



**United Nations
Environment
Programme**

Distr.
GENERAL

UNEP/OzL.Pro/ExCom/59/10
14 September 2009

ORIGINAL: ENGLISH



EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Fifty-ninth Meeting
Port Ghalib, Egypt, 10-14 November 2009

**REPORT ON IMPLEMENTATION OF APPROVED PROJECTS WITH SPECIFIC
REPORTING REQUIREMENTS**

Introduction

1. The Governments of Canada, France, Germany and Japan as well as UNDP, UNIDO and the World Bank have submitted progress reports on the implementation of the following projects, where specific reporting requirements are contained in the agreements, for consideration by the Executive Committee at its 59th Meeting:

- (a) China: Sector plan for phase-out of CFC-11 in the China foam sector: financial audit report (World Bank)
- (b) China: Halon production and consumption phase-out programme (World Bank)
- (c) China: Sector plan for CFC production phase-out: financial audit report (World Bank)
- (d) Colombia: National phase-out plan for Annex A (Group I and II) substances (2008-2009 progress report and 2010 work programme) (UNDP);
- (e) India: CTC phase-out plan for the consumption and production sectors: additional verification for feedstock use (World Bank)
- (f) Libyan Arab Jamahiriya (the): Phase-out of methyl bromide (MB) in horticulture: tomatoes, cucumbers, peppers and others (Request for the revision of the Agreement (UNIDO)
- (g) Romania: Verification of CTC production (UNIDO)
- (h) Venezuela (Bolivarian Republic of): CFC production phase-out programme (World Bank)
- (i) Yