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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Seventy-first Meeting
Montreal, 2-6 December 2013

PROJECT PROPOSALS: CHINA

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

Fumigant

- National phase-out of methyl bromide (phase II, eighth tranche) UNIDO/Italy

Phase-out

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

China: National phase-out of methyl bromide (phase II, eighth tranche) (UNIDO/Italy)

PROJECT DESCRIPTION

1. On behalf of the Government of China, UNIDO, as the lead implementing agency, has submitted to the 71st meeting of the Executive Committee a request for funding for the implementation of the eighth tranche (2013 work programme) of phase II of the national plan for the phase-out of methyl bromide (MB)¹, at a total cost of US \$500,000 plus agency support costs of US \$37,500 for UNIDO. The submission also includes a progress report on the implementation of the MB phase-out plan during 2012 and the implementation programme for 2013. The project is being implemented with assistance from the Government of Italy.

Progress report

2. Monitoring and technical assistance activities were carried out in the commodity and tobacco sectors, where MB has not been used since 2007 and 2008, respectively, to ensure the permanent and sustainable phase-out of MB. The main focus in the tobacco sector was on strengthening technical capacity to ensure the continuing satisfactory performance of the floating tray technology. In the grain sub-sector, 18.5 metric tonnes (mt) (11.1 ODP tonnes) of MB stored in 45 grain storage facilities was identified and earmarked for disposal.

3. The registration of MB for use in strawberry and cucumber sectors was cancelled in June 2011; since then MB can only be used in ginger crops. Alternative technologies introduced over 106.25 ha of ginger reduced the aggregated MB consumption by 26 ODP. Field activities carried out to test chloropicrin and dazomat as alternatives for MB involved 397 farmers and five ginger cooperatives. The technical assistance unit (Institute of Plant Protection, Chinese Academy of Agricultural Sciences) established 18 model farms which screened MB alternatives including dazomet, chloropicrin, and 1,3 dichloropropene plus chloropicrin. An assessment of soil borne diseases in the ginger sector was carried out as part of an activity to develop an integrated pest management (IPM) protocol to help ginger farmers better manage soil borne pests.

4. Following on-site surveys in nurseries and farms, a number of recommendations were formulated to improve grafting technology for cucumber, tomato, eggplant and watermelon crops, and these were subsequently disseminated through reports and an international workshop attended by 48 participants including project managers and representatives of seed companies. Functioning machine prototypes for the application of MB alternative were developed and tested by three companies; recommendations for further improvements of the application machines will be implemented as a next step.

5. Eight official training sessions were held for 1,177 farmers and technical staff, along with other informal training and awareness activities. The coordination mechanism between the MB consumption and production phase-out is in place and both projects will end in 2015. No export quotas for controlled uses of MB had been issued since 2010.

6. As of September 2013, of the US \$9,900,000 approved for the first seven tranches, US \$9,524,048 had been disbursed. The balance of US \$375,952 will be used in 2013 for the procurement of machines, farm materials, additional training and improvement of grafting technology.

¹ Phase II of the national plan for the phase-out of MB in the consumption sector in China was approved in principle at the 44th meeting at a total funding level of US \$14,789,342. Since then, the Committee has approved the first seven tranches of the project at a total value of US \$9,900,000 plus support costs of US \$912,500.

2013 work programme

7. The 2013 work programme will address 83 ODP tonnes of MB used on 207.5 ha by 2,000 farmers in the ginger sector. Activities include: the improvement and manufacture of commercial ready prototypes for application of MB alternatives; the application of improved grafting production protocols for cucumber, tomato, eggplant, watermelon and melon; promoting the adoption of the IPM protocol in the ginger sector; the establishment of 10 model farms in the ginger and yam sector; training programmes for 30 monitoring staff and 1,500 farmer; awareness materials on the application of MB alternatives in the strawberry, tomato and cucumber sectors.

8. Although not funded under the project, the disposal of a total of 43 mt² (25.8 ODP tonnes) of MB stored in different depots across China will be carried out by the Chengdu Grain Storage Research Institute. Technical assistance in the tobacco sector will continue to ensure the sustained phase-out of MB in that sector.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

9. The 2012 MB consumption reported by the Government of China under Article 7 of the Montreal Protocol of 149.8 ODP tonnes was already 731.9 ODP tonnes below that of the 881.7 ODP tonnes allowed under the Protocol, and 0.2 ODP tonnes below that of the 150.0 ODP tonnes allowed under the Agreement between the Government and the Executive Committee. Since the approval of the phase-out plan, with assistance from the Government of Italy and UNIDO, the Government of China has achieved greater reductions in MB consumption than those stipulated in the Agreement, as shown in Table 1 below:

Table 1 - MB consumption in China

Sector/Year	MB consumption (ODP tonnes)								
	2004	2005	2006	2007	2008	2009	2010	2011	2012
Allowable consumption under the Agreement									
Commodity	126.0	46.0	25.2						
Tobacco	427.8	300.0	164.6	124.6					
Agriculture	534.0	534.0	534.0	446.0	390.0	250.0	209.0	176.0	150.0
Total	1,087.8	880.0	723.8	570.6	390.0	250.0	209.0	176.0	150.0
Actual consumption									
Commodity	52.2	32.1	7.0	-	-	-	-	-	-
Tobacco	227.8	54.0	21.0	32.4	-	-	-	-	-
Agriculture	534.0	534.0	282.1	351.7	371.3	241.9	201.7	174.8	149.8
Total	814.0	620.1	310.1	384.1	371.3	241.9	201.7	174.8	149.8

10. The Secretariat requested clarification and further information on problems encountered such as the registration of MB alternatives and other factors affecting the MB phase-out such as the limited number of certified fumigation companies; feasible MB alternatives for ginger production; and the implementation of IPM sectors. UNIDO expressed doubts that 1,3 dichloropropene would be registered for use in China, as it had been banned in several non-Article 5 countries. The Government of China and UNIDO have therefore refocused the strategy and obtained satisfactory results through the combination of higher dosages of chloropicrin, improved methods of applying chloropicrin and dazomet, use of other chemical and biological nematicides, and IPM practices including careful crop management. Individually these practices are not as effective as MB but their combination, particularly good crop management,

² This amount includes 18.5 mt (11.1 ODP tonnes) referred to in the progress report on the 2012 work plan (see paragraph 2of this document).

gives satisfactory results. New products based on biological control systems have been tested and proved effective. UNIDO further indicated that since 2012 the number of fumigation companies has increased and costs have stabilized. While chloropicrin must be applied by a certified fumigator due to its toxicity, dazomat and contact nematicides can be applied by individual farmers noting that recently developed application machines improve the effectiveness of the alternatives. UNIDO also reported that market prices of fumigation providers and MB alternatives are being monitored by the project. With regard to IPM, farmers have been taught that results are obtained from a well-coordinated sequence of activities throughout the crop season rather than a single chemical application at the beginning of the season. The IPM approach is based on learning by doing trials and at this stage farmers clearly understand the need for careful irrigation practices to avoid crop infestation and spread of disease.

11. As reported by UNIDO, since the implementation of the first tranche of the MB phase-out plan, over 25,953 trainers and farmers have been trained, as shown in Table 2 below. The project staff maintains close contact with trainers employed by local fumigation or agricultural goods suppliers; since these trainers are always up-to-date and provide quality services, they are well-positioned to provide ongoing relevant training.

Table 2 - Number of trainers and farmers trained in China

Crop	2008	2009	2010	2011	2012	2013*	Total
Trainers							
Strawberry	233	185	60	-	50	30	558
Cucumber/tomato	57	678	-	-	-	30	765
Ginger	27	475	-	-	80	50	632
Eggplant	-	-	-	-	-	80	80
Total	317	1,338	60	0	130	190	2,035
Farmers							
Strawberry	10,851	6,902	500	172	1,047		19,472
Cucumber/tomato	120			200		200	520
Ginger	50	1,554	308	879		150	2,941
Eggplant				185		800	985
Total	11,021	8,456	808	1,436	1,047	1,150	23,918
Grand total	11,338	9,794	868	1,436	1,177	1,340	25,953

(*) Estimated

RECOMMENDATION

12. The Fund Secretariat recommends that the Executive Committee:

- (a) Takes note of the progress report on the implementation of the seventh tranche of phase II of the national phase-out of methyl bromide (MB) plan for China; and
- (b) Approves the 2013 annual implementation programme associated with the eighth tranche.

13. The Secretariat further recommends blanket approval of the eighth tranche associated with the 2013 annual implementation programme of phase II of the national plan for the phase-out of MB, with associated support costs, at the funding level shown in the table below.

Project title	Project funding (US \$)	Support costs (US \$)	Implementing agency
National phase-out of methyl bromide (phase II, eighth tranche)	500,000	37,500	UNIDO

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

Note by the Secretariat

Background

14. On behalf of the Government of China, the Governments of Germany and Japan, UNDP, UNEP, UNIDO and the World Bank submitted the HCFC phase-out management plan (HPMP) for China for consideration by the Executive Committee at its 63rd meeting. The HPMP consisted of a summary of the overarching strategy to address the 2013 and 2015 HCFC control targets and of the sector plans, namely the polyurethane (PU) foam sector plan; the extruded polystyrene (XPS) foam sector plan; the industrial and commercial refrigeration and air conditioning (ICR) sector plan; and the room air-conditioner manufacturing (RAC) sector plan. Following discussion, the Executive Committee decided to consider the HCFC phase-out activities for China further at its 64th meeting (decision 63/59).

15. At the 64th meeting UNDP, as the lead implementing agency, submitted, in addition to the PU, XPS, ICR and RAC sector plans, the HPMP for China providing *inter alia* the regulatory ODS framework, levels of HCFC consumption and production, the overarching strategy and a brief description of the sector plans, and an analysis of the overall cost of the phase-out activities proposed in the various sectors. UNDP also submitted the solvent sector plan; the management plan in the refrigeration servicing sector; the national enabling programme for stage I of the HPMP; and the national coordination plan for stage I of the HPMP (document UNEP/OzL.Pro/ExCom/64/29).

16. To ensure fulfilment of the 2013 and 2015 control targets, the PU foam sector will eliminate about 17.5 per cent of the consumption of HCFC-141b, while the XPS foam, RAC, and ICR and solvent sectors will eliminate about 10 per cent of the consumption of HCFC-22 and HCFC-142b, and the solvent sector will eliminate about 8 per cent of the consumption of HCFC-141b. For the servicing sector, efforts will be made to reduce the leakage rate of refrigerants, avoid unnecessary consumption of HCFCs and increase the recovery ratio of refrigerants during service practice. The 2013 and 2015 HCFC consumption control targets in the six sectors are shown in Table 1 below.

Table 1 - HCFC consumption limits and targeted phase-out amount
in consumption sectors for stage I

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

17. Following discussion, 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, associated with the PU foam, XPS foam, ICR, RAC and refrigeration servicing sector plans, the national enabling programme and the national coordination 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 65th meeting (decision 64/49). With the approval of the solvent sector plan at the 65th meeting (decision 65/36), the overall funding for stage I of the HPMP for China amounted to US \$270,000,000.

18. Further to a discussion on the Agreement between the Government of China and the Executive Committee that was approved at the 66th meeting, the updated Agreement was approved at the 67th 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).

19. Requests for the approval of the second tranche of all sectors were submitted to the 68th meeting. The review showed that all preconditions for approval appeared to have been met. However, it was noted that the implementing agencies selected as an implementation modality the transfer of large portions of the approved funding to the Foreign Economic Cooperation Office (FECO) of the Ministry of Environmental Protection (MEP) for subsequent disbursement. The contractual arrangements between the agencies and FECO suggested these transfers to be recorded in the implementing agencies accounting systems as disbursement. The Secretariat recognised the change by noting high reported disbursement figures in combination with limited progress in implementing activities. The Secretariat advised the Executive Committee of a number of potential repercussions.

20. Following informal discussions, the Executive Committee took decision 68/22 to request the implementing agencies and the Secretariat to further discuss issues on the interest accrued for the Government of China from transferred funds, the monitoring function of disbursement reporting, the apparent change in character of an approval condition in the Agreement requesting minimum disbursement, and that some of the oversight of the Executive Committee might de facto in the future be exercised by agencies. The Executive Committee requested recommendations on those issues be provided to the 69th meeting, including identification of opportunities for providing information specifically on disbursement from China to enterprises. The Executive Committee also requested the implementing agencies to work with China to obtain information on any interest accrued on funds held by China for stage I of its HPMP and to offset those amounts against further funding towards subsequent tranches.

21. The Executive Committee also approved, without prejudice to the future interpretation of the 20 per cent disbursement threshold required by the Agreement, funding for the second tranches and corresponding tranche implementation plans for ICR, PU, RAC sector plans, as well as the refrigeration servicing sector plan. The Executive Committee decided to consider the request for funding for XPS foam sector plan at the 69th meeting. At the 69th meeting, the Executive Committee provided the related approval for the XPS foam sector, after confirmation by the agency that the level of fund disbursement to date to beneficiary enterprises was approximately 23 per cent.

22. Also at its 69th meeting, the Committee discussed the document on “Fund transfers and information on any interest accrued on funds held by China for stage I of its HPMP and historical implementation modalities of the Multilateral Fund”. In decision 69/24 the Executive Committee noted:

- (a) Document UNEP/OzL.Pro/ExCom/69/35, informing the Executive Committee in paragraph 18 that the implementing agencies will be able to provide actual amounts for funds disbursed from FECO/MEP to beneficiary enterprises for all of the sector plans, as UNIDO had done for the XPS foam sector plan in the submission to the 69th meeting; and

- (b) That China had stated that interest accrued could be returned to the implementing agencies or offset against future tranches, and requested implementing agencies to report on interest provided by China on funds transferred for the HPMP in the tranche implementation reports³.

Submission to the 71st meeting

23. 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 2, together with annual implementation reports covering the activities undertaken so far, and annual implementation plans for the activities to be implemented in 2014.

Table 2 - Tranche requests of sector plans submitted to the 71st 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 the 71st meeting (US \$)	Share of funding approved and requested of total approved in principle
ICR sector plan (UNDP)	61,000,000	32,280,000	52.9%	8,495,000	66.8%
XPS foam sector plan (UNIDO, Germany ⁴)	50,000,000	32,439,000	64.9%	3,998,000	72.9%
PU foam sector plan (World Bank)	73,000,000	44,379,000	60.8%	13,592,000	79.4%
RAC sector plan (UNIDO)	75,000,000	45,630,000	60.8%	8,495,000	72.2%
Service sector plan (UNEP, Japan)	5,640,000	2,337,000	41.4%	1,184,000	62.4%
Solvent sector plan (UNDP)	5,000,000	2,500,000	50.0%	2,000,000	90.0%
Total	269,640,000	159,565,000	59.2%	37,764,000	73.2%

24. After reviewing the project proposals, the Secretariat concluded that all of the sector plans had merits to warrant their submission to the 71st meeting although some of the plans present some issues.

Overall consumption

25. 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 3.

³ In a further follow-up on the issue, the 70th meeting discussed how to report disbursement for stage I of HPMPs as per decision 69/24(c). However, the ensuing decision 70/20 relates to progress reporting and reporting of balances to the treasurer, but not to the content of tranche submissions

⁴ Germany is not requesting funding at the 71st meeting

Table 3- Consumption of different HCFCs in China (2009 to 2012)

Year	2009	2010	2011	2012	Baseline	Difference 2012 to baseline	Change 2012 to baseline
Metric tonnes							
HCFC-22	209,536.6	220,984.9	213,809.0	237,459.7	215,260.7	22,199.0	10.3%
HCFC-123	308.6	748.0	772.0	778.4	528.3	250.1	47.3%
HCFC-124	284.7	-14.2	16.8	-5.7	135.2	-140.9	-104.2%
HCFC-141b	51,335.9	56,687.7	68,332.2	63,863.9	54,011.8	9,852.1	18.2%
HCFC-142b	21,810.8	23,530.5	22,241.3	15,274.3	22,670.7	-7,396.4	-32.6%
HCFC-225ca	42.2	55.8	59.5	16.2	49.0	-32.8	-66.9%
ODP tonnes							
HCFC-22	11,524.51	12,154.17	11,759.49	13,060.28	11,839.34	1,220.94	10.3%
HCFC-123	6.17	14.96	15.44	15.57	10.57	5.00	47.3%
HCFC-124	6.26	-0.31	0.37	-0.13	2.98	-3.11	-104.4%
HCFC-141b	5,646.95	6,235.64	7,516.55	7,025.03	5,941.30	1,083.73	18.2%
HCFC-142b	1,417.70	1,529.49	1,445.69	992.83	1,473.60	-480.77	-32.6%
HCFC-225ca	1.05	1.40	1.49	0.41	1.23	-0.82	-66.7%
Total	18,602.6	19,935.4	20,739.0	21,094.0	19,269.02	1,824.97	9.5%
Change to previous year	20.9%	7.2%	4.0%	1.7%	n/a	n/a	n/a

26. The consumption of China continues to be dominated by three substances, HCFC-22, HCFC-141b and HCFC-142b, which collectively account for 99.92 per cent of the country's consumption. While the consumption increased as compared to the baseline for HCFC-22 and HCFC-141b by 10.3 and 18.3 per cent, respectively, it decreased by almost one third for HCFC-142b. There is also a visible downward trend in overall HCFC consumption growth, from 20.9 per cent in 2009 as compared to the previous year to 1.7 per cent for 2012. However, in 2012 the overall consumption of HCFC remained 9.5 per cent higher than the baseline.

Disbursement and interest

27. Based on decision 69/24, the submissions included information on funds disbursed and interest. Additional details and further explanations can be found in the respective sector plans of this document. Tables 4 to 6 show the level of funds disbursed by the implementing agencies as of the submission deadline (9 September 2013). In these tables as well as in the remainder of the document, the Secretariat refers to those disbursements which constitute an income to FECO as "disbursement to FECO".

Table 4 - Information provided by implementing agencies on disbursement as of the submission deadline

Sector plan	Tranche approved at 64 th meeting					Previous tranche				
	Approved	Disbursed				Approved	Disbursed			
	(US \$)	To FECO (US \$)	To FECO (%)	From FECO to beneficiaries and FECO activities (US \$)	For FECO activities and to beneficiaries (%)	(US \$)	To FECO (US \$)	To FECO (%)	From FECO to beneficiaries and FECO activities (US \$)	For FECO activities and to beneficiaries (%)
ICR sector plan (UNDP)	25,380,000	25,380,000	100.0%	3,169,700	12.5%	6,900,000	6,900,000	100.0%	695,761	10.1%
Solvent sector plan (UNDP)	Only tranche approved at 65 th meeting					2,500,000	2,000,000	80.0%	707,701	28.3%
XPS sector plan (UNIDO, Germany)	21,831,023	19,623,823	89.9%	4,333,314	19.8%	10,607,977	5,108,500	48.2%	258,784	2.4%
RAC sector plan (UNIDO)	36,430,000	18,215,000	50.0%	8,253,000	22.7%	9,200,000	4,600,000	50.0%	546,489	5.9%
PU sector plan (World Bank)	38,859,000	19,429,500	50.0%	5,782,542	14.9%	5,520,000	0	0.0%	0	0.0%
Service sector plan (UNEP, Japan)	1,659,000	680,000	41.0%	680,000	41.0%	678,000	0	0.0%	0	0.0%
Total	124,159,023	83,328,323	67.1%	22,218,556	17.9%	35,405,977	18,608,500	52.6%	2,208,735	6.2%

28. The implementing agencies reported as of the date of the submission deadline for the respective sector implementation reports for the first tranche approved at the 64th meeting disbursements of 67.1 per cent of the approved amounts from the agencies to FECO, and 17.9 per cent from FECO to beneficiaries. With reference to the same date, the disbursement of the previous tranche amounted to 52.6 per cent for transfer from the agencies to FECO, and 6.2 per cent for the transfer from FECO to beneficiaries.

29. Table 5 below provides updated information by the implementing agencies shortly before finalisation of the document (as of 31 October 2013).

Table 5 - Most recent information provided by implementing agencies on disbursement

Sector plan	Tranche approved at the 64 th meeting					Previous tranche				
	Approved	Disbursed				Approved	Disbursed			
	(US \$)	To FECO (US \$)	To FECO (%)	From FECO to beneficiaries and FECO activities (US \$)	For FECO activities and to beneficiaries (%)	(US \$)	To FECO (US \$)	To FECO (%)	From FECO to beneficiaries and FECO activities (US \$)	For FECO activities and to beneficiaries (%)
ICR sector plan (UNDP)	25,380,000	25,380,000	100.0%	5,375,700	21.2%	6,900,000	6,900,000	100%	2,445,663	35.4%
Solvent sector plan (UNDP)	Only tranche approved at 65 th meeting					2,500,000	2,000,000	80.0%	716,565	28.7%
XPS sector plan (UNIDO, Germany)	21,831,023	19,623,823	89.9%	4,461,524	20.4%	10,607,977	5,108,500	48.2%	2,256,800	21.3%
RAC sector plan (UNIDO)	36,430,000	18,215,000	50.0%	8,253,000	22.7%	9,200,000	4,600,000	50.0%	1,702,810	18.5%
PU sector plan (World Bank)	38,859,000	31,087,200	80.0%	9,179,078	23.6%	5,520,000	2,760,000	50.0%	0	0.0%
Service sector plan (UNEP, Japan)	1,659,000	680,000	41.0%	680,000	41.0%	678,000	0	0.0%	0	0.0%
Total	124,159,023	94,983,023	76.5%	27,949,302	22.5%	35,405,977	21,368,500	60.35%	7,121,838	20.1%

30. The implementing agencies provided the information on interest accrued as of the end of 2012 as shown in Table 6.

Table 6 - Information provided by implementing agencies on interest accrued

Sector plan	Interest accrued (US \$)	Information accurate as per
ICR sector plan (UNDP)	70,627.72	31 December 2012
Solvent sector plan (UNDP)	2,289.05	31 December 2012
XPS sector plan (UNIDO, Germany)	11,955.26	31 December 2012
RAC sector plan (UNIDO)	9,512.60	31 December 2012
PU sector plan (World Bank)	None*	n/a
Total	94,384.63	n/a

*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

Progress in national legislation

31. A number of national regulations have been enacted in the years up to 2010. The related regulations, "Strict Control of HCFC Production Facilities", "Strict Control over the Establishment of Facilities Using HCFCs", "Catalogue of Controlled ODS in Import and Export (5th batch)", "Regulation on Ozone Depleting Substances Management" and "Catalogue of Controlled ODS in China" continue to be enforced; they have been described in previous documents pertaining to the HPMP.

32. In August 2013, MEP issued a "Notice on Quota Permit for HCFC Production and Consumption". This notice establishes a quota permit system for, *inter alia*, sales and use of HCFCs. Any enterprise with an annual consumption of ODS of above 100 metric tonnes (mt) has to apply for a quota.

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS
China

(I) PROJECT TITLE	AGENCY	
HCFC phase out plan (stage I) XPS foam	Germany, UNIDO (lead)	
(II) LATEST ARTICLE 7 DATA (Annex C Group I)	Year: 2012	21,094.65 (ODP tonnes)

(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)								Year: 2012	
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-123				10.2	5.4				15.6
HCFC-141b		6,502.0				523.1			7,025.0
HCFC-142b		637.0		7.2	348.7				992.8
HCFC-22	95.4	1,892.0		6,569.3	4,503.8				13,060.4
HCFC-225ca						0.4			0.4
HCFC-225cb						0.7			0.7
(IV) CONSUMPTION DATA (ODP tonnes)									
2009 - 2010 baseline:				19,269.0	Starting point for sustained aggregate reductions:				18,865.4
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)									
Already approved:				3,445.19	Remaining:				15,420.25

(V) BUSINESS PLAN		2012	2013	2014	2015	2016	Total
Germany	ODS phase-out (ODP tonnes)		4.9			6.3	11.2
	Funding (US \$)		438,036			560,181	998,217
UNIDO	ODS phase-out (ODP tonnes)		284.8	200.1	225.5	0.0	710.4
	Funding (US \$)		24,299,700	17,071,850	19,241,810	0	60,613,360

(VI) PROJECT DATA			2011	2012	2013	2014	2015	Total
Montreal Protocol consumption limits			n/a	n/a	19,269.0	19,269.0	17,342.1	
Maximum allowable consumption (ODP tonnes)			n/a	n/a	18,865.4	18,865.4	16,978.9	
Agreed funding (US \$)	Germany	Project costs	459,023	390,977			500,000	1,350,000
		Support costs	1,260	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	0		0	0	25,829,023
	Support costs		1,654,160	0		0	0	1,934,020
Total funds requested for approval at this meeting (US \$)	Project costs				3,998,000			3,998,000
	Support costs				279,860			279,860

Secretariat's recommendation:	For individual consideration
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PROJECT DESCRIPTION

33. On behalf of the Government of China UNIDO, as the lead implementing has submitted to the 71st meeting of the Executive Committee a request for funding for the third tranche of the extruded polystyrene (XPS) foam sector plan⁵ of stage I of the HCFC phase-out management plan (HPMP) at the amount of US \$3,998,000, plus agency support cost of US \$279,860 for UNIDO only. The submission includes a progress report on the implementation of the second tranche of the HPMP, together with the tranche implementation plan for 2014.

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

Policy development

34. The Ministry of Environmental Protection (MEP) has issued a Circular on Strict Management of HCFC Production, Sale and Consumption on 7 August 2013 to ensure achievement of the freeze target in 2013, and the overall 10 per cent HCFC consumption reduction in 2015. Under this system, HCFC consumers with more than 100 metric tonnes (mt) of annual HCFC consumption for controlled uses (including XPS manufacturing) should hold quota permits, while those with lower consumption should be put on file with the provincial environmental protection agencies.

Implementation of investment projects

35. An amendment to the contract for the implementation of the XPS foam sector plan between UNIDO and FECO to integrate the funds approved and associated activities from the second tranche, was signed in September 2013.

36. A first group of 11 XPS foam enterprises with an associated consumption of 3,802 mt (224.3 ODP tonnes) signed individual phase-out contracts with FECO in March 2013 for a value of US \$18,955,620 and a duration of 24 months. The first disbursement from FECO to the enterprises took place in April 2013. The enterprises received training in project implementation procedures, financial management and procurement requirements. At present, six of these enterprises started their procurement activities and the remaining are preparing their documents to start procurement activities within the next few months.

37. In December 2012, FECO published a second invitation for XPS foam producers to submit applications for conversion projects. From a second group of 17 enterprises that sent their applications, 12 met the preliminary qualifications and were audited for funding eligibility⁶. A total of 10 enterprises with a consumption of 4,245 mt (250.5 ODP tonnes) were eligible. All 10 enterprises submitted their project implementation and procurement plans; which were reviewed by FECO in September 2013. Seven enterprises signed individual phase-out contracts in October 2013 and the remaining three will sign in December 2013 upon approval of the third tranche of funds.

⁵ The XPS foam sector plan was approved at the 64th meeting to reduce HCFC consumption to a sustained level of 2,286 ODP tonnes by 1 January 2015.

⁶ The audit verified the eligibility of the enterprises, the levels of HCFC-22 and HCFC-142b consumption (including the review of purchase invoices), baseline equipment and its capacity.

Technical assistance

38. Several technical activities were carried out in order to support and promote phase-out activities as follows:

- (a) A meeting among FECO, MEP, UNIDO and the Government of Germany to discuss the implementation progress of the sector plan and site visits to five beneficiaries;
- (b) Contracting an implementing support agency (ISA) to assist in the signing of contracts with enterprises, review of procurement plans and documents submitted by enterprises, and providing guidance to the enterprises when needed;
- (c) Contracting the institute of plastics processing and application of light industry in China to revise and formulate XPS foam standards for thermal insulation, cold storage and construction; and
- (d) Study tour by FECO to relevant governmental departments, XPS foam producers, and equipment suppliers, and to attend a technology summit organized by UNIDO in Austria, to exchange information on new alternatives to HCFC, the development of the standards for XPS foam products, and management of the HCFC phase-out.

Status of fund disbursement

39. As of October 2013, of the total funding of US \$32,439,000 approved so far (for both UNIDO and the Government of Germany), US \$24,732,323 had been disbursed to FECO. Of this amount, US \$4,592,058 had been disbursed by FECO to the beneficiary enterprises as shown in Table 1.

Table 1 - Status of disbursement of the XPS sector plan in China (*)

XPS foam sector plan		Tranche 1	Tranche 2	Total
Funds approved		21,831,023	10,607,977	32,439,000
Disbursement from UNIDO to FECO		19,234,800	5,108,500	24,343,300
Disbursement from Germany to FECO		389,023	0	389,023
Total disbursement from implementing agencies to FECO	Amount	19,623,823	5,108,500	24,732,323
	Percentage	89.9%	48.2%	76.2%
Disbursement from FECO to beneficiaries	Amount	4,333,314	258,784	4,592,058
	Percentage	19.8%	2.4%	14.2%

(*) As of 7 October 2013.

Annual plan for the third tranche

40. In 2014, FECO will carry out a screening process of 2 to 5 additional enterprises to assess their eligibility and HCFC consumption and sign phase-out contracts. The estimated HCFC phase-out of the third tranche is 811 mt (47.84 ODP tonnes). Upon selection of the beneficiary enterprises, FECO will undertake baseline verification for each one, review their implementation plans, assess their procurement capacity, and sign phase-out contracts by mid-2014. Enterprises will receive the same type of assistance provided by FECO, ISA and their experts to the enterprises covered under the first two tranches.

41. Technical assistance activities include training workshops on procurement, verification and financial aspects to selected enterprises, baseline information verification for all new phase-out projects, establishment of a monitoring information system (MIS); support through the ISA on the day-to-day

operational management, and a study tour to countries using alternatives to HCFCs. The budget for activities in the third tranche is shown in Table 2 below.

Table 2 - Budget for the third tranche of the XPS foam sector plan in China

Activity	Budget (US \$)
Conversion of XPS foam enterprises to non-HCFC technology	3,614,192
Technical assistance activities	163,918
Project monitoring	219,890
Total third tranche	3,998,000

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

HCFC consumption and reductions in consumption

42. Table 3 shows total HCFC consumption in the XPS sector in China. In reviewing the country programme implementation data, it is noted that consumption has not grown as much as initially expected during the preparation of the HPMP (48,776 mt in 2012). However, timely implementation of the investment projects supported by the quota system will be required to reach compliance with the 2013 and 2015 phase-out targets (Table 3).

Table 3 - Consumption of HCFCs in the XPS foam sector (*)

	HCFC Consumption as per country programme report				Target		
	2009	2010	2011	2012	2013	2014	2015
HCFC consumption in XPS (mt)	41,000	45,100	43,905	44,200	43,340	43,340	39,006
HCFC consumption in XPS (ODP tonnes)	2,419	2,661	2,583	2,529	2,540	2,540	2,286
Phase-out target (mt)					5,726		4,305
Phase-out target (ODP tonnes)					338		254

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

Level of implementation of activities achieved

43. The overall status of progress at enterprise level is presented in Table 4.

Table 4 - Progress on the implementation of the XPS foam sector plan in China

XPS foam enterprises	Number of enterprises	HCFC to be phased out (mt)	Contracts signature	Required to stop using HCFCs	Phase-out as share of plan phase-out (10,031 mt)
First group	11	3,802	Mar-2013	Mar-2015	38%
Second group(*)	7	2,018	Oct-2013	Oct-2013	20%
	3	2,227	Dec-2013	Dec-2015	22%
Third group (**)	2 to 5	811	Jun-2014	June-2016	8%
Totals (***)	23 to 26	8,858			88%

(*) Three enterprises in this group will be assisted with funds from the third tranche.

(**) Estimated data, values subject to funds available after addressing three enterprises from the second group.

(***) Preliminary data based on existing information.

44. The Secretariat noted that a large portion of the required reductions are already being addressed through individual phase-out contracts with enterprises. However, as reductions in principle will effectively take place at least two years after the contracts are signed, which is after the reduction targets for 1 January 2013 (338.0 ODP tonnes) and 1 January 2015 (254.0 ODP tonnes), it was explained that the quota system will ensure that the specific consumption targets established per year are respected. Timely conversion of the enterprises also becomes critical to make the reductions sustainable.

45. UNIDO also indicated that all of the 11 enterprises from the first group are expected to complete their projects by 2014. Six of them consuming 2,505 mt will sign procurement contracts with equipment suppliers between October and December 2013, and the remaining five enterprises consuming 1,296 mt will sign procurement contracts between March and May 2014.

Other issues discussed

46. The Secretariat raised issues related to the other co-blowing agents used with CO₂ by most enterprises, and on the source of the equipment being procured under the XPS foam sector plan. On the co-blowing agents used, UNIDO informed that they may include ethanol or other low-global warming potential chemicals, and the proportion of these co-blowing agents will be lower than 50 per cent. On the equipment supply, the beneficiaries themselves conduct a market survey to find equipment suppliers, and finally decide on the equipment suppliers through bidding procedures at the level of individual procurement (both domestic foreign suppliers can be considered by beneficiaries).

Status of fund disbursement

47. At the time of submission of the tranche request⁷, UNIDO and the Government of Germany had disbursed to FECO 89 and 48 per cent of the first and second tranches respectively, while FECO had disbursed to beneficiaries 19.8 and 2.4 per cent of the first and second tranches respectively (Table 1). However, by the end of October, the overall disbursement from FECO to beneficiary enterprises was over 20 per cent as shown in Table 5.

Table 5 - Status of disbursement as of 30 October 2013

XPS foam sector plan		Tranche 1	Tranche 2	Total
Funds approved		21,831,023	10,607,977	32,439,000
Total disbursement from implementing agencies to FECO	Amount	19,623,823	5,108,500	24,732,323
	Percentage	89.9%	48.2%	76.2%
Disbursement from FECO to beneficiaries	Amount	4,461,524	2,256,800	6,718,324
	Percentage	20.4%	21.3%	20.7%

48. In reviewing the approval of the second tranche (document UNEP/OzL.Pro/ExCom/69/23), it was noted that at that time UNIDO reported that FECO would be disbursing US \$6,802,187 to beneficiaries in March 2013. However, disbursement as of October 2013 was only US \$4,461,524. UNIDO explained that when FECO submitted the tranche request for the second tranche, the second installment of sub-contracts with beneficiaries was included in the calculation of disbursement to beneficiaries, which was expected to be released by the end of March. So at that time, the estimated disbursement was around US \$6.8 million. However, in the course of implementation of the sub-contracts, the milestone for the second installment required more time to be achieved. Therefore, in the new tranche request, FECO revised the associated data to show actual disbursement progress.

⁷ Paragraph 5(b)(ii) of the Agreement establishes as precondition for the release of tranches for a sector plan that eight weeks in advance of the applicable Executive Committee meeting *inter-alia* the rate of disbursement of funding available from the previously approved tranche was more than 20 per cent.

Interest

49. In line with decision 69/24(b)(ii) that requests implementing agencies to report on interest provided by China on funds transferred for the HPMP in the tranche implementation reports, UNIDO informed the Secretariat that FECO has earned US \$11,955 in interest from funds transferred to FECO by UNIDO for the XPS foam sector plan, as of 31 December 2012.

Conclusion

50. The Secretariat noted that the XPS foam sector plan is progressing as planned. Within the limited time available between the approval of the second tranche and the request of the third tranche, the first group of 11 enterprises signed their individual phase-out contracts, are in different stages of implementation and are expected to reduce HCFC consumption starting in 2014. All the preparatory work for signing contracts for an additional 10 XPS foam enterprises has been completed, with signatures expected between October and December 2013. The implementing agencies and FECO have implemented technical assistance activities that have facilitated the selection and preparation of enterprises for conversion to HCFC-free alternatives. Although at eight weeks in advance of the Executive Committee meeting the level of disbursement from FECO to beneficiaries were below 20 per cent for both tranches, by the end of October 2013 the level of disbursement were both above 20 per cent.

RECOMMENDATION

51. The Executive Committee may wish to consider:

- (a) Noting the progress report on the implementation of the second tranche of stage I of the extruded polystyrene (XPS) foam sector plan for China;
- (b) Approving the third tranche of stage I of the XPS foam sector plan for China and the corresponding 2014 tranche implementation plan, at the amount of US \$3,998,000, plus agency support costs of US \$279,860 for UNIDO; and
- (c) Requesting the Treasurer to offset future transfers to UNIDO by US \$11,955 representing interest accrued by the Government of China up to 31 December 2012 from funds previously transferred for the implementation of the XPS foam sector plan for China as per decision 69/24.

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS
China

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

(II) LATEST ARTICLE 7 DATA (Annex C Group I)	Year: 2012	21,094.65 (ODP tonnes)
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(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)								Year: 2012	
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-123				10.2	5.4				15.6
HCFC-141b		6,502.0				523.1			7,025.0
HCFC-142b		637.0		7.2	348.7				992.8
HCFC-22	95.4	1,892.0		6,569.3	4,503.8				13,060.4
HCFC-225ca						0.4			0.4
HCFC-225cb						0.7			0.7

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

(V) BUSINESS PLAN		2013	2014	2015	Total
World Bank	ODS phase-out (ODP tonnes)	170.5	51.2	137.3	358.9
	Funding (US \$)	14,543,440	4,364,530	11,716,500	30,624,470

(VI) PROJECT DATA			2011	2012	2013	2014	2015	Total
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	0	0	0	44,379,000
		Support costs	2,914,000	386,400	0	0	0	3,300,400
Total funds requested for approval at this meeting (US \$)		Project costs	0	0	13,592,000	0	0	13,592,000
		Support costs	0	0	951,440	0	0	951,440

Secretariat's recommendation:	For individual consideration
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PROJECT DESCRIPTION

52. On behalf of the Government of China the World Bank, as the designated implementing agency, has submitted to the 71st meeting of the Executive Committee a request for funding for the third tranche of the polyurethane rigid (PU) foam sector plan⁸ of stage I of the HCFC phase-out management plan (HPMP), at the amount of US \$13,592,000, plus agency support costs of US \$951,440. The submission includes a progress report on the implementation of the second tranche of the HPMP, together with the tranche implementation plan for 2014.

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

Policy development

53. The Ministry of Environmental Protection (MEP) issued a Circular on Strict Management of HCFC Production, Sale and Consumption on 7 August 2013 to ensure achievement of the freeze target in 2013 and the overall 10 per cent HCFC consumption reduction in 2015. Under this system, PU foam enterprises that consume HCFC-141b as a blowing agent are required to submit applications for HCFC consumption quotas each year.

Implementation of investment projects

54. During the last year, the Grant Agreement between the World Bank and the Ministry of Finance was signed (November 2012) and became effective from 1 January 2013. In April 2013 the World Bank disbursed US \$19,429,500 to FECO

55. From the first group of 37 enterprises audited in 2012 by FECO⁹, 31 enterprises with an associated consumption of 7,411 mt (815.21 ODP tonnes) of HCFC-141b signed contracts with FECO between March and April 2013 and started project implementation. FECO has released first disbursements to these enterprises accordingly.

56. From a second group of 18 enterprises audited in 2013, 16 enterprises with a consumption of 4,459 mt (490.49 ODP tonnes) of HCFC-141b were found eligible for funding. The enterprises are in the process of preparing their project proposals and are expected to sign contracts with FECO in November 2013.

57. In order to assist some of the enterprises that cannot establish hydrocarbon (HC) storage and pre-blending stations due to financial, safety and technical reasons, it was proposed to supply hydrocarbon pre-blended polyols through systems houses. FECO issued a notice to invite systems houses to apply in June 2013. After assessing their safety measures and location, six systems houses will be selected to receive funding (approximately US \$350,000) for installation of equipment and safety systems, and optimization of polyol formulations for different applications, trials and training.

⁸ The PU foam sector plan was approved by the Executive Committee at its 64th meeting to reduce HCFC consumption to a sustained level of 4,449.6 ODP tonnes by 1 January 2015.

⁹ The audit verified the eligibility of the enterprises, the levels of HCFC-141b consumption (including the review of purchase invoices), baseline equipment and its capacity.

Technical assistance

58. Several technical activities were carried out in order to support and promote phase-out activities as follows:

- (a) Training to the first group of enterprises on project requirements, financial and procurement regulations (March 2013), and on the preparation of on-site verification and their project proposal for conversion (May 2013);
- (b) Selection of four domestic experts by FECO to provide technical assistance and participate in the assessment of implementation plans, on-site verification and technical workshops;
- (c) On-site verification of consumption and technical and financial status on the first and second groups of enterprises and calculation of the grant amount to be provided to enterprises; and
- (d) Selection of an Implementation Support Agency (ISA) to assist FECO in day-to-day operational management, pre-review of project documents submitted by the first 31 foam enterprises, and providing supervision, commissioning and on-site verification.

Status of fund disbursement

59. As of early September 2013, of the total funding of US \$44,379,000 approved so far, US \$19,429,500 had been disbursed from the World Bank to FECO. Of this amount, US \$5,782,542 had been disbursed from FECO to the beneficiary enterprises as shown in Table 1.

Table 1 - Status of disbursements of the PU foam sector plan in China

PU foam sector plan		Tranche 1	Tranche 2	Total
Funds approved		38,859,000	5,520,000	44,379,000
Disbursement from the World Bank to FECO	Amount	19,429,500	0.0	19,429,500
	Percentage	50.0%	0.0%	43.8 %
Disbursement from FECO to beneficiaries (*)	Amount	5,782,542	0.0	5,782,542
	Percentage	14.9%	0.0%	13.0%

(*) Disbursement is composed of US \$5,244,695.20 disbursed to beneficiary enterprises and US \$537,847 used on technical assistance activities.

Annual plans for the third tranche of the HPMP

60. In 2014, FECO will verify 10 to 15 additional PU foam enterprises to assess their eligibility and HCFC-141b consumption and sign contracts; and will select six systems houses to allow the supply of pre-blended cyclopentane polyol formulations for downstream foam enterprises. The phase-out of the third tranche is estimated at 2,324 mt (255.64 ODP tonnes) of HCFC-141b. In addition, the 47 enterprises already being assisted will continue implementing their conversion expected to be completed in 2015.

61. Technical assistance activities include training workshops on procurement, verification and financial aspects to selected enterprises, baseline information verification for all new phase-out projects, and research on the ban of production, sale, import and export of reefer containers, refrigerators and freezers and small household appliances using HCFC-141b as blowing agent. They will also include contracting the ISA to assist in the selection of the new phase-out projects; performance verification for the projects started in 2012 and 2013; establishment of a technical support system to identify and test potential substitutes for small and medium-size enterprises (SMEs); and technical and financial assistance for conversion and training at the provincial level for enterprises that do not sign HCFC-141b phase-out contracts before 2015. The budget for activities in the third tranche is shown in Table 2.

Table 2 - Budget for the third tranche of the PU foam sector plan in China

Activity	Budget (US \$)
Conversion of PU foam enterprises to non-HCFC technology	11,732,400
Technical assistance activities	1,180,000
Project monitoring	679,600
Total third tranche	13,592,000

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

62. The Secretariat and the World Bank discussed issues related to the level of progress and disbursement achieved in the implementation of the plan, quota management for HCFC-141b control, and how the Government of China will address non-eligible consumption. A summary of the discussions is presented below.

HCFC consumption and reductions in consumption

63. Table 3 shows HCFC-141b consumption in the PU foam sector in China. Based on the actual level of consumption in 2012, the reduction required to reach the 2013 target is larger than the initially forecasted phase-out target of 6,116 mt. Therefore timely implementation of the investment projects and supported by the quota system are critical to reach compliance. It is also to be noted that part of the increase in the consumption is associated with the number of PU foam enterprises converted under stage I of the HPMP.

Table 3 - Consumption of HCFC-141b in the PU foam sector

	Country programme implementation report				Target		
	2009	2010	2011	2012	2013	2014	2015
HCFC-141b consumption (mt)	45,971	52,069	63,570	59,109	49,018(*)	49,018(*)	40,451(*)
HCFC-141b consumption (ODP tonnes)	5,056.8	5,727.5	6,992.7	6,501.9	5,392.2(*)	5,392.2(*)	4,449.6(*)
Phase-out target (mt)					6,116		8,569
Phase-out target (ODP tonnes)					672.8		942.6

(*) As per Agreement signed at the 67th meeting of the Executive Committee.

64. The World Bank explained that the conversion of the first two groups of enterprises being assisted, plus a third group to be assisted from 2014, will reduce more than the 12,000 mt target for eligible enterprises. In addition, the application of the quotas and the future ban on the use of HCFC-141b as blowing agent in the three selected sectors will support the phase-out efforts made by eligible enterprises and will also contribute to phase out 2,202 mt (242.0 ODP tonnes) of ineligible consumption (e.g., multinationals). These regulatory measures in combination with the provincial projects will assist many of the smaller enterprises to phase out HCFC consumption.

65. Furthermore, it is noted that the assistance to systems houses will ensure a supply of HC pre-blended polyols to a large number of enterprises that are not able to establish in their plants HC storage and pre-blending systems due to financial, safety and/or technical reasons. This would facilitate reductions on HCFC-141b consumption with potential savings for downstream foam enterprises as the HC pre-blending station could represent up to 35 per cent of the total incremental capital cost.

Level of implementation of activities achieved

66. The Secretariat noted that a large portion of the required reductions are already being addressed through individual phase-out contracts with enterprises, and projects to address 50 per cent of the reductions are already in different stages of implementation. The overall status of progress at the enterprise level is presented in Table 4.

Table 4 - Status of progress investment projects China PU foam sector plan

PU foam enterprises	Number of enterprises	Consumption (mt)	Contracts signature	Required to stop using HCFC-141b	Phase-out as share of plan phase-out (14,685 mt)
First group	31	7,411	Apr-13	2014 (11) 2015 (20)	50%
Second group	16	4,459	Nov-13	2015	30%
Third group	10 to 15	2,324	Sep to Dec-2014	2015	16%
Totals	57 to 62	14,194			96%

67. As reductions may effectively take place at least two years after the contracts are signed, which is after the reduction target of 2013 and in some cases 2015, compliance with the targets will be substantially facilitated by the existing quota and licensing system for large consumers. The World Bank also clarified that given the limited time available time to achieve the 10 per cent reduction; FECO will sign all the contracts within the first two years of implementation. The funding available from the first tranches will be used to sign all the required individual contracts; enterprises will be paid with funds from several tranches as they complete their conversions.

68. With regard to the first group of 31 enterprises, the World Bank indicated that there was an initial delay in signing the first contracts between FECO and each beneficiary enterprise due to procedural issues. However, significant progress has been achieved since then, as shown in Table 5.

Table 5 - Summary of progress of the first group of 31 PU foam enterprises

Project Status (milestone)	Enterprises currently in this step	Aggregated consumption (mt) (*)	Phase-out as share of plan phase-out (14,685 mt)	
			Currently in this milestone	Cumulative
Preparation of procurement	12	5,396.1	37%	50%
Equipment partially procured	4	220.8	1%	14%
All equipment procured	4	565.6	4%	12%
Purchased alternative materials	1	150.3	1%	8%
Stopped purchasing HCFC	10	1,079.0	7%	7%
Total	31	7,411.8		

(*) Year taken as reference is the year before on-site verification. For this group of enterprises: 2011

69. With regard to the second group of 16 enterprises, the World Bank indicated that FECO issued a notice to foam enterprises to submit project applications in February 2013; the training on the on-site verification and preparation of the project proposal was organized in March 2013; the verification of enterprises was carried out in June 2013; and the final assessment of the project proposals submitted by foam companies was in October 2013. Upon signing individual contracts with FECO in November 2013, the second group of enterprises will start the procurement process. These enterprises are expected to be converted by the end of 2015. The third batch of 10 to 15 foam enterprises, with an associated phase-out

of 2,324.00 mt (255.64 ODP tonnes), is expected to sign contracts between September and December 2014.

