.2				465.3			5,611.1
HCFC-142b		732.2		6.5	96.9				835.6
HCFC-22	89.2	1,644.5		5,996.1	2,995.7				10,725.5
HCFC-225ca						0.7			0.7

<b>(IV) CONSUMPTION DATA (ODP tonnes)</b>			
2009 - 2010 baseline:	19,269.0	Starting point for sustained aggregate reductions:	18,865.44
<b>CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)</b>			
Already approved:	3,445.19	Remaining:	15,420.25

<b>(V) BUSINESS PLAN</b>		<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>Total</b>
World Bank	ODS phase-out (ODP tonnes)	51.2	137.3	0	188.5
	Funding (US \$)	4,364,530	11,716,500	0	16,808,630

<b>(VI) PROJECT DATA</b>			<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>Total</b>
Montreal Protocol consumption limits			n/a	n/a	19,269.0	19,269.0	17,342.1	n/a
Maximum allowable consumption (ODP tonnes)			n/a	n/a	18,865.4	18,865.4	16,978.9	n/a
Agreed funding (US \$)	World Bank	Project costs	38,859,000	5,520,000	13,592,000	4,079,000	10,950,000	73,000,000
		Support costs	2,914,000	386,400	951,440	285,530	766,500	5,303,870
Funds approved by ExCom (US \$)		Project costs	38,859,000	5,520,000	13,592,000	0	0	57,971,000
		Support costs	2,914,000	386,400	951,440	0	0	4,251,840
Total funds requested for approval at this meeting (US \$)		Project costs	0	0	0	4,079,000	0	4,079,000
		Support costs	0	0	0	285,530	0	285,530

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

43. On behalf of the Government of China, the World Bank as the designated implementing agency, has submitted to the 73<sup>rd</sup> meeting a request for funding for the fourth tranche of the polyurethane rigid (PU) foam sector plan<sup>6</sup> of stage I of the HCFC phase-out management plan (HPMP), at the amount of US \$4,079,000, plus agency support costs of US \$285,530. The submission includes a progress report on the implementation of the third tranche of the HPMP, together with the tranche implementation plan for 2015.

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

44. The Government of China continued implementing the ODS regulations and policies established in previous tranches, including the quota permits to PU foam enterprises consuming more than 100 metric tonnes (mt) of HCFCs per year.

45. Forty-seven PU foam enterprises with a consumption of 12,114.41 mt (1,332.58 ODP tonnes) have signed subcontracts with FECO and started conversions. Eleven of them have been converted to water-blown technology with an associated phase-out of 1,229.41 mt (135.23 ODP tonnes) of HCFC-141b. The remaining 36 are at different stages of conversion (i.e. procurement of equipment, delivery of equipment, installation and trials).

46. FECO also reviewed the application of seven additional PU foam enterprises with a consumption of 648.54 mt (71.34 ODP tonnes) of HCFC-141b and invited them to submit their project implementation plans in September for evaluation in October. It is expected that funds will be disbursed to these enterprises by November 2014.

47. FECO organized on-site verifications at the six systems houses selected last year for technical assistance to supply foam manufacturers with hydrocarbon (HC)-based pre-blended polyols. Approval of their project implementation plans is expected to lead each systems house to sign a subcontract with FECO for US \$350,000.

48. Additional technical assistance activities implemented include:

- (a) Training workshops for new beneficiary enterprises and systems houses on project implementation procedures, and financial and procurement regulations;
- (b) Performance verifications of the 11 enterprises converted to water-blown technology;
- (c) Preparation of terms of reference for the development of a guideline on safe design and operation of foam plants using HC-based pre-blended polyols, and for the formulation of new standards on foam products in the reefers containers, refrigerators and freezers, and small household appliances sectors using HC-based polyols and other low-global warming potential technologies;
- (d) Preparation of a study by the China Household Electrical Appliance Association (CHEAA) on how a ban on HCFC-141b would affect the three sectors above and preparation of a draft notice of the ban; and

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<sup>6</sup> The PU foam sector plan of the HPMP for China was approved by the Executive Committee at its 64<sup>th</sup> meeting to reduce HCFC consumption to a sustained level of 4,449.60 ODP tonnes by 1 January 2015.



- (e) Selection of an implementation support agency (ISA) to assist FECO in the day-to-day operational management, pre-review project documents of foam enterprises, and providing supervision, commissioning and on-site verification.

#### Level of fund disbursement

49. As of 29 September 2014, of the US \$13,592,000 approved for the third tranche, US \$6,796,000 had been disbursed from the World Bank to FECO, and US \$2,728,500 (20.1 per cent) had been disbursed by FECO to beneficiaries. Table 1 presents the status of total disbursement.

**Table 1. Status of disbursements of the PU foam sector plan as of 29 September 2014**

PU foam sector plan		Tranche 1	Tranche 2	Tranche 3	Total
Funds approved		38,859,000	5,520,000	13,592,000	57,971,000
Disbursement from the World Bank to FECO	Amount (US \$)	31,087,200	4,416,000	6,796,000	42,299,200
	Percentage	80.0%	80.0%	50.0%	73.0%
Disbursement from FECO to beneficiaries	Amount (US \$)	11,048,928	2,134,682	2,728,500	15,912,110
	Percentage	28.4%	38.7%	20.1%	27.4%

#### Implementation plan for the fourth tranche of the PU foam sector plan

50. FECO will sign subcontracts with an additional seven PU foam enterprises at an estimated value of US \$3,520,000. Technical assistance activities will continue to be provided including training workshops on procurement, verification and financial aspects for selected enterprises; verification of consumption for all new projects; project implementation status verification for disbursements; creation of technical support systems to identify, test and adopt potential foam blowing substitutes for small and medium-size enterprises; technical and financial assistance at the provincial level for enterprises that do not sign HCFC-141b phase-out contracts before 2015; and support through the ISA on the day-to-day operational management. The budget for activities in the fourth tranche is shown in Table 2 below.

**Table 2. Budget for the fourth tranche of the PU foam sector plan in China**

Activity	Budget (US \$)
Conversion of PU foam enterprises to non-HCFC technology	3,520,177
Technical assistance activities	354,873
Project monitoring	203,950
<b>Total fourth tranche</b>	<b>4,079,000</b>

## SECRETARIAT'S COMMENTS AND RECOMMENDATION

### COMMENTS

#### HCFC consumption and reductions in consumption

51. Consumption of HCFC-141b in the PU foam manufacturing sector in 2013 was 46,338.49 mt (5,097.23 ODP tonnes), which is lower than the maximum allowable consumption established for the same year in the Agreement between the Government of China and the Executive Committee (Table 3). Given that it takes about two years to complete the conversion of enterprises to alternative technologies, the reduction in consumption has been achieved through the application of the HCFC production quota and domestic sale quota issued for each producer, as well as the HCFC consumption quotas issued to manufacturing enterprises using more than 100 mt per year. These reductions will become sustained as the enterprises complete their conversions and stop using HCFC-141b. So far, 11 PU foam enterprises have already phased out 1,229.41 mt (135.23 ODP tonnes) of HCFC-141b; another enterprise have stopped purchasing 239.31 mt (26.32 ODP tonnes); and additional 20 enterprises will complete their conversion projects and stop using 6,288.64 mt (691.75 ODP tonnes) in 2015. This represents 52 per cent

of the reduction target for stage I of the PU foam sector plan. A complete overview of progress is provided in the next section.

**Table 3. HCFC-141b consumption and targets for the PU foam sector**

PU foam sector		2009	2010	2011	2012	2013	2014	2015
Consumption*	Mt	45,971	52,069	63,570	59,109	46,338		
	ODP t	5,056.8	5,727.5	6,992.7	6,501.9	5,097.2		
Maximum allowable consumption*	Mt	n/a	n/a	n/a	n/a	49,018	49,018	40,451
	ODP t	n/a	n/a	n/a	n/a	5,392.2	5,392.2	4,449.6
Phase-out target**	Mt	n/a	n/a	n/a	n/a	6,116		8,569
	ODP t	n/a	n/a	n/a	n/a	672.8		942.6

\* As per the country programme implementation report.

\*\* As per Agreement signed at the 67<sup>th</sup> meeting of the Executive Committee.

#### Level of implementation of activities achieved

52. The status of conversions of the 47 currently assisted enterprises as of mid-August is summarized in Table 4.

**Table 4. Overall status of conversions of PU foam enterprises currently assisted**

Status of implementation	Number of enterprises	HCFC consumption (mt)	Expected date of completion	Share of stage I target of (%)
<b>Ongoing conversions</b>				
Complete phase-out of HCFC	11	1,229.41	2014	8
Stopped HCFC purchase	1	239.31	2015	2
Equipment commissioned	3	415.52	2015	3
Equipment procured	10	2,732.20	2015	19
Preparation of procurement	7	3,140.92	2015	21
	15	4,357.05	2016	30
<b>Sub-total</b>	<b>47</b>	<b>12,114.41</b>		<b>82</b>
<b>Conversions still to be funded</b>				
Verified enterprises ready to start conversions	7	648.54	2016	4
Additional enterprises to be addressed	To be determined	1,922.05*	2016	13
<b>Total</b>		<b>14,685.00</b>		

\* Estimated additional reductions to achieve stage I target.

53. PU foam enterprises being converted are required to stop using HCFC-141b by the end of their contract with FEEO, which is normally 24 months after signing. Accordingly, it is estimated that the 47 PU foam enterprises will phase out 12,114.41 mt of HCFC-141b (82 per cent of the HCFC reduction target for stage I) by the end of 2016.

54. According to preliminary and unverified information collected by FEEO from the 47 beneficiary enterprises, their counterpart funding amounts to US \$19,341,911. The specific expenditures related to this funding and the degree to which they may be incremental or not, are not known.

#### Technical issues

55. The Secretariat notes that through two demonstration projects previously implemented, the World Bank was able to verify viable and safe production of HC-based pre-blended polyols by two systems houses<sup>7</sup>; and viable use of these polyols in PU foam for solar water heaters and small household appliances. The World Bank explained that the information and lessons learned from the demonstration

<sup>7</sup> Guangdong Wanhua Rongwei Polyurethane and Jiangsu Huaiyin Huihuang Solar Co. Ltd.

projects in terms of investment costs, safe delivery distance, proper handling and usage of HC pre-blended polyol, and shelf life, will be used in designing technical assistance activities for six systems houses to increase access to HC-based pre-blended polyol supply to small enterprises, especially in the reefer container, freezer, and small appliance sub-sectors. The Secretariat considers that the safe introduction of this technology will indeed assist a larger number of enterprises that cannot establish HC-storage and mixing stations.

#### Level of fund disbursement and interest

56. Based on the financial report submitted, the level of disbursement<sup>8</sup> of funds approved in the third tranche is above 20 per cent and the overall level of disbursement is 27.4 per cent. The Secretariat noted that all approved funds are already committed in contracts between FECO and the enterprises, and payments are being released upon completion of agreed implementation milestones. The World Bank explained that the current disbursement rate to enterprises varies from 10 to 70 per cent depending on the size of the contracts. Larger enterprises with several equipment procurement contracts have lower disbursement rates as it requires longer time for them to reach the milestone to receive their second payment. Smaller enterprises (with limited procurement activities) reach the condition for payments within a shorter time period, and therefore have higher disbursement rates. The disbursement schedule designed by FECO is aimed at managing the risk of disbursing a large sum of funds only to have some enterprises, larger enterprises in particular, decide to cancel contracts.

57. In line with decision 69/24(b)(ii) that requests implementing agencies to report on interest accrued by China on funds transferred for the HPMP in the tranche implementation reports, the World Bank informed the Secretariat that FECO has earned a total of US \$5,195 in interest from funds transferred for the PU foam sector plan as of 31 December 2013. The World Bank submitted an independent audit report with the interest accrued for all sectors in the HPMP for China which indicates that no interest was accrued in 2012.

#### Conclusion

58. The Secretariat noted that the PU foam sector plan continues to progress as planned. A total of 47 enterprises are in different stages of conversions and will result in the phase-out of 12,114.41 mt (1,332.58 ODP tonnes) of HCFC-141b, or 82 per cent of the HCFC reduction target for stage I of the PU foam sector plan. Eleven of them have already phased out 1,229.41 mt (135.23 ODP tonnes) of HCFC-141b; another one is no longer purchasing 239.31 mt (26.32 ODP tonnes); and additional 20 will phase out 6,288.64 mt (691.75 ODP tonnes) between 2015 and 2016. The remaining reductions will take place by the enterprises assisted in the next two tranches. It is expected that FECO will undertake additional payments to enterprises upon their completion of implementation milestones. The Secretariat will continue monitoring the level of disbursement from previous tranches by the time of the next tranche request. In view of the progress taking place and the newly identified enterprises, the Secretariat recommends approval of the fourth tranche.

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<sup>8</sup>As confirmed by decision 71/29(a), achievement of the 20 per cent disbursement threshold provision should be determined in terms of the level of disbursement to final beneficiaries.

## RECOMMENDATION

59. The Executive Committee may wish to consider:
- (a) Noting the progress report on the implementation of the third tranche of stage I of the polyurethane (PU) foam sector plan for China;
  - (b) Approving the fourth tranche of stage I of the PU foam sector plan for China and the corresponding 2015 tranche implementation plan, at the amount of US \$4,079,000, plus agency support costs of US \$285,530 for the World Bank; and
  - (c) Requesting the Treasurer to offset future transfers to the World Bank by US \$5,195 representing interest accrued by the Government of China up to 31 December 2013 from funds previously transferred for the implementation of the PU foam sector plan for China as per decision 69/24.

**PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS**  
**China**

<b>(I) PROJECT TITLE</b>	<b>AGENCY</b>
HCFC phase out plan (stage I) industrial, commercial and air conditioning (ICR)	UNDP (lead)

<b>(II) LATEST ARTICLE 7 DATA (Annex C Group I)</b>	Year: 2013	15,757.87 (ODP tonnes)
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<b>(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)</b>								<b>Year: 2013</b>	
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-123				11.7	8.5				20.2
HCFC-124					2.6				2.6
HCFC-133									
HCFC-141b	48.6	5,097.2				465.3			5,611.1
HCFC-142									
HCFC-142b		732.2		6.5	96.9				835.6
HCFC-22	89.2	1,644.5		5,996.1	2,995.7				10,725.5
HCFC-225ca						0.7			0.7
HCFC-225cb									
<b>(IV) CONSUMPTION DATA (ODP tonnes)</b>									
2009 - 2010 baseline:		19,269.0		Starting point for sustained aggregate reductions:				18,865.44	
<b>CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)</b>									
Already approved:		3,445.19		Remaining:				15,420.25	

<b>(V) BUSINESS PLAN</b>		<b>2014</b>	<b>2015</b>	<b>Total</b>
UNDP	ODS phase-out (ODP tonnes)	138.9	114.74	253.64
	Funding (US \$)	11,850,250	9,790,500	21,640,750

<b>(VI) PROJECT DATA</b>			<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>Total</b>
Montreal Protocol consumption limits			n/a	n/a	142,289.0	134,883.0	141,778.7	n/a
Maximum allowable consumption (ODP tonnes)			n/a	n/a	125,850.2	125,850.2	112,479.8	n/a
Agreed funding (US \$)	UNDP	Project costs	25,380,000	6,900,000	8,495,000	11,075,000	9,150,000	61,000,000
		Support costs	1,903,500	483,000	594,650	775,250	640,500	4,396,900
Funds approved by ExCom (US \$)		Project costs	25,380,000	6,900,000	8,495,000	0	0	40,775,000
		Support costs	1,903,500	483,000	594,650	0	0	2,981,150
Total funds requested for approval at this meeting (US \$)		Project costs				11,075,000		11,075,000
		Support costs				775,250		775,250

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

60. On behalf of the Government of China, UNDP as the designated agency, has submitted to the 73<sup>rd</sup> meeting of the Executive Committee a request for funding for the fourth tranche of the industrial and commercial refrigeration and air conditioning (ICR) sector plan<sup>9</sup> of stage I of the HCFC phase-out management plan (HPMP), at the amount of US \$11,075,000 plus agency support costs of US \$775,250. The submission includes the progress report on the implementation of the third tranche of the ICR sector plan together with the tranche implementation plan for 2015.

### Report on the implementation of the third tranche of the ICR sector plan

61. The reduction in HCFC consumption was mainly achieved through the conversion of enterprises that consume HCFC-22 and the phase-out of HCFCs in enterprises owned by non-Article 5 countries (through quota control). A number of group projects contribute to the reduction of HCFC consumption in stage I. The overall progress of these phase-out projects is shown in Table 1.

**Table 1. Overall progress of the phase-out projects in the ICR sector in China**

No.	Phase-out project	Phase-out of HCFC-22 (mt)	Status	Percentage in consumption (%)
1	Enterprises owned by non-Article 5 countries	167.27	Controlled by quota	2.0
2	Demonstration projects at Qinghua Tongfang and Yantai Moon	311.9	Completed	3.7
3	Conversions of nine enterprises (that have contracts signed with FECO)	5,807.5	Stopped using HCFC-22, conversion is progressing	68.7
4	Conversion of four enterprises identified in the third tranche	1,190.62	Contracts to be signed in 2014	14.1
5	Remaining tonnage to be identified in 2014 and early 2015	972.71		11.5
<b>Total phase-out</b>		<b>8,450</b>		<b>100.00</b>

### Enterprise conversion

62. The conversions of the enterprises are progressing as follows:

- (a) For the conversion of 15 production lines in six enterprises funded by the first and second tranches, 14 lines in five enterprises have completed the design of conversion of production lines and are at the stage of converting heat exchangers; one compressor manufacturer is at the stage of signing contracts for purchasing devices and components of the compressor assembly line;
- (b) For the five production lines in three enterprises funded by the third tranche, two lines are constructing prototypes, two lines have signed contracts for purchasing devices and components of heat exchanger; the compressor line is conducting prototyping and converting test room;
- (c) During the third tranche, three production lines were verified with total consumption of 604.32 mt. Contracts with two enterprises were prepared and expected to be signed in September 2014; and

<sup>9</sup> The ICR sector plan of the China HPMP was approved by the Executive Committee at its 64<sup>th</sup> meeting to reduce HCFC consumption to a sustained level of 2,162.5 ODP tonnes by 1 January 2015.

- (d) Four additional equipment manufacturers and two compressor enterprises submitted proposals for conversion. Baseline information of the production lines is being verified. Conversion of these production capacities will be undertaken during the fourth tranche.

### Technology selections in conversion projects

63. A number of substitutes were used in different applications of the ICR sector as shown in Table 2. The main alternative technologies for stage I has been HFC-32. The use of HFC-410 was due to lack of suitable low-GWP technology for the applications and the compelling need to comply with the reduction target. The Government of China is exploring more options for conversion to non-HFC based technology through technology promotion and a number of enabling activities. It is expected that more enterprises will choose HFC-32, CO<sub>2</sub> and NH<sub>3</sub> for conversion during the fourth tranche.

**Table 2. Technology selection in conversion projects\***

Sub-sector	HCFC-22 consumption by technology (mt)						Number of lines by technology					
	R-32	R-410	NH <sub>3</sub>	R134a	CO <sub>2</sub>	Total	R-32	R-410	NH <sub>3</sub>	R134a	CO <sub>2</sub>	Total
Unitary air-conditioning	2,517.90	1,345.97				3,863.87	5	3				8
Industrial and commercial water chiller (heat pump)	1,070.84		95.30	33.57		1,199.71	6		1	1		8
Multi-connected air-conditioning units		814.83				814.83		2				2
Small-sized water chiller (heat pump)	331.66					331.66	1					1
Condensing unit				31.77		31.77				1		1
Piston compressors						0.00	1				1	2
<b>Total</b>	<b>3,920.40</b>	<b>2,160.80</b>	<b>95.30</b>	<b>65.34</b>		<b>6,241.83</b>	<b>13</b>	<b>5</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>22</b>
Percentage	63%	35%	1%	1%	0%	100%	59%	23%	4.5%	9%	4.5%	100%

\*Based on the conversion of production lines for which technologies have been selected.

### Technical assistance activities

64. Several technical assistance activities were undertaken to enable the smooth implementation of enterprise conversion activities. These include activities to promote alternative technologies; research and studies on the applicability of alternative technologies; and revision of standards to address flammability of alternative refrigerants. The progress of various components is described as follows.

- (a) A training workshop was conducted to facilitate the implementation of conversion projects. One seminar was organized to promote carbon dioxide (CO<sub>2</sub>) technology in the ICR sector. An exhibition on refrigeration technology was held and alternative technologies with low GWP were displayed;
- (b) The studies on the applicability of HFC-32 and natural refrigerants in ICR sector are ongoing. The contracts were signed in December 2013 with two bidders formed by multiple organizations including universities, research institute, and enterprises. Co-ordination meetings were held in May 2014 to exchange preliminary research results;
- (c) Revision of technical standards to include flammable refrigerants is progressing. The contracts for the revision of product standards for unitary air conditioners, water chilling (heat pump) packages using the vapour compression cycle and ducted air-conditioning units were signed in December 2013. The first drafts were completed and a workshop

was held in March 2014. The revised drafts included HFC-32 and other alternative refrigerants. The review of safety and environmental requirements for refrigeration systems and heat pumps using flammable refrigerants has been initiated; and

- (d) A demonstration project for technology promotion was initiated to pilot the use of HFC-32, ammonia (NH<sub>3</sub>), CO<sub>2</sub> and HFC-134a refrigerants in heat pumps for room heating. The indirect impact of the piloted technologies is expected to avoid installation of about 37,750 HCFC-22 based air-conditioners and achieve a potential reduction of 37.75 mt of HCFC-22. The project included ten pilot sub-projects for different refrigerants and applications. The contracts for these are expected to be signed in September 2014.

#### Status of disbursement

65. The disbursement status as of 28 September 2014 is shown in Table 3.

**Table 3. Financial report of the third tranche of the HPMP (US \$)**

<b>ICR sector plan</b>	<b>Tranche 1</b>	<b>Tranche 2</b>	<b>Tranche 3</b>	<b>Total</b>
Funds approved	25,380,000	6,900,000	8,495,000	40,775,000
Disbursement UNDP to FECO	25,380,000	6,900,000	5,897,061	38,177,061
Disbursement UNDP to FECO (%)	100	100	69	94
Disbursement FECO to final beneficiaries	8,770,716	3,148,500	1,978,371	13,897,587
Disbursement FECO to final beneficiaries (%)	35	46	23	34

#### Tranche implementation plan for 2015

66. The total budget for the implementation of the fourth tranche of the ICR sector plan in China amounts to US \$11,075,000, with a breakdown as follows:

- (a) Conversions of additional enterprises with an estimated manufacturing capacity of 1,559 mt (US \$8.7 million);
- (b) Training workshop on project implementation mechanism for personnel involved in conversion projects (US \$100,000);
- (c) Revision of technical standards for the use of CO<sub>2</sub> in refrigeration and heat pumps applications (US \$200,000);
- (d) Workshops for the review and dissemination of environmental-friendly technologies in the ICR sector (US \$500,000);
- (e) Technical assistance to address the obstacles and technological problems encountered in the process of conversion to alternative refrigerants (US \$800,000); and
- (f) Monitoring and management of project activities in the ICR sector (US \$775,000).



## SECRETARIAT'S COMMENTS AND RECOMMENDATION

## COMMENTS

Reductions in HCFC consumption

67. The consumption of HCFCs in the ICR sector in 2013 was 40,805 mt (2,224.8 ODP tonnes), which is lower than the maximum allowable consumption established in the Agreement between the Government of China and the Executive Committee for 2013. Although most conversion projects will only be completed in 2015, all of the enterprises stopped consuming HCFCs once the contracts for conversions were signed. As shown in Table 4 the total phase-out of HCFC-22 through projects already completed and that in progress amounts to 336.57 ODP tonnes, which exceeded the required reduction of 224.5 ODP tonnes by 2013. The phase-out of HCFCs in enterprises owned by non-Article 5 countries is controlled through quota system.

**Table 4. Reduction in HCFC consumption in the ICR sector**

	2011	2012	2013	2014	2015
Maximum allowable consumption(ODP t)	n/a	n/a	2,402.80	2,402.80	2,162.50
Maximum allowable consumption (mt)	n/a	n/a	43,925	43,925	39,320
Actual consumption in ICR sector (ODP t)*	2,651.72	2,610.47	2,224.80		
Actual consumption in ICR sector (mt)*	48,213	47,463	40,805		
Reduction target set in HPMP (ODP t)	n/a	n/a	224.50		240.30
Reduction target set in HPMP (mt)	n/a	n/a	4,080		4,370
Actual reduction achieved (ODP t)			336.57		
Actual reduction achieved (mt)			6,119		

\*The consumption in the ICR sector is based on estimated amount as actual amounts cannot be accurately verified.

Progress achieved in conversion of enterprises

68. The overall progress of conversion projects is shown in Table 5. Project milestone were designed and linked to payments. It is expected that conversion of all 20 production lines will be completed in 2015.

**Table 5. Progress of conversion of 20 production lines in nine enterprises**

Name of enterprise	No. of lines	HCFC-22 consumption (mt)	Progress of conversion	Contract amount (US \$)	Payment to beneficiaries (US \$)***
Refrigeration and air-conditioning enterprises					
Guandong Gree	5	2,607	Milestone 4*	14,662,000	2,300,000
Dunan Environment	2	160		1,033,258	400,000
Guandong Midea	4	2,239		7,580,000	856,400
Shandong Geruide	2	106		479,859	148,000
Qingdao Haier	1	396		2,355,002	375,000
Nanjing Tianjia	2	172		754,900	270,000
Wuhan Xinshijie	2	127	Milestone 3	618,150	94,902
Compressor enterprises					
Jiangsu Xuemei	1	-	Milestone 3**	1,600,000	480,000
Zhejiang Shangji	1	-	Milestone 4	1,600,000	960,000
<b>Total</b>	<b>20</b>	<b>5,807.5</b>		<b>30,683,169.0</b>	<b>5,884,302.0</b>

\*Milestones for equipment manufacturing were defined and linked to payment as follows: 1. contract signed (20%); 2. design for new product and conversion (20%); 3. contract for components of heat exchanger and test room (30%); 4. prototypes constructed and test room converted (15%); and 5. conversion, trial and training completed, project accepted (5%).

\*\*Milestones for compressor manufacturing were defined and linked to payment as follows: 1. contract signed (20%); 2. design for new product; 3. line conversion and test room (40%); 4. completion of prototypes and test room (25%); and 5. completion of conversion of assembly line, trial and training, project accepted (15%).

\*\*\*The disbursement data is as of July 2014.

Level of fund disbursement and interest

69. The Secretariat noted that the levels of payment to enterprises were significantly lower as compared to the progress achieved in conversion. UNDP explained that the achievements of milestones need to be verified before payment can be made. It took a longer time to organize the audit and fund transfer. Although the payments have not been made, funds have been committed to payments for enterprise conversion. As indicated by UNDP, the conversion of eight production lines will be completed in 2014 with an associated payment of US \$13,333,859.

70. From the financial audit report submitted to the Secretariat, the interest accrued from the funding transferred to FECO by UNDP for the implementation of the ICR sector plan (as of 31 December 2013) is US \$87,093. This will be offset against the fourth tranche.

Conclusion

71. The implementation of the ICR sector plan progressed well. The conversions of 20 production lines will be gradually completed from November 2014 to September 2015. Manufacturing capacity identified for conversion will be completed in 12 months. New production capacity will be identified and converted during the 2015 tranche to phase out the remaining amount of HCFCs in order to achieve the reduction target for stage I. Technical assistance projects, including standard revisions, technology promotion, training and technology dissemination, will continue to be implemented to assist in the adaptation, successive marketing and commercialization of HCFC-free refrigeration equipment in China and the global market.

72. Licensing and quota system has been implemented to control the overall compliance in the ICR sector. HCFCs are no longer used in enterprises that signed contracts for conversion. The consumption of 6,119.4 mt has already been phased out and 1,357.5 mt is to be phased out by the end of 2014. The HCFC consumption in the ICR sector has met the control target set in the Agreement for 2013. The remaining consumption of 972.71 mt will be phased out in 2015. In view of the progress made and the overall disbursement rate of 34 per cent, the Secretariat recommends approval of the fourth tranche of the ICR sector plan for China.

**RECOMMENDATION**

73. The Executive Committee may wish to consider:

- (a) Noting the progress report on the implementation of the third tranche of stage I of the industrial and commercial refrigeration and air conditioning (ICR) sector plan for China;
- (b) Approving the fourth tranche of stage I of the ICR sector plan for China, and the corresponding 2015 tranche implementation plan, at the amount of US \$11,075,000 plus agency support costs of US \$775,250 for UNDP; and
- (c) Requesting the Treasurer to offset future transfers to UNDP by US \$87,093 representing interest accrued by the Government of China up to 31 December 2013 from funds previously transferred for the implementation of the ICR sector plan as per decision 69/24.

**PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS**
**China**

<b>(I) PROJECT TITLE</b>				<b>AGENCY</b>					
HCFC phase out plan (stage I) room air conditioning (RAC)				UNIDO (lead)					
<b>(II) LATEST ARTICLE 7 DATA (Annex C Group I)</b>				Year: 2013		15,757.87 (ODP tonnes)			
<b>(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)</b>							<b>Year: 2013</b>		
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-123				11.7	8.5				20.2
HCFC-124					2.6				2.6
HCFC-133									
HCFC-141b	48.6	5,097.2				465.3			5,611.1
HCFC-142									
HCFC-142b		732.2		6.5	96.9				835.6
HCFC-22	89.2	1,644.5		5,996.1	2,995.7				10,725.5
HCFC-225ca						0.7			0.7
HCFC-225cb									
<b>(IV) CONSUMPTION DATA (ODP tonnes)</b>									
2009 - 2010 baseline:		19,269.0		Starting point for sustained aggregate reductions:				18,865.44	
<b>CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)</b>									
Already approved:		3,445.19		Remaining:				15,420.25	
<b>(V) BUSINESS PLAN</b>				<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>Total</b>		
UNIDO	ODS phase-out (ODP tonnes)			120.7	141.1	0.0	261.8		
	Funding (US \$)			10,298,750	12,037,500	0.0	22,336,250		
<b>(VI) PROJECT DATA</b>				<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>Total</b>
Montreal Protocol consumption limits				n/a	n/a	19,408.8	19,408.8	17,468.0	n/a
Maximum allowable consumption (ODP tonnes)				n/a	n/a	4,109.0	4,109.0	3,698.0	n/a
Agreed funding (US \$)	UNIDO	Project costs		36,430,000	9,200,000	8,495,000	9,625,000	11,250,000	75,000,000
		Support costs		2,732,250	644,000	594,650	673,750	787,500	5,432,150
Funds approved by ExCom (US \$)		Project costs		36,430,000	9,200,000	8,495,000		0	54,125,000
		Support costs		2,732,250	644,000	594,650		0	3,970,900
Total funds requested for approval at this meeting (US \$)		Project costs		0	0	0	9,625,000	0	9,625,000
		Support costs		0	0	0	673,750	0	673,750
<b>Secretariat's recommendation:</b>				For individual consideration					

## PROJECT DESCRIPTION

74. On behalf of the Government of China, UNIDO as the designated implementing agency, has submitted to the 73<sup>rd</sup> meeting a request for funding for the fourth tranche of the room air-conditioner manufacturing (RAC) sector plan<sup>10</sup> of stage I of the HCFC phase-out management plan (HPMP) for China, at the amount of US \$9,625,000, plus agency support costs of US \$673,750. The submission includes a progress report on the implementation of the third tranche of the HPMP together with the tranche implementation plan for 2015.

### Report on the implementation of the third tranche of the RAC sector plan

#### *Policy development*

75. The Government of China continued implementing the ODS regulations and policies established in previous tranches, including the issuance of quota permits to enterprises consuming more than 100 metric tonnes (mt) of HCFCs per year for all applications, including room air-conditioning.

#### *Implementation of investment projects*

76. A total of 17 RAC enterprises were identified during the first three tranches of the HPMP, and are at different stages of implementation, as follows:

- (a) Seven enterprises with nine production lines and actual consumption of 3,741 mt (205.7 ODP tonnes) of HCFC-22 are converting to HC-290 (propane). Four of these are completing their bidding process for equipment, two had their main equipment delivered, and one had completed the conversion resulting in the phase out 246.50 mt (13.5 ODP tonnes) of HCFC-22;
- (b) Seven enterprises with eight production lines and actual consumption of 2,962 mt of HCFC-22 are converting their manufacturing to R-410a. Two of these have had their main equipment delivered, and five have completed the conversion of six lines resulting in the phase out 2,826.60 mt (155.5 ODP tonnes) of HCFC-22;
- (c) Three compressor manufacturing enterprises with a total annual production of over 5.3 million units are converting to HC-290. Two of these have completed the bidding process for equipment, and one had all main equipment delivered.

77. Three additional enterprises with four production lines signed contracts as part of the third tranche with an associated consumption of 1,353 mt (74.4 ODP tonnes) of HCFC-22, and will convert to HC-290. Only the incremental capital costs (ICC) of these lines are included in the third tranche, the incremental operating costs (IOCs) will be committed under subsequent tranches.

78. A new mechanism for determining IOC was set up to encourage enterprises to use HC-290 in their conversions. Under this new mechanism, IOC per unit will be paid at a higher level during the earlier stages of market development, then reduced at the later stages, ensuring that the total IOC will be maintained at the same amount.

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<sup>10</sup> The RAC sector plan of the China HPMP 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 1 January 2015.

*Technical Assistance*

79. The following technical assistance activities have been completed:

- (a) An exhibition organized by the Foreign Economic Cooperation Office (FECO) / the Ministry of Environmental Protection (MEP) with the participation of manufacturers of low-carbon air-conditioning; and an international workshop on alternative technologies for HCFC-22 in the RAC sector were conducted. Developments in the use of HC-290 and issues related to improvements in performance, safety measures and types of compressors were discussed;
- (b) Continued research into technology required for hydrocarbon air-conditioners, assessing heating performance improvements, refrigerant distribution properties, safety measures, compressor properties, and charge optimization. All major manufacturers in the RAC sector in China are involved in these research efforts; the results are expected to be available by June 2015;
- (c) FECO/MEP has cooperated with China Household Electric Appliances Association (CHEAA) to establish three standards to ensure the safe use of HC-290 in the RAC sector. These include technical safety codes for using flammable refrigerants in the household and in the air-conditioners manufacturing industry; requirements for transportation of room air-conditioners charged with flammable refrigerants; and technical safety codes for servicing equipment using flammable refrigerants. A draft standard for safety codes for servicing was approved and adoption envisaged for 2015; while the drafts of two other standards are being completed with adoption targeted for the end of 2015; and
- (d) Continued development of the functionality and structure of a management information system (MIS) that will monitor quota management and project management, in line with the government's policy for quota permits, as well as to monitor HCFC consumption in the sector.

Level of fund disbursement

80. As of 29 September 2014, of the US \$8,495,000 approved for the third tranche, US \$2,530,200 had been disbursed from UNIDO to FECO, and US \$1,760,674 (21 per cent) had been disbursed by FECO to beneficiaries. Table 1 shows the status of disbursement.

**Table 1. Status of disbursements (US \$)**

<b>RAC sector</b>	<b>Tranche 1</b>	<b>Tranche 2</b>	<b>Tranche 3</b>	<b>Total</b>
Funds approved by the Executive Committee	36,430,000	9,200,000	8,495,000	54,125,000
Disbursement from UNIDO to FECO	18,215,000	4,600,000	2,530,200	25,345,200
Disbursement ratio (%)	50	50	27.7	46.82
Disbursement from FECO to beneficiaries	11,069,345	2,857,251	1,760,674	15,687,270
Disbursement ratio (%)	30	31	21	29

Technical verification

81. UNIDO submitted a technical verification report to verify the completed conversions in three enterprises (Changhong Mianyang, Chongqing Gree and TCL Wuhan), in line with paragraph 5(b)(i) of the Agreement between the Government of China and the Executive Committee.

Tranche implementation plan for 2015

82. The tranche implementation plan foresees specific policy and government activities related to the RAC sector. Work will continue to develop substitute alternatives as well as an incentive mechanism to encourage the use of environmentally friendly substitutes to RAC manufacturing sector, and facilitate further market penetration of HC-290 air-conditioners through the application of the new IOC mechanism. Training of personnel will continue, and consultancy services will be contracted as needed. The HCFC quota management system for RAC manufacturers and the MIS will be finalized to establish a quota for 2015 of no more than 90 per cent of the baseline consumption for each manufacturer. Meetings will be held to provide information on new trends and experiences with the use of HC-290 and other low-global warming potential (GWP) alternatives. The study on the energy efficiency standards of different refrigerants will be carried out and further research will be undertaken on the environmental impact of appliances with different refrigerants under different energy efficiency ratios by establishing environmental impact assessment methods in the whole lifecycle of the equipment. CHEAA will continue to provide assistance and support on the implementation and management of the project.

83. FECO/MEP will continue to select suitable enterprises in the RAC sector for conversion projects, and contracts are expected to be signed for the phase out of at least 800 mt (44.0 ODP tonnes) of HCFC-22 in the RAC sector no later than April 2015 for at most five enterprises. UNIDO provided information on potential candidates as part of the proposal. The activities and budget for the fourth tranche are presented in Table 2.

**Table 2. Budget for the fourth tranche of the RAC sector plan in China**

<b>Activity</b>	<b>Budget (US \$)</b>
Conversion of at most five RAC enterprises to phase out at least 800 mt of HCFC-22	7,500,000
Technical assistance activities, research and development	836,000
Project implementation and management	818,125
Contingencies	470,875
<b>Total</b>	<b>9,625,000</b>

**SECRETARIAT'S COMMENT AND RECOMMENDATION****COMMENTS**HCFC consumption and reductions in consumption

84. Table 3 presents HCFC-22 consumption in the RAC sector<sup>11</sup>. The consumption in 2013 was 68,900 mt (3,789.5 ODP tonnes), and is lower than the maximum allowable consumption of 74,700 mt (4,108.5 ODP tonnes) for the RAC sector. This reduction may be attributed to the completed conversions in six enterprises in the RAC sector with an associated reduction of 3,073 mt (169 ODP tonnes) of HCFC-22.

<sup>11</sup> These figures are estimates since the distribution of HCFC-22 to different sectors cannot be monitored with accuracy

**Table 3. Consumption of HCFC in the RAC sector**

RAC sector		2009	2010	2011	2012	2013	2014	2015
Actual consumption*	mt	71,500	77,900	74,700	72,600	68,900	n/a	n/a
	ODP tonnes	3,932.5	4,284.5	4,108.5	3,993.0	3,789.5	n/a	n/a
Maximum allowable consumption**	mt	n/a.	n/a.	n/a.	n/a.	74,700	74,700	67,230
	ODP tonnes	n/a.	n/a.	n/a.	n/a.	4,108.5	4,108.5	3,697.7
Phase-out target	mt	n/a.	n/a.	n/a.	n/a.	3,200	0	7,470**
	ODP tonnes					176	0	410.9**

\* As per the country programme implementation report.

\*\* As per Agreement with the Executive Committee.

85. Currently there are total of 20 RAC enterprises with an overall consumption of 8,056.1 mt of HCFCs (443.08 ODP tonnes), and three compressor manufacturing enterprises undertaking conversions, the status of which as of mid-August 2014 is summarized in Table 4.

**Table 4. Status of conversions of RAC enterprises currently assisted**

Status of implementation	Enterprises	HCFC consumption (mt)	Expected date of completion
Enterprises converted	6	3,073.10	2 in October 2013 2 in April 2014 2 in October 2014*
Equipment partially or totally delivered	7	2,589.7	December 2014
Procurement plan completed and bidding started	3	672.6	July 2015
Bidding completed	3	1,191.10	July 2015
Contract signed	1	529.6	July 2015
<b>Total</b>	<b>20</b>	<b>8,056.1</b>	

\*awaiting final verification by local EPB.

#### Level of implementation of activities achieved

86. Contracts have been signed for the conversion of production lines relating to 85 per cent of the consumption to be phased out and for all of those conversions the procurement plan has been finalised. The bidding process has been initiated for 60 per cent of the consumption to be phased out and contracts with suppliers have been concluded for 24 per cent of the phase-out.

87. In responding to queries regarding HC-290 conversions, UNIDO reported that these are progressing well and that there is an increased interest in these products from various markets and it is anticipated that a few thousand units may begin to be sold in 2015. This is, however, contingent upon putting the necessary framework conditions (i.e. applicable standards) in place in order to support product marketing. Given that the Government of China is moving ahead and finalizing three standards related to the use of HC-290, contracts to HC-290 have been concluded at the same pace as those converting to HFC-410a in enterprises with high levels of production.

88. In addition to the “Standard of Safety of Household and Similar Electrical Appliances – Particular Requirements for Heat Pumps, Air-Conditioner and Dehumidifier” (GB4706.32) which came into effect in May 2013 in China, CHEAA has also finalised the standards providing for safety codes for installation and servicing of room air-conditioners with flammable refrigerants.

### Level of fund disbursement and interest

89. Based on the financial report submitted in Table 1 above, the level of disbursement<sup>12</sup> of funds approved in the third tranche is above the 20 per cent threshold required for approval of the next tranche. The Secretariat also noted that overall, approved funds are already committed in the contracts between FECO and the enterprises, and payments will be released upon completion of implementation milestones. UNIDO informed that several enterprises have a pending payment upon equipment procurement and delivery to the plants, and that additional disbursements of approximately US \$4.6 million are expected before January 2015. As the conversions are progressing and a large number of enterprises are expected to complete their projects in 2015, the level of disbursement from FECO to final beneficiaries will be higher by the time of the next tranche request.

90. UNIDO informed the Secretariat that FECO has earned a total of US \$76,806.23 in interest from funds transferred to FECO by UNIDO for the RAC sector plan, which includes US \$10,015.72 as of 31 December 2012 and US \$66,790.51 as of 31 December 2013. The level of interest for 2012 reported to this meeting is slightly larger than that reported during the submission of the last tranche and subsequently offset at the 71<sup>st</sup> meeting (US \$9,512.60). Therefore, the difference of US \$503.12 will be added to the value of US \$66,790.51 (from interest accrued in 2013) to be offset from future transfers to UNIDO.

### Conclusion

91. The Secretariat noted that the RAC sector continue to show good progress in implementation, with 20 enterprises currently undergoing their conversion to non-HCFC technology to phase out a consumption of 8,056 mt (443.1 ODP tonnes) of HCFC-22. Six of these enterprises have completed their conversion resulting in a phase-out of 3,037 mt (167 ODP tonnes) as of October 2014, and the rest will be completed no later than July 2015. The overall level of disbursement is 29 per cent, and most of the funds are already committed in ongoing contracts with enterprises and it is expected that FECO will undertake additional payments to enterprises upon their completion of implementation milestones. The Secretariat will continue monitoring the level of disbursement from previous tranches by the time of the next tranche request. In view of the progress taking place and the newly identified enterprises, the Secretariat recommends approval of the fourth tranche.

### **RECOMMENDATION**

92. The Executive Committee may wish to consider:

- (a) Noting the progress report on the implementation of the third tranche of stage I of the room air-conditioner manufacturing (RAC) sector plan for China;
- (b) Whether approving the third tranche of stage I of the RAC sector plan for China, or the corresponding 2015 tranche implementation plans, at the amount of US \$9,625,000 plus agency support costs of US \$673,750 for UNIDO; and
- (a) Requesting the Treasurer to offset future transfers to UNIDO by US \$67,293.63 representing additional interest accrued by the Government of China in 2012 and interest accrued up to 31 December 2013 from funds previously transferred for the implementation of the RAC sector plan for China in line with decision 69/24.

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<sup>12</sup> As confirmed by decision 71/29(a), achievement of the 20 per cent disbursement threshold provision should be determined in terms of the level of disbursement to final beneficiaries.



China: Sector plan for the phase-out of methyl bromide production (phase IV) (UNIDO)**Introduction**

93. UNIDO, on behalf of the Government of China, had submitted to the 72<sup>nd</sup> meeting the progress report on phase III of the sector plan for the phase-out of methyl bromide (MB) production<sup>13</sup> for the period 2011 to 2013 and the verification reports on MB production for controlled (2011 to 2013) and feedstock (2010 to 2012) uses in China. The release of US \$1,790,000 plus agency support costs of US \$134,000 for phase IV (2014-2015) was also being requested.

94. Further to a discussion, the Executive Committee *inter alia* noted that the Government of China would continue to use existing balances to undertake activities for the phase-out of MB production, and deferred consideration of the fourth tranche of the sector plan for the phase-out of MB production to the 73<sup>rd</sup> meeting (decision 72/29(b) and (c)).

95. In line with decision 72/29(c), UNIDO has resubmitted the request for phase IV of the sector plan for the MB production in China to the 73<sup>rd</sup> meeting. UNIDO has also resubmitted the progress report on phase III of the sector plan for the phase-out of MB production for the period 2011 to 2013 and the verification reports on MB production for controlled (2011 to 2013) and feedstock (2010 to 2012) uses. The information on these subjects is the same as that in the document submitted to the 72<sup>nd</sup> meeting<sup>14</sup>. Accordingly, the section below presents a summary of these subjects.

**Background**

96. At its 47<sup>th</sup> meeting, the Executive Committee approved the sector plan for the phase-out of MB production, with a proposed schedule until the complete phase-out by 1 January 2015, at a total cost of US \$9,790,000 plus agency support costs for UNIDO.

97. The Government of China reported under Article 7 of the Montreal Protocol a total production of 100 ODP tonnes of MB in 2013, which is the same amount as that allowed under its Agreement with the Executive Committee. The maximum allowed production of MB for 2014 amounts to 50 ODP tonnes. The cumulative MB production quota issued by the Government amounts to 50 ODP tonnes for 2014 and 0 ODP tonnes for 2015, except for critical uses exception, if any, and will be distributed proportionally among the three MB producers as for the established practice.

Progress report from 2011 to 2013

98. Compensation contracts have been concluded and funds have been disbursed to the three MB producers. In May 2009, the Government of China issued regulations for feedstock users. FECO/MEP has scheduled on site verification at the major feedstock users in 2013 to ensure the correct application of MB as feedstock. The Special Working Group (SWG) of FECO/MEP has developed a monitoring regulation for MB producers, *inter alia*:

- (a) Contracts with MB producers were drafted by SWG specifying that producers must carry out production within their baseline capacity, produce MB for controlled uses within the established quota, and carry out production and distribution and sale according to the

<sup>13</sup> In accordance with the Montreal Protocol, China should reduce MB production and consumption from the average level of 1995-1998 by 20 per cent by 1 January 2005, maintain that level of reduction for the years 2005 to 31 December 2014 and reduce to zero production by 1 January 2015 (except for quarantine and pre-shipment (QPS) applications, feedstock, and critical use). There is no requirement for production to be limited to domestic consumption for critical use exemptions (CUEs) as was the case with the CFC production sector agreement for essential use exemptions (EUEs). China currently exports MB to several other countries.

<sup>14</sup> Paragraphs 33 to 43 of document UNEP/OzL.Pro/ExCom/72/24.

national regulation. FECO/MEP will disburse the compensation based on the verification to be conducted in early 2014;

- (b) Only qualified users and distributors can purchase MB from the producers through sales contracts with each individual client;
- (c) MB sales are accounted as QPS only if the producer has received the QPS fumigation licence issued by the General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ) or by local Supervision Bureaus; and
- (d) MB producers can sell MB only to the qualified feedstock users which have been registered by FECO/MEP and submit production and sales data on a quarterly basis.

99. The Government has recruited a team of experts for the supervision of feedstock use; the coordination mechanism with AQSIQ to reinforce the Government's management and supervision on MB consumption for QPS use; the disposal of MB stocks in grain storage; a survey on MB feedstock users; the implementation of a technical assistance project to assist the Ministry of Agriculture and local agricultural bureaus to phase out MB in the ginger sector. No new policies related to MB production were issued.

#### Verification reports

100. The verification for raw material for feedstock was carried out from 14 October to 10 November 2013 to crosscheck the trade data of MB provided by feedstock end-users with data from MB producers; analyse and verify the actual application of MB as feedstock by checking the production process, technologies applied, production facilities, stocks and leakage; and confirm that MB producing and consuming enterprises follow the laws and regulations. The verification team concluded that the amount of MB consumed as feedstock was 1,661 mt in 2010, 1,194 mt in 2011 and 1,907 mt in 2012. With respect to the 22 enterprises surveyed all of them are legal manufacturing enterprises; have kept standardized records; have had the amounts of MB purchased verified to match closely to the sales volume provided by the manufacturing enterprises; have had their invoices verified with production enterprises; obey strictly the relevant regulation without illegal resale or use for other purposes; and have production processes that ensure that all MB is consumed in the course of manufacturing the final product.

101. The verification for controlled uses of MB to audit production and sales in the three MB production enterprises was carried out by a team of technical and financial experts from 10 to 19 February 2014. The verification team concluded that none of the three enterprises or the whole manufacturing sector has produced controlled uses of MB exceeding the quotas; all the enterprises have qualification certificates issued by the provincial inspection and quarantine department/bureau; all enterprises are on the list of enterprises registered under the Ministry of Environmental Protection (MEP); and none of the enterprises has new construction, renovations or expansions or has introduced changes in production equipment or production process.

#### Fund disbursement

102. Table 1 shows the funds approved and disbursed as at 31 December 2013 as presented to the 72<sup>nd</sup> and 73<sup>rd</sup> meetings.

**Table 1. Comparison of funds approved and disbursed of the MB production sector plan in China (US \$)**

Items	Expenditures submitted to	
	72 <sup>nd</sup> meeting	73 <sup>rd</sup> meeting
<b>Funds approved excluding the final tranche</b>	<b>8,000,000</b>	<b>8,000,000</b>
Compensation to MB producers 2005-2013	2,704,030	2,704,030
Technical assistance 2005/2007	65,783	
Technical assistance 2008/2010	85,265	
Survey of feedstock users	54,000	54,000
Verification to three MB producers, expert fees and travelling	24,869	
Project verifications, feedstock management, expert fees, etc.		100,428
Monitoring and supervision (QPS) (AQSIQ)	0	
MB alternatives promotion (AQSIQ and Ministry of Agriculture)	0	
Training programme	0	
Disposal of stored MB in grain storage sector	153,000	156,438
Audit 2007/2010/2014 (US \$20,000 per year) by UNIDO	60,000	60,000
International consultancy (technical services on root-knot nematode on ginger crop) (by UNIDO)	200,000	200,000
<b>Sub-total expenditures</b>	<b>3,346,947</b>	<b>3,274,896</b>
<b>Balance from 2005-2013</b>	<b>4,653,053</b>	<b>4,725,104</b>
<b>Last tranche request</b>	<b>1,790,000</b>	<b>1,790,000</b>
<b>TOTAL FUNDS AVAILABLE AFTER 2014</b>	<b>6,443,053</b>	<b>6,515,104</b>

#### 2014-2015 work plan and budget

103. Table 2 presents the work plan budget for the 2014-2015 tranche (and final tranche) as presented to the 72<sup>nd</sup> and 73<sup>rd</sup> meetings. The completion date of the project is 31 December 2018 making the last tranche effectively from 2014-2018.

**Table 2. Work plan budget for the last tranche of the MB production sector plan in China (US \$)**

Items	Last tranche submitted to	
	72 <sup>nd</sup> meeting	73 <sup>rd</sup> meeting
<b>2014-2015 AQSIQ activities (obligated)*</b>	<b>1,950,000</b>	<b>2,000,000</b>
· Evaluation and research of the MB capture technologies and alternatives in the QPS sector	1,200,000	
· Training and dissemination for QPS supervision and management	190,000	
· Management information system for QPS consumption	300,000	
· Study tour for QPS alternatives	190,000	
· Assessment of the legislation system for QPS management	70,000	
<b>Compensation to the three producers (obligated)</b>	<b>800,000</b>	<b>1,140,000</b>
<b>Final compensation to MB producers (Onetime compensation bonus) (obligated)</b>	<b>0</b>	<b>1,850,000</b>
<b>SUB-TOTAL FUNDS OBLIGATED BY FECO</b>	<b>2,750,000</b>	<b>4,990,000</b>
<b>MB alternative technologies development</b>	<b>1,270,000</b>	
<b>MB alternatives registration</b>		<b>1,000,000</b>
<b>Monitoring and supervision</b>	<b>320,000</b>	<b>240,000</b>
<b>Awareness (training, meetings, and publicity)**</b>	<b>240,000</b>	<b>70,000</b>
<b>Verification and audit*</b>	<b>240,000</b>	<b>150,000</b>
<b>UNIDO audit in 2016</b>		<b>20,000</b>
<b>Project completion report</b>	<b>0</b>	<b>190,000</b>
<b>Capacity building</b>	<b>1,270,000</b>	
<b>Expert groups</b>	<b>130,000</b>	
<b>International consultants</b>	<b>220,000</b>	<b>90,000</b>
<b>SUB-TOTAL UNSPENT BALANCE FOR AFTER 2014</b>	<b>3,690,000</b>	<b>1,520,000</b>

Items	Last tranche submitted to	
	72 <sup>nd</sup> meeting	73 <sup>rd</sup> meeting
<b>UNALLOCATED</b>	<b>3,053</b>	<b>5,104</b>
<b>TOTAL BUDGET</b>	<b>6,443,053</b>	<b>6,515,104</b>

\* The US \$50,000 difference is a result of the actual cost to conduct five activities by AQSIQ at the time of signing the contract in August 2014.

\*\* These activities were separate activities in the budget submitted to the 72<sup>nd</sup> meeting but included with the cost of Monitoring and Supervision in the budget submitted to the 73<sup>rd</sup> meeting.