Status of fund disbursement

70. The Secretariat noted that at the time of submission of the tranche request¹⁰ the level of disbursement associated with the first tranche was 50 per cent from the World Bank to FECO and 14.9 per cent from FECO to final beneficiaries, while the level of disbursement associated with the second tranche from the World Bank to FECO was nil (Table 1). However, as of the first week of November 2013, the disbursement from FECO to beneficiary enterprises was 20.7 per cent of the total funds so far approved. In addition, the World Bank informed that the processing of an additional disbursement to FECO for US \$14,417,700 was taking place to become effective by the first week of November. The updated status of disbursements as of the first week of November is shown in Table 6.

Table 6 - Status of disbursement as of first week of November 2013

PU foam sector plan		Tranche 1	Tranche 2	Total
Funds approved		38,859,000	5,520,000	44,379,000
Disbursement from the World Bank to FECO	Amount	31,087,200	2,760,000	33,847,200
	Percentage	80.0%	50.0%	76.3%
Disbursement from FECO to beneficiaries	Amount	9,179,078	0	9,179,078
	Percentage	23.6%	0.0%	20.7%

71. It is the view of the World Bank that if the 20 per cent disbursement precondition is on a tranche-by-tranche basis, this would put pressure on the Government of China to only disburse up to 20 per cent of the previous tranche and seek for a release of another funding tranche from the implementing agencies. This approach would compel China to withhold larger inactive funds in its account just to ensure its compliance with the 20 per cent minimum disbursement requirement.

Interests

72. In line with decision 69/24(b)(ii) that requests implementing agencies to report on interest provided by China on funds transferred for the HPMP in the tranche implementation reports, the World Bank reported that according to the Grant Agreement between China and the World Bank, China is obliged to submit an audited financial report of the designated account on a calendar year basis. Given that funds for the PU foam sector plan were only transferred to China in 2013, no interest was accrued by FECO.

Conclusion

73. The Secretariat noted that the implementation of the PU foam sector plan is progressing as planned. Within the time available between the approval of the second tranche and the request of the third tranche, all the preparatory work for the signing of a first group of enterprises was completed and enterprises are at various stages of implementation. In addition, all the preparatory work for the signing of phase-out contracts for an additional 16 enterprises was completed and the contracts are expected to be signed by November 2013. The World Bank and FECO have implemented technical assistance activities that have facilitated the process of selecting and preparing enterprises for conversion to HCFC-free alternatives and will facilitate the introduction of pre-blended HC polyols by systems houses for enterprises that cannot establish in their plants HC storage and pre-blending systems. Although the level of disbursement of funding from FECO to final beneficiaries from the previously approved tranche has

¹⁰ Paragraph 5(b)(ii) of the Agreement establishes as precondition for the release of tranches for a sector plan that twelve weeks in advance of the applicable Executive Committee meeting *inter-alia* the rate of disbursement of funding available from the previously approved tranche was more than 20 per cent.

not reached 20 per cent yet, the overall level of disbursement from the World Bank to FECO and from FECO to beneficiaries surpasses 20 per cent of the funds approved.

RECOMMENDATION

74. The Executive Committee may wish to consider:

- (a) Noting the progress report on the implementation of the second tranche of stage I of the polyurethane rigid (PU) foam sector plan for China; and
- (b) Approving the third tranche of stage I of the PU foam sector plan for China, and the corresponding 2014 tranche implementation plan, at the amount of US \$13,592,000, plus agency support costs of US \$951,440 for the World Bank.

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

China

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

(II) LATEST ARTICLE 7 DATA (Annex C Group I)	Year: 2012	21,094.65 (ODP tonnes)
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(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)								Year: 2012	
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-123				10.2	5.4				15.6
HCFC-141b		6,502.0				523.1			7,025.0
HCFC-142b		637.0		7.2	348.7				992.8
HCFC-22	95.4	1,892.0		6,569.3	4,503.8				13,060.4
HCFC-225ca						0.4			0.4
HCFC-225cb						0.7			0.7

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

(V) BUSINESS PLAN		2013	2014	2015	2016	Total
UNDP	ODS phase-out (ODP tonnes)	106.53	138.9	114.74	0.0	360.17
	Funding (US \$)	9,089,650	11,850,250	9,790,500	0	30,730,400

(VI) PROJECT DATA			2011	2012	2013	2014	2015	Total
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 \$)	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	0	0	0	32,280,000
		Support costs	1,903,500	483,000	0	0	0	2,386,500
Total funds requested for approval at this meeting (US \$)		Project costs			8,495,000			8,495,000
		Support costs			594,650			594,650

Secretariat's recommendation:	For individual consideration
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PROJECT DESCRIPTION

75. On behalf of the Government of China, UNDP as the designated agency, has submitted to the 71st meeting of the Executive Committee a request for funding for the third tranche of the industrial and commercial refrigeration and air conditioning (ICR) sector plan¹¹ of stage I of the HCFC phase-out management plan (HPMP), at the amount of US \$8,495,000 plus agency support costs of US \$594,650 for UNDP. The submission includes the progress report on the implementation of the second tranche of the HPMP together with the tranche implementation plan for 2014-2015.

Report on the implementation of the second tranche of the ICR sector plan

76. A ceremony was held for the first four enterprises in the ICR sector signing their contracts in December 2012; and a workshop on environmentally-friendly refrigerants was held on occasion of the introduction of the first ammonia/CO₂ refrigeration system in China developed by Yantai Moon group as part of a Multilateral Fund demonstration project (see also document UNEP/OzL.Pro/ExCom/71/6). UNDP reported that this event has drawn substantial attention from the refrigeration industry in China and from users of such equipment. As part of the annual refrigeration exhibition in Shanghai, several side meetings on technology were organised.

77. Terms of reference (TOR) for identification of an accounting firm for conducting performance verification for the conversion contracts were developed. Co-ordination between UNDP and FECO regarding the implementation of the plan has taken place. A training workshop on implementing the conversion projects for the beneficiary enterprises has taken place. Nine conversion contracts comprising of 18 refrigeration production lines and two compressor production lines have been signed with an aggregated 5,807 metric tonnes (mt) (319.4 ODP tonnes) of HCFC-22 phase-out. Under these nine contracts, the conversion contracts cover production lines manufacturing compressors, industrial and commercial water chillers, variable refrigerant volume systems, small-sized water chillers, heat pumps, water heaters and compressor compressing units. The alternative technologies include HFC-410A, HFC-32, HFC-134A, ammonia and CO₂ technology.

78. Under the on-going research on HFC-32 safety standards and regulation, a series of experiments with HFC-32 relating to its flammability have been completed. About 15 standards on safety, energy efficiency, products standards and others were identified to need a revision to accommodate flammable refrigerants. TOR for background work on three standards were established and a bidding process initiated. TOR have also been developed for a study on the applicability of natural refrigerants in the ICR sector.

Status of disbursement

79. As of 9 September 2013, of the total funds approved, US \$25,380,000 has been disbursed as shown in Table 1. No funds from the second tranche had been disbursed¹².

Table 1 – Financial status of the annual plan for the third tranche of the HPMP as submitted

Year	Funding Released by ExCom (US \$)	Value of Contracts Signed (US \$)	Funds Disbursed (US \$)	Funds Committed but not disbursed (US \$)	Balance Uncommitted (US \$)
2011	25,380,000	25,380,000	25,380,000	0	0
2012	6,900,000	6,900,000	0	6,900,000	0
Total	32,280,000	32,280,000	25,380,000	6,900,000	0

¹¹ The ICR sector plan of the China HPMP was approved by the Executive Committee at its 64th meeting to reduce HCFC consumption to a sustained level of 2,162.5 ODP tonnes by 1 January 2015.

¹² The Agreement specified as a condition for approval that China has achieved at least 12 weeks before the applicable meeting a rate of disbursement of funding available from the previously approved tranche of more than 20 per cent.

Tranche implementation plan for 2014-2015

80. A number of technical assistance activities are foreseen, including awareness and training of personnel in the implementation of phase-out activities, formulation and revision of technical standards, a national technical support programme and a financial audit.

81. During 2014, it is planned to sign contracts with additional enterprises and production lines in the ICR sector with an aggregate consumption of 1,000 mt (55.0 ODP tonnes) of HCFC-22 which will require training workshops to invite participation of enterprises, submission of the letter of intent, verification of the enterprises consumption, preparation and assessment of project proposals and the signing of contracts.

82. The submission also included the names of the nine enterprises for which phase-out contracts have been concluded, the number of production lines to be converted for each of the enterprises, information regarding the alternative technology chosen and the funding level. The submission also contained similar to last year, a list of standards and regulations that will be updated by the end of 2014.

SECRETARIAT'S COMMENTS AND RECOMMENDATION**COMMENTS**Limitations to providing requested data

83. UNDP had in some cases not been in the position to provide the data requested by the Secretariat for its review. UNDP further advised that the Government of China felt information provided in response to questions by the Secretariat was sufficient to assess progress in the implementation of the plan and expressed concerns about providing this level of detailed information without a specific decision by the Executive Committee.

HCFC consumption and reductions in consumption

84. Table 2 provides the HCFC consumption in the ICR sector¹³.

Table 2 – Consumption of HCFC-22 in the ICR sector

	Actual				Target		
	2009	2010	2011	2012	2013	2014	2015
HCFC-22 consumption (mt)	41,850	46,000	48,213	47,463	43,690	43,690	39,320
HCFC-22 consumption (ODP tonnes)	2,301.75	2,530.00	2,651.72	2,610.47	2,402.80	2,402.80	2,162.50
Phase-out target (mt)	0	0	0	0	4,080	0	4,370
Phase-out target (ODP tonnes)	0	0	0	0	224.5	0	240.3

¹³ These figures are estimates since the distribution of HCFC-22 to different sectors cannot be monitored with accuracy.

85. UNDP provided information on the implementation of activities at the enterprise level including total HCFC-22 consumption, alternative technologies selected, foreseen funding, milestones achieved (i.e. dates of signing of contract and scheduled duration for the different conversion activities). However, UNDP was not in a position to share information regarding products manufactured, size of production lines, or, in case different technologies were associated with one manufacturer, which lines and consumption would be converted to one or the other technology. Based on the available information the Secretariat prepared Table 3.

Table 3 - Plan and actual reduction of HCFC-22 in the ICR sector

Estimated activity completion date	Phase-out (mt)		Phase-out foreseen in the plan (mt)	Phase-out as share of plan phase-out	
	Per quarter	Aggregated		Per quarter	Aggregated
Before 2013			4,075		
2013 – 3 rd quarter*	250	250		3%	3%
2014 – 2 nd quarter	246	496		2.9%	5.9%
2014 – 3 rd quarter*	62	558		0.7%	6.6%
2014 – 4 th quarter	2,714	3,271		32.2%	38.8%
Before 2015 (includes 2013)			8,440		
2015 – 1 st quarter	396	3,667		4.7%	43.4%
2015 – 2 nd quarter	2,239	5,906		26.5%	70.0%
2015 – 3 rd quarter	127	6,033		1.5%	71.5%

* Phase-out from demonstration projects¹⁴

86. The information presented in Table 3 indicates that the Government could achieve 12 per cent planned reduction in the ICR sector before 2015 by successfully and timely implementing the activities already initiated. Activities not yet under implementation are unlikely to be completed by December 2014. Meeting the targeted sector consumption for 2015 will therefore rely on overall market development in the ICR sector as well as on the conversions of additional manufacturers not covered by stage I or not eligible for support. Compliance with the target will be supported by the quota and licencing systems for large consumer.

Use of different technologies in conversion projects

87. The ICR sector plan foresees a number of different replacement technologies for HCFC-22. In the progress report, it was indicated that the enterprises would use as alternatives HFC-32/HFC-410A, HFC-32, HFC-32/HFC-134a, R-717/HFC-134a and CO₂. UNDP was not in a position to share information on what products, manufacturing lines or consumption would be associated with the different technologies, or what combined technology information such as R-717/HFC-134a would entail. However, three enterprises employ only one alternative technology, namely HFC-32. The Secretariat analysed the information, and found that the total phase-out in these three enterprises (five manufacturing lines) amounts to 641.7 mt (35.29 ODP tonnes), resulting in a cost effectiveness value of US \$6.46/kg. In comparison, the average value of the cost effectiveness of all conversions under the ICR sector plan where contracts have already been signed is US \$4.75/kg.