## SECRETARIAT'S COMMENTS AND RECOMMENDATION

### COMMENTS

#### Issues related to compensation for MB producers

104. Most of the funds allocated for compensation were disbursed although at different levels than anticipated.

105. The Secretariat noted that the compensation to producers increased from US \$800,000 in the budget submitted to the 72<sup>nd</sup> meeting to US \$2,990,000, including a final one-time compensation bonus of US \$1,850,000 submitted to the 73<sup>rd</sup> meeting. Accordingly, the total funds to be paid to the three producers would amount to US \$5,694,030. On this matter, UNIDO reported that the funds to be paid to MB producers are below the level of US \$8,490,000 agreed in the project document. It further clarified that in view of the maximum flexibility given in the Agreement with the Executive Committee, and negotiations with the three MB producers, FECO decided to grant a final payment of US \$1,850,000 (Table 3). The term "bonus" used in the project document, might be misleading, as this is a one-off payment agreed with the producers to bring the actual compensation (US \$/ODP tonne) to a value close to what was agreed.

**Table 3. Payments to MB producers have been agreed based on a proportional compensation**

Enterprise	Compensation (US \$)					Local ownership (%)
	2005/2013	2014/2015	Final	Total	Per tonne	
Lianyungang Dead Sea Bromine Co. Ltd.*	1,382,453	582,832	945,825	2,911,110	5,186	40
Linhai Jianxin Chemical Co. Ltd.	1,021,045	430,465	698,562	2,150,073	12,965	100
Changyi Chemical Factory	300,532	126,703	205,613	632,847	12,965	100
<b>Total</b>	<b>2,704,030</b>	<b>1,140,000</b>	<b>1,850,000</b>	<b>5,694,030</b>	<b>7,338</b>	

\* The level of compensation has taken into account the 40 per cent local ownership.

#### Issues related to technical assistance activities

106. Two technical assistance activities had been implemented but had not been included in the 2011-2013 work plan. One was related to the disposal of 19.23 metric tonnes (mt) (11.56 ODP tonnes) of stored contaminated MB in the grain storage sector (at a cost of US \$153,000) which was considered cost-effective. The other was related to a study on root-knot nematode and other pathogen isolation, identification, assessment and control on ginger crop (at a cost of US \$200,000), which is related to the consumption sector and not the production sector. In responding, UNIDO indicated that the activity fall under decision 61/18(b)(v)<sup>15</sup> for which "assessment of on-going of MB phase-out plan and establishment of technical expert team have been approved".

<sup>15</sup> The Executive Committee took note of the information provided on the reallocation of funds for technical assistance, noting that Multilateral Fund resources should be directly linked to assessing Article 7 data and to clarify the country's non QPS usage.

107. The Secretariat notes, however that decision 61/18(b)(v) was taken upon a request by UNIDO and the Government of China to shift the uncommitted balance allocation for compensation for profit lost and labour cost for MB producers (i.e., US \$1,873,559) to the technical assistance component for capacity building of institutions; assessment of legislation systems for feedstock and QPS uses; data collections for MB consumption in feedstock and QPS sectors, development of a management strategy for feedstock and QPS uses, assessment of ongoing MB phase-out plans; establishment of a technical experts team; and a survey and supervision of MB dealers<sup>16</sup>.

108. In light of the fact that there remains a balance of US \$1.52 million for activities that are not considered incremental, the Secretariat enquired as to whether other eligible activities had been considered, such as: production closure; closure of the canister packaging line in MB producing enterprises which is for controlled use for soil fumigation which might ensure future compliance if production is packaged in tanks destined for QPS use; mitigation of adverse environmental consequences from the reduction of controlled use production; and or improved plant efficiency and enhance collateral adverse environmental consequences for continued production of MB formerly produced for controlled uses. In responding to these suggested proposals, UNIDO indicated that the Agreement for the MB production sector plan did not foresee closure of any production enterprise; currently, there are no plans to close any of the MB packaging lines which are also used for QPS for small volumes of commodities; there no adverse environmental consequences from the reduction on the levels of MB production and producers have continuously enhanced their production efficiency and safety and, therefore, there was no need for further improvements.

109. The final tranche will include funds amounting to US \$1,000,000 for registration of MB alternative chemicals. Upon a request for a clarification on how such funds would benefit the producers of MB that already have very large export markets. UNIDO responded that the funds would be used to facilitate the registration of available and well proven chemicals that have not yet been registered, including 1,3-dichloropropene, chloropicrin, dazomet and metham sodium; dimethyl disulfide, and sulfuryl fluoride. Funding would not be used to subsidize enterprises that wish to register those chemicals but to support various tests and assessment (e.g., toxicology, compatibility, and environmental impact) required to register them as pesticide with relevant Government's agencies. Expert teams and technical assistance units already established within the MB phase-out plan will be employed for implementing this activity. The beneficiary enterprises will be selected through a competitive bidding based on their technical and financial capacities to carry out the registration process. UNIDO is of the view that the registration of alternative chemicals has to be facilitated to allow farmers to benefit of multiple options to control soil borne pests. Furthermore, the related cost falls under the Government of China's effort toward the smoothest possible phase-out of controlled uses of MB, in line with implementation modalities stipulated its Agreement with the Executive Committee.

110. The Secretariat notes that in the context of MB phase-out projects, financial assistance had not been provided for registration of alternative chemicals.

111. In clarifying the request of US \$190,000 for a project completion report involving only three producers, which appears to be excessive, UNIDO explained that the completion report amounts to US \$100,000, and the remainder US \$90,000 for publications, awareness and a closing workshop. UNIDO also indicated that US \$90,000 for international consultants would be used to support best practices.

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<sup>16</sup> Paragraphs 54 to 56 of document UNEP/OzL.Pro/ExCom/61/20/Add.1.

## Conclusion

112. The Secretariat notes that MB production reported under Article 7 of the Montreal Protocol of 100 ODP tonnes in 2013 is the same amount as that allowed under the Agreement and that the Government had issued MB production quotas amounting to 50 ODP tonnes for 2014 and 0 ODP tonnes for 2015.

113. The Secretariat also notes that during implementation of the MB production sector the funding approved by the Executive Committee may be used in any manner that China believes will achieve the smoothest possible phase-out of controlled MB production as long as it is consistent with the Agreement and the mode of implementation included in the China project proposal. On this basis, the Government of China agreed with the three MB producers to allocate US \$5,694,030 for profit lost and labour cost and the remaining US \$4,095,970 for several legislative/regulatory and technical assistance activities, several of which had already been implemented.

114. The verification team for feedstock use reported *inter alia* that the 22 enterprises surveyed were legal manufacturing enterprises; the amounts of MB purchased had been verified; obey strictly the relevant regulation without illegal resale or use for other purposes; and have production processes that ensure that all MB is consumed in the course of manufacturing the final product. The verification team for MB production confirmed *inter alia* that production was within the limits of the Agreement; and that there had been no changes to the production capacity or processes. Furthermore, there were no recommendations from the verification teams for the period 2011-2013.

115. Therefore, the criteria for approval of the fourth and last tranche of the MB production sector plan have been met.

## **RECOMMENDATION**

116. In light of the Secretariat's comment the Executive Committee may wish to consider:

- (a) To approve the fourth (and final) tranche of the sector plan for the phase-out of MB production, and the corresponding 2014-2018 tranche implementation plan, in the amount of US \$1,790,000 plus agency support costs of US \$134,000 for UNIDO, on the understanding that the Government of China would continue to use existing balances to undertake activities for the phase-out of MB production, and that all project activities will be completed no later than 31 December 2018; and
- (b) To request the Government of China and UNIDO to submit annual reports on the status of implementation the sector plan for the phase-out of MB production and the project completion report to the Executive Committee no later than the first meeting in 2019.

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