¹⁴ One production line has been converted to HFC-32 in 2012, but production has not commenced due to outstanding standard ISO5149 needed for marketing of the product; completion of conversion is therefore only estimated.

Level of implementation of activities achieved

88. Based on the information provided by UNDP the Secretariat concluded that contracts have been signed for the conversion of production lines relating to 70 per cent of the consumption to be phased out. Product design has finished and procurement started for 46 per cent of the consumption. Procurement is advanced for 12 per cent of the consumption to be phased out under stage I of the sector plan.¹⁵

89. The non-investment components of the sector plan are progressing satisfactory. The project's management structures such as verification of consumption and expenditures, computerized management information system and technical support capabilities are available and will be further strengthened in the next year.

Disbursement

90. Based on a query by the Secretariat, UNDP provided more information on disbursements as of 9 September 2013 (i.e. 12 weeks in advance of the 71st meeting) and as of end of October 2013, as is shown in Table 4 below.

Table 4 – Information on disbursements under the ICR sector plan

Tranche approved		64 th meeting	68 th meeting
Approved	(US \$)	25,380,000	6,900,000
Disbursed as per deadline	To FECO (US \$)	25,380,000	6,900,000
	To FECO (%)	100.0%	100.0%
	For FECO activities (US \$)	1,649,700	375,761
	To beneficiaries (US \$)	1,520,000	320,000
	For FECO activities and to beneficiaries (%)	12.5%	10.1%
Disbursed as per latest information	For FECO activities (US \$)	1,649,700	375,761
	To beneficiaries (US \$)	3,726,000	2,069,902
	For FECO activities and to beneficiaries (%)	21.2%	35.4%

Interest

91. UNDP informed the Secretariat that FECO has earned US \$70,627 as interest earned from funding transferred to FECO by UNDP for the purpose of implementation of the ICR sector plan (as of 31 December 2012).

Conclusion

92. The ICR sector plan shows significant progress. The overall progress and the targeted completion dates for the conversions support this assessment. The non-investment activities address important parts of the management of the sector plans. The disbursement from UNDP to FECO has reached 100 per cent of the amount approved for the second tranche by 9 September 2013. However, at that time, the disbursement from FECO to beneficiaries had only reached 12.5 per cent for the first and 10.1 per cent for the second tranche. At the time of finalisation of the document, these figures have risen to 21.2 and 35.4 per cent, respectively. Activities under the sector plan and the previously approved demonstration projects will contribute 38.8 per cent to achieving the 2015 ICR sector reduction target.

¹⁵ UNDP provided a comment that for one manufacturer, a contract had been signed and certain progress occurred in some lines but not others, and information was only provided for four lines while five were to be converted. When requested by the Secretariat to provide disaggregated data UNDP was not in the position to share more information. For this case, the Secretariat assumed five production lines of equal size and no progress for the line with no data, and some progress for three lines with unclear data.

RECOMMENDATION

93. The Executive Committee may wish to consider:
- (a) Noting the progress report on the implementation of the second tranche of stage I of the industrial and commercial refrigeration and air conditioning (ICR) sector plan for China;
 - (b) Approving the third tranche of stage I of the ICR sector plan for China, and the corresponding 2014-2015 tranche implementation plan, at the amount of US \$8,495,000 plus agency support costs of US \$594,650 for UNDP; and
 - (c) Requesting the Treasurer to offset future transfers to UNDP by US \$70,627 representing interest accrued by the Government of China up to 31 December 2012 from funds previously transferred for the implementation of the ICR sector plan for China as per decision 69/24.

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

China

(I) PROJECT TITLE	AGENCY
HCFC phase out plan (stage I) room air conditioning (RAC)	UNIDO (lead)

(II) LATEST ARTICLE 7 DATA (Annex C Group I)	Year: 2012	21,094.65 (ODP tonnes)
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(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)								Year: 2012	
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-123				10.2	5.4				15.6
HCFC-141b		6,502.0				523.1			7,025.0
HCFC-142b		637.0		7.2	348.7				992.8
HCFC-22	95.4	1,892.0		6,569.3	4,503.8				13,060.4
HCFC-225ca						0.4			0.4
HCFC-225cb						0.7			0.7

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

(V) BUSINESS PLAN		2013	2014	2015	2016	Total
UNIDO	ODS phase-out (ODP tonnes)	106.54	120.71	141.09	0.0	368.34
	Funding (US \$)	9,089,650	10,298,750	12,037,500	0	31,425,900

(VI) PROJECT DATA			2011	2012	2013	2014	2015	Total
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 \$)	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	0	0	0	45,630,000
		Support costs	2,732,250	644,000	0	0	0	3,376,250
Total funds requested for approval at this meeting (US \$)		Project costs			8,495,000			8,495,000
		Support costs			594,650			594,650

Secretariat's recommendation:	For individual consideration
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PROJECT DESCRIPTION

94. On behalf of the Government of China, UNIDO as the designated implementing agency has submitted to the 71st meeting of the Executive Committee a request for funding for the third tranche of the room air conditioner manufacturing (RAC) sector plan¹⁶ of stage I of the HCFC phase-out management plan (HPMP) for China, at the amount of US \$8,495,000 plus agency support cost of US \$594,650. The submission includes the progress report on the implementation of the second tranche of the HPMP together with the tranche implementation plan for 2014-2015.

Report on the implementation of the second tranche of the RAC sector plan

95. During the previous year, several presentations were made in national and international fora by manufacturers of air conditioning equipment and air conditioning compressors; an official ceremony was held where the contract with Haier (the air conditioner manufacturer) for the conversion of its production line was signed; and community events for non-HCFC air conditioners. A procurement capacity assessment of beneficiaries was carried out. HCFC conversion proposals from different enterprises were reviewed and assessed, eligible cost was determined and the funding scheme was developed. Conversion contracts were signed with seven enterprises, partially with multiple lines, and the conversion to hydrocarbon technology for eight production lines funded from the first tranche and one from the second was initiated. Under the first funding tranche, seven additional production lines associated with six manufacturers have commenced conversion to HFC-410A technology, and one more under the second tranche. Also one conversion of a compressor production line to hydrocarbon technology with funding from the first tranche and two more with funding from the second tranches were initiated.

96. Research through literature review and experiments on the flammability of hydrocarbons and risks associated with their use in room air conditioners have been conducted, documented and published. Activities in the formulation and adaptation of existing standards applicable to room air conditioners using flammable refrigerants in general and HC-290 (propane) in particular were also implemented. A new version of the national standard GB 4706.32 of China allowing the use of flammable refrigerants in air conditioners was approved. Such a standard is a precondition for marketing any related product.

Status of disbursement

97. Table 1 presents the financial status of the annual plan for the RAC sector in China (as of 9 September 2013, with estimates for disbursements for October and November 2013 from FECO to beneficiaries¹⁷).

Table 1 – Financial status of the annual plan for the third tranche of the RAC sector plan as submitted (US \$)

Tranche	Funding released by ExCom*	Value of contract signed with FECO (Committed)*	Funds disbursed by UNIDO*	Funds committed by FECO*	Funds disbursed by FECO*
Tranche 1	36,430,000	36,430,000	18,215,000	32,581,793	8,253,000
Tranche 2	9,200,000	9,200,000	4,600,000**	7,213,176	2,046,000***
Total	45,630,000	45,630,000	22,815,000	39,794,969	10,299,000

* Excluding agency support costs.

** By October 2013 (as forecasted by 9 September 2013).

*** By November 2013, estimated (as forecasted by 9 September 2013).

¹⁶ The RAC sector plan of the China HPMP was approved by the Executive Committee at its 64th meeting to reduce HCFC consumption to a sustained level of 3,697.9 ODP tonnes by 1 January 2015

¹⁷ The Agreement specified as a condition for approval that China has achieved at least 12 weeks before the applicable meeting a rate of disbursement of funding available from the previously approved tranche of more than 20 per cent.

Tranche implementation plan for 2014-2015

98. The tranche implementation plan foresees specific policy and government activities related to the RAC sector, in particular in substitute development, facilitation of further market penetration of HC-290 (propane) air conditioners and providing support to technical manufacturers on the alternative technologies. A HCFC quota management system for manufacturers and a management information system will be established. Several meetings will be undertaken to distribute information and share experiences of using HC-290 and other low global warming potential (GWP) alternative technologies. A study tour for the project management team and national experts will be organized to visit countries that are using HCFC alternatives. CHEAA, the association of household electrical appliance manufacturers, will provide assistance and support on the implementation and management of the project. Training of personnel will continue, and consultancy services will be contracted as needed.

99. Contracts with three additional enterprises for the conversion of four production lines with a consumption of 892 metric tonnes (mt) (49.06 ODP tonnes) of HCFC-22 in the RAC sector are expected to be signed no later than September 2014. UNIDO provided information on potential candidates as part of the proposal. The submission also included a detailed fund allocation plan for the different tranches and information of the baseline consumption of 40 air conditioning manufacturers.

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

100. Table 2 presents HCFC-22 consumption in the RAC sector¹⁸. The consumption in 2012 was 2,100 mt (115.5 ODP tonnes) lower than forecasted, caused by the decrease of the global market for such systems.

Table 2 – Consumption of HCFC-22 in the RAC sector

	Actual				Target		
	2009	2010	2011	2012	2013	2014	2015
HCFC-22 consumption (mt)	71,500	77,900	74,700	72,600	74,700	74,700	67,230
HCFC-22 consumption (ODP tonnes)	3,932.50	4,284.50	4,108.50	3,993.00	4,108.50	4,108.50	3,697.70
Phase-out target (mt)	0	0	0	0	3,200	0	7,470
Phase-out target (ODP tonnes)	0	0	0	0	176	0	410.9

¹⁸ These figures are estimates since the distribution of HCFC-22 to different sectors cannot be monitored with accuracy

101. UNIDO provided information about the implementation progress by enterprise including HCFC-22 consumption, alternative technology selected, foreseen funding, milestones achieved and the estimated completion date. Based on this information, the Secretariat prepared Table 3.

Table 3 - Plan and actual reduction of HCFC-22 in the RAC sector

Estimated activity completion date	Phase-out (mt)		Phase-out foreseen in the plan (mt)	Phase-out as share of plan phase-out	
	Per quarter	Aggregated		Per quarter	Aggregated
Before 2013			2,044*		
2013 – 4 th quarter	2,598	2,598		27.3%	27.3%
2014 – 1 st quarter	364	2,963		3.8%	31.1%
2014 – 2 nd quarter	892	3,854		9.4%	40.5%
2014 – 3 rd quarter	2,128	5,983		22.4%	62.9%
2014 – 4 th quarter	721	6,704		7.6%	70.4%
Before 2015 (includes 2013)			9,454		

*Plus phase-out associated with the demonstration project at Midea (250 mt) and non-eligible enterprises (968 mt).

102. The Government of China could achieve 70 per cent of the planned reduction in the RAC sector by successfully and timely implementing the activities already initiated. Activities not yet under implementation are unlikely to be completed by December 2014. Meeting the targeted sector consumption for 2015 will therefore rely on overall market development in the RAC sector as well as on the conversions of additional manufacturers not covered by stage I or not eligible for support. Compliance with the target will be supported by the quota and licencing system for large consumers.

Level of implementation of activities achieved

103. Contracts have been signed for the conversion of production lines relating to 70 per cent of the consumption to be phased out; 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.

104. The non-investment components of the sector plan are progressing as planned. The implementation emphasises significantly on activities related to standardization and certification of HC-290 air conditioners, which is a pre-condition for successful introduction of the technology in China. As a result of these activities, an important standard for air conditioners with HC-290 has been adopted. The project management structures have been predominantly established and will be further strengthened in the next year.

Interest

105. UNIDO informed the Secretariat that FECO has earned US \$9,513 in interest accrued from funding transferred to FECO by UNIDO for of implementation of the RAC sector plan (as of 31 December 2012).

Use of hydrocarbon technology in conversion projects

106. Based on the information available, the Secretariat performed an analysis to assess the progress in the implementation of HC-290 technology in the air conditioning manufacturing sector in China.¹⁹ The results of the analysis are shown in Table 4 below.

Table 4 - Conversions to different technologies – plan and current status²⁰

Comparison	Plan / estimate		Current status			
	HC-290	HFC-410A	HC-290	HFC-410A	Total	Total as share of plan
Technology						
Number of AC equipment manufacturing lines	18	10	9	9	18	≤ 67 %
Consumption phase-out	9,454		3,741**	3,196	6,937	73.4%
Average consumption per line	297		416	355	385	n/a
Costs/value of contracts signed AC manufacturers	n/a	n/a	27,681,949	4,916,021	32,597,970	n/a
Compressor manufacturing lines	3.0	0.0	3.0	0.0	3.0	100.0%
Total costs / value of contracts signed	67,500,000*		31,794,851	4,916,021	36,710,872	54.4%

*Estimate, assuming 10 per cent of approved funding as technical assistance and overhead.

** In addition, 250 mt have been converted to HC-290 technology in the demonstration project at Midea.

107. At the time of concluding the discussions on the RAC sector plan, the approach that had been followed is to convert to HFC-410A technology to comply with the 2013 compliance target, and to convert to HC-290 technology to meet the 2015 target given the fact that it remains challenging to market HC-290 air conditioners due to, *inter alia*, uncertainties regarding the applicable standards. Despite this, conversion contracts to HC-290 have been concluded at the same pace as those to HFC-410A, and the production lines to be converted have on average a larger consumption of HCFC-22. The Secretariat also noted that the average cost effectiveness for hydrocarbon conversions is US \$7.66/kg while for HFC-410A is only US \$1.63/kg. On the assumption that average cost effectiveness and size of the production lines remain constant for the rest of stage I, the remaining phase-out contracts would solely relate to conversions to hydrocarbons technology within the approved budget. The Secretariat noted that four more production lines with a consumption of 1,376 mt (75.68 ODP tonnes) of HCFC-22 were identified for conversion to hydrocarbon technology, with contracts to be signed in 2014.

¹⁹ The Agreement between the Government of China and the Executive Committee includes in its Appendix 8-A that during stage I of the HPMP, China agrees to convert at least 18 manufacturing lines for the production of RAC equipment to hydrocarbon technology.

²⁰ The conversion costs in the table are given as the costs occurring to the project. Eight of the 20 contracts are with enterprises with a share of foreign ownership, one of them a compressor manufacturer. Would the foreign ownership quota be used to calculate the actual value of the conversion contracts, the costs shown in the table would increase by US \$982,990 for the current status of air conditioner manufacturing conversions to hydrocarbons and US \$304,109 for HFC-410A. The aggregated cost differential related to all conversions would be US \$1,651,776.

Progress in relation to standards on hydrocarbon

108. In May 2013, GB4706.32, the “Standard of Safety of Household and Similar Electrical Appliances – Particular Requirements for Heat Pumps, Air-Conditioner and Dehumidifier”, came into effect in China. The standard is equivalent to the international standard IEC 60335-2-40, which allows application of flammable refrigerants in air-conditioner systems within certain limits. Another important international standard currently under revision is ISO 5419, which has a corresponding Chinese standard, deals with refrigeration applications in general, and currently does not allow for the use of hydrocarbons in RAC equipment. Under this circumstance, manufacturers in China are reluctant to market a new technology if it is not facilitated by all applicable standards. UNIDO also informed that work on three more standards is foreseen for 2014: on installation and servicing of room air conditioners with flammable refrigerant; on the production lines for room air conditioners with flammable refrigerant; on the transportation of room air conditioners with flammable refrigerant. All three are needed for the facilitation of the introduction of hydrocarbon air conditioners.

109. The Secretariat and UNIDO also discussed the results of an expert meeting in 2013 on the marketing of hydrocarbon air conditioners:

- (a) The first pre-condition for marketing HC-290-based air conditioners is the appropriate product certification. A number of manufacturers applied for this certification, and the products were sent for testing. However, the certification body has no experience with testing the safety of air conditioners with a flammable refrigerant, and needs to define a suitable test for this type of equipment. As of to date, no certification has been approved;
- (b) The need to consider the ability to service and install HC-290 air conditioners as an important pre-condition for the introduction of technology: Related standards are to be developed, and service workshops handling HC-290 air conditioners need to be equipped with the necessary tools to use flammable substances, and their know-how needs to be upgraded;
- (c) Products with hydrocarbons might be more expensive than products using non-flammable refrigerants due to the cost of the safety measures;
- (d) The current situation on standards is the major obstacle for the market introduction of HC-290 air conditioners. It was noted that the international standard committee responsible for IEC 60335-2-40 considers proposals by some members to lower the allowed hydrocarbon charge for air conditioning systems;
- (e) The energy efficiency of the HC-290 air conditioners is higher than the energy efficiency of the HCFC-22 and HFC-410A systems, according to studies by experts and manufacturers. It turns out that the energy efficiency is partly dependent on the charge amount, the limit of 300 g in one particular design (according to the new standard) leading to an energy efficiency 10 to 15 per cent lower than a system charged with 320 g; and
- (f) A number of manufacturers are meant to complete their conversion to hydrocarbon technology during 2014. Suggestions were made to introduce first sealed systems in 2014 (e.g. window-type air conditioners, dehumidifiers, split room air conditioners with low capacity) to gain experience on how the market will react.

Disbursement

110. Table 5 presents the information on disbursements under the RAC sector plan.

Table 5 – Information on disbursements under the RAC sector plan

Tranche approved		64 th meeting	68 th meeting
Approved	(US \$)	36,430,000	9,200,000
Disbursed as of 9 September 2013	To FECO (US \$)	18,215,000	4,600,000
	To FECO (%)	50.0%	50.0%
	For FECO activities (US \$)	8,253,000	0
	To beneficiaries (US \$)		546,489.00
	For FECO activities and to beneficiaries (%)	22.7%	5.9%
Disbursed as of 1 November 2013	For FECO activities (US \$)	8,253,000	0
	To beneficiaries (US \$)		1,702,810
	For FECO activities and to beneficiaries (%)	22.7%	18.5%

Conclusion

111. The implementation of the RAC sector plan is progressing as planned. The introduction of low-GWP technology and the targeted completion dates for the conversions support this assessment. The non-investment activities address not only the management of the sector plan but also important obstacles for a smooth conversion. The disbursement from UNIDO to FECO has reached 50 per cent of the amount approved for the second tranche by 9 September. However, at that time, the disbursement from FECO to beneficiaries has only reached 5.9 per cent. At the time of finalisation of the document, this amount has risen to 18.5 per cent. The adoption of standard GB 4706.82 (IEC 60335-2-40) is an important milestone, so will be the three new standards to be adopted in 2014. Finalisation of the international standard ISO 5419 is urgently awaited to allow its publishing as a national standard.

RECOMMENDATION

112. The Executive Committee may wish to consider:

- (a) Noting the progress report on the implementation of the second 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, and the corresponding 2014-2015 tranche implementation plans, at the amount of US \$8,495,000 plus agency support costs of US \$594,650 for UNIDO; and
- (c) Requesting the Treasurer to offset future transfers to UNIDO by US \$9,513 representing interest accrued by the Government of China up to 31 December 2012 from funds previously transferred for the implementation of the RAC sector plan for China as per decision 69/24.

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS
China

(I) PROJECT TITLE	AGENCY
HCFC phase out plan (stage I) servicing sector, including enabling	Japan, UNEP (lead)

(II) LATEST ARTICLE 7 DATA (Annex C Group I)	Year: 2012	21,094.65 (ODP tonnes)
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(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)							Year: 2012		
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-123				10.2	5.4				15.6
HCFC-141b		6,502.0				523.1			7,025.0
HCFC-142b		637.0		7.2	348.7				992.8
HCFC-22	95.4	1,892.0		6,569.3	4,503.8				13,060.4
HCFC-225ca						0.4			0.4
HCFC-225cb						0.7			0.7

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

(V) BUSINESS PLAN		2013	2014	2015	Total
Japan	ODS phase-out (ODP tonnes)	1.0	1.0	1.0	3.0
	Funding (US \$)	90,400	90,400	90,400	271,200
UNEP	ODS phase-out (ODP tonnes)	13.9	14.7	9.9	38.5
	Funding (US \$)	1,227,546	1,304,268	873,960	3,405,774

(VI) PROJECT DATA			2011	2012	2013	2014	2015	Total
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 \$)	Japan	Project costs	80,000	80,000	80,000	80,000	80,000	400,000
		Support costs	10,400	10,400	10,400	10,400	10,400	52,000
	UNEP	Project costs	1,579,000	598,000	1,104,000	1,173,000	786,000	5,240,000
		Support costs	176,703	66,921	123,547	131,269	87,960	586,400
Funds approved by ExCom (US \$)	Project costs	1,659,000	678,000	0	0	0	2,337,000	
	Support costs	187,103	77,321	0	0	0	264,424	
Total funds requested for approval at this meeting (US \$)	Project costs	0	0	1,184,000	0	0	1,184,000	
	Support costs	0	0	133,947	0	0	133,947	

Secretariat's recommendation:	For individual consideration
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PROJECT DESCRIPTION

113. On behalf of the Government of China, UNEP as the lead implementing agency, has submitted to the 71st meeting of the Executive Committee a request for funding for the third tranche of the refrigeration servicing sector plan and the national enabling programme²¹ of stage I of the HCFC phase-out management plan (HPMP) for China at the amount of US \$1,317,947, consisting of US \$1,104,000, plus agency support costs of US \$123,547 for UNEP, and US \$80,000, plus agency support costs of US \$10,400 for the Government of Japan. The submission includes a progress report on the implementation of the second tranche of the HPMP and the tranche implementation plan for 2014.

Progress report on the implementation of the second tranche

114. The following activities have been implemented since the approval of the second tranche:

- (a) The implementation plan for the first tranche was finalized and signed in January 2013, while an Amendment of the Project Cooperation Agreement (PCA) between UNEP and FECO to include the funding approved for the second tranche and its corresponding activities was completed and signed in September 2013;
- (b) Procurement of two industry codes/standards for the servicing sector was completed in 2013. The terms of reference for adopting these codes to China and hiring of the consultant after the procurement process was agreed in March 2013;
- (c) A contract between FECO and the Chinese Refrigeration and Air-conditioning Industry Association (CRAA) for the development of training materials was signed in September 2013;
- (d) A feasibility study to support the certification of service technicians had been initiated. In October 2013, a contract was signed with the Vocational Training and Qualification Certification of China to undertake the study;
- (e) Stakeholder consultations, data survey of the local refrigerant servicing market and one training workshop on the progress of the implementation of the HPMP, overall compliance to the Montreal Protocol and enforcement of ODS regulations and the use of refrigerant identifiers were completed as part of the implementation of the Shenzhen demonstration project;
- (f) A training workshop with 90 participants to build capacity of local authorities to support the HCFC phase-out was held in June 2013; and
- (g) Outreach and communication activities were also completed, focusing on Ozone Day, with a youth video competition and awards given during the period.

²¹ The refrigeration servicing sector plan and the national enabling programme for China, as a component of stage I of the HCFC phase-out management plan (HPMP) was approved at 64th meeting, at a total funding of US \$5,640,000, for UNEP and the Government of Japan.

Status of disbursement

115. Of the US \$2,337,000 approved so far²², US \$680,000 was disbursed by UNEP to FECO/MEP on 13 September 2012 under the PCA. A second payment of US \$340,000 under the PCA is in process but has not yet been transferred to FECO at the time this document was written.

Annual plan for the third tranche of the HPMP

116. The requested funding for the third tranche will be used to:

- (a) Finalize training materials and undertake training of service technicians on good refrigeration practices; continue the development and finalization of the Qualification and/or Compulsory Certificate System for servicing technicians; complete the development of standards/codes activities in servicing sector; and continue activities of the Shenzhen project which will demonstrate work for the servicing sector through the local Environmental Protection Bureau (EPB) (US \$685,500);
- (b) Undertake policy training for national and local authorities to support Government actions for the refrigeration servicing sector to achieve its target under the HPMP and finalize the development of training materials and update the on-line training delivery system (US \$125,000);
- (c) Finalize training materials for customs officers; train additional customs and enforcement officers on identification and control of HCFC imports and exports; and purchase 30 sets of ODS identifiers (US \$160,000);
- (d) Continue capacity-building of national and local authorities (no new funding required);
- (e) Continue outreach and awareness raising activities focusing on strengthening the social media and website component of the activities, activities for International Ozone Day and development and printing of publicity materials (US \$122,500);
- (f) Support to the operation of the working group overseeing the implementation of the service sector plan in China (US \$71,000); and
- (g) UNEP technical assistance (US \$20,000).

SECRETARIAT'S COMMENTS AND RECOMMENDATION**COMMENTS**Level of implementation of activities achieved

117. The Secretariat noted limited progress in the implementation of the activities planned for the second tranche. In general, the reported achievements during the period were in the form of contracts signed and agreements finalized with various stakeholders. However, no training of customs officers or refrigeration technicians was provided, nor equipment was purchased and distributed.

²² Of this amount, US \$308,500 has been allocated for procurement of equipment, and meeting resource persons, and will be disbursed through a Small Scale Funding Agreement (SSFA) directly to FECO.

118. UNEP advised the Secretariat as it had during the previous tranche request that, as China is a large country with many stakeholders, after the finalization of the overall work plan in September 2012, more time was required to initiate the specific activities on the ground. Agreements and contracts have now been signed, delays in the implementation of the activities should be minimal

119. The Secretariat further advised UNEP that the servicing sector work plan needed to be updated to define specific indicators and targets for the activities that would be implemented for each tranche. This would allow for quantitative assessment, a more efficient monitoring of progress, and facilitate better reporting. Accordingly, the Secretariat provided UNEP with a draft format to use as reference, drawing upon the activities that had been identified in the progress report, for the overall work plan for the sector. In discussions with UNEP, the Secretariat was informed that the Government of China was reluctant to adopt what it considered to be new reporting requirements which may be difficult to comply with. The Secretariat encouraged UNEP to further discuss with FECO/MEP and come up with an acceptable format that will enable the objective determination of significant progress in implementation for future tranches.

Level of disbursement

120. Based on the financial report included in the proposal, of the total funding so far approved, US \$680,000 has been disbursed from UNEP to FECO, and no further fund transfers have been made as of the time of finalization of the present document.

Conclusion

121. Based on the information contained in the progress report, the responses to the Secretariat's queries, and further discussions with UNEP, the Secretariat noted that implementation of the activities in the refrigeration servicing sector are not progressing as planned. Furthermore, of the US \$2,337,000 so far approved, only US \$680,000 has been disbursed (from the first tranche only).

122. Based on the above, the Secretariat further noted that the current request does not meet the required pre-conditions for the release of the third tranche of the HPMP.

RECOMMENDATION

123. In light of the Secretariat's comments above, the Executive Committee may wish to consider:

- (a) Noting the progress report on the implementation of the second tranche of stage I of the refrigeration servicing sector plan and the national enabling programme for China; and
- (b) Whether or not to approve the third tranche of stage I of the refrigeration servicing sector plan and the national enabling programme for China, and the corresponding 2014 tranche implementation plan, at the amount of US \$1,317,947, consisting of US \$1,104,000, plus agency support costs of US \$123,547 for UNEP, and US \$80,000, plus agency support costs of US \$10,400 for the Government of Japan.

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS
China

(I) PROJECT TITLE	AGENCY
HCFC phase out plan (stage I) solvent	UNDP (lead)

(II) LATEST ARTICLE 7 DATA (Annex C Group I)	Year: 2012	21,094.65 (ODP tonnes)
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(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)							Year: 2012		
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-123				10.2	5.4				15.6
HCFC-141b		6,502.0				523.1			7,025.0
HCFC-142b		637.0		7.2	348.7				992.8
HCFC-22	95.4	1,892.0		6,569.3	4,503.8				13,060.4
HCFC-225ca						0.4			0.4
HCFC-225cb						0.7			0.7

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

(V) BUSINESS PLAN		2013	2014	2015	2016	Total
UNDP	ODS phase-out (ODP tonnes)	25.08	0	6.27	0	31.35
	Funding (US \$)	2,140,000	0	535,000	0	2,657,000

(VI) PROJECT DATA			2011	2012	2013	2014	2015	Total
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 \$)	UNDP	Project costs	2,500,000		2,000,000		500,000	5,000,000
		Support costs	187,500		140,000		35,000	362,500
Funds approved by ExCom (US \$)		Project Costs	2,500,000	0	0	0	0	2,500,000
		Support Costs	187,500	0	0	0	0	187,500
Total funds requested for approval at this meeting (US \$)		Project Costs			2,000,000			2,000,000
		Support Costs			140,000			140,000

Secretariat's recommendation:	For individual consideration
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PROJECT DESCRIPTION

124. On behalf of the Government of China, UNDP as the designated implementing agency has submitted to the 71st meeting of the Executive Committee a request for funding for the second tranche of the solvent sector²³ plan of stage I of the HCFC phase-out management plan (HPMP), at the amount of US \$2,000,000 plus agency support costs of US \$140,000. The submission includes the progress report on the implementation of the first tranche of the HPMP together with the tranche implementation plan for 2014-2015.

Progress report on the first tranche of the solvent sector plan

125. The project document between UNDP and FECO was signed in May 2012. In 2013, contracts for four individual enterprises were signed with a phase-out of 353.3 metric tonnes (mt) (38.86 ODP tonnes) of HCFC-141b. All of the four enterprises have selected KC-6 as the replacement technology developed in China. The conversion will be completed in 2015. By September 2013, tenders for equipment have been completed and contracts awarded.

126. Five more enterprises using 259.3 mt (28.52 ODP tonnes) of HCFC-141b as a solvent have submitted project applications, were visited by verifiers, and contracts are expected to be signed in November 2013. One additional enterprise, which had originally applied for a conversion project, was unable to select the suitable technology and secure counterpart funding, and consequently withdrew its application.

127. Technical experts have been selected to participate in the assessment of the implementation plan and provide advice during the implementation of the plan. An accounting firm was contracted to assist FECO in the verification of the baseline consumption, evaluation of the financial status of beneficiaries, and providing financial appraisal for selection of the beneficiary enterprises. Training workshops have been conducted in 2013 with participants from enterprises, the accounting firm and experts. Additional workshops were conducted to review the implementation plan and to review the progress made in implementation.

Status of disbursement

128. The project proposal included information on the financial status as presented in Table 1 below.

Table 1 - Financial status of the annual plan for the second tranche of the HPMP as submitted

Year (2011-2013)	Funding released by ExCom (US \$)	Funds disbursed by UNDP (US \$)	Contract committed (US \$)	Funds disbursed by FECO (US \$)	Interest (US \$)	Balance in UNDP (US \$)
UNDP	2,500,000	2,000,000	2,468,882	707,701.2*	2,289**	500,000

* This figure subsequently increased to US \$716,565 in October 2013, without impact on the assessment and recommendation of the Secretariat

**As of 31 December 2012

²³ The solvent sector plan of the China HPMP was approved by the Executive Committee at its 65th meeting to reduce HCFC consumption to a sustained level of 455.2 ODP tonnes by 1 January 2015

Annual plans for 2014 and 2015

129. By the end of 2013, it is expected that nine phase-out contracts will have been signed. No additional phase-out contracts are expected to be signed in 2014 and 2015. UNDP and FECO will concentrate on implementing the conversion of the nine enterprises (i.e. procurement, assessment of achievements, payment to enterprises, commissioning and training). FECO will also undertake public awareness activities, in particular attending the annual meeting of the Medical Devices Association, where solvent users in the medical sector are represented, to raise awareness of the accelerated HCFC phase-out, and to distribute information materials. Training workshops and meetings will train the staff of the enterprises to facilitate the implementation. Consultants will continue to carry out field visits, verification, commissioning, assisting in training workshops and technical investigations on alternative technologies. A financial audit will be conducted to ensure that beneficiary enterprises follow the financial requirements, and that the disbursement has occurred before FECO transfers additional funding. A monitoring information system will be established during 2014, and a study tour for the product management team and national experts will be organized, visiting countries using HCFC alternatives in order to study and exchange information on such technologies.

130. The submission also included tables with the name of all nine beneficiaries under the sector plan, the eligible consumption for the four enterprises where contracts have been signed, and the baseline for the other enterprises, the alternative technologies selected as well as for those enterprises which have already signed contracts, the contract value and the date of signing of the contract. Information of the completion date for those enterprises which have already signed contracts was also included. Finally, the submission included lessons learned during the implementation of the first tranche.

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

131. HCFC-141b consumption in the solvent sector is presented in Table 2²⁴. In 2012, consumption of HCFC-141b was about 6 per cent higher than the sector consumption target for 2013.

Table 2 – Consumption of HCFC-141b in the solvent sector

	Actual				Target		
	2009*	2010*	2011**	2012**	2013	2014	2015
HCFC-141b consumption (mt)	4,352.0	4,612.0	4,660.0	4,755.0	4,482.0	4,482.0	4,127.0
HCFC-141b consumption (ODP t)	478.72	507.32	512.60	523.05	493.02	493.02	453.97
Phase-out target (mt)	0.0	0.0	0.0	0.0	272.7	0.0	354.5
Phase-out target (ODP t)	0.00	0.00	0.00	0.00	30.00	0.00	39.00

* Data submitted to 65th meeting; 2010: estimate

** CP data

²⁴ These figures are estimates since the distribution of HCFC-22 to different sectors cannot be monitored with accuracy

132. UNDP provided detailed information on the implementation by enterprise, *inter alia*, HCFC consumption, alternative technology selected, foreseen funding and milestones achieved including the estimated completion date. Based on this information, the Secretariat prepared Table 3, which provides an overview of the phase-out foreseen in the plan, and the expected completion dates of the conversion activities.

Table 3 - Plan and actual reduction of HCFC-141b in the solvent sector

Estimated activity completion date	Phase-out (mt)		Phase-out foreseen in the plan (mt)	Phase-out as share of plan phase-out	
	-	Aggregated		-	Aggregated
Before 2013			273		
2014 – 1 st quarter*	27	27		4.3%	4.3%
2014 – 3 rd quarter	353	380		56.3%	60.6%
Before 2015 (includes 2013)			627		
2015 – 3 rd quarter**	259	640		41.3%	102.0% ²⁵

*Demonstration project approved at 64th meeting before sector plan; phase-out foreseen includes the demonstration project

**Not contracted yet; assuming timely contracting and same implementation duration as first batch

133. The information presented in Table 3 indicates that the Government could achieve prior to 2015 61 per cent of the planned reduction in the solvent sector under stage I of the HPMP by successfully and timely implementing the activities already initiated. According to the current status, it appears that remainder of activities will be implemented well before the end of 2015. Meeting the targeted sector consumption for 2015 will therefore rely on overall market development in the solvent sector as well as on the conversions of additional manufacturers not covered by stage I or not eligible for support. Compliance with the target will be substantially facilitated by the quota and licencing system for large consumers, which came into force in the previous year.

Technology in conversion projects

134. The solvent sector plan foresees for the first batch of activities in four enterprises the conversion to the solvent KC-6, which is a zero ODP, zero GWP solvent developed in China specifically for the medical device industry.

Conclusion

135. It appears that the solvent sector plan has achieved a significant level of implementation of activities initiated with the previously approved tranche. The overall progress, introduction of low-GWP technology and the targeted completion dates for the conversions support this assessment. The non-investment activities relate to the management of the sector plan progressed well. The disbursement from UNDP to FECO has reached 80 per cent of the amount approved for the first tranche as of 7 October 2013, and the disbursement from FECO to beneficiaries has reached 28.7 per cent.

RECOMMENDATION

136. The Executive Committee may wish to:

- (a) Note the progress report on the implementation of the first tranche of stage I of the solvent sector plan for China;

²⁵ All enterprises foreseen under the sector plan have been identified, have been contracted or are in the process of being contracted.

- (b) Approve the second tranche of stage I of the solvent sector plan for China, and the corresponding 2014-2015 tranche implementation plan, at the amount of US \$2,000,000 plus agency support costs of US \$140,000 for UNDP; and
- (c) Request the Treasurer to offset future transfers to UNDP by US \$2,289 representing interest accrued by the Government of China up to 31 December 2012 from funds previously transferred for the implementation of the solvent sector plan for China as per decision 69/24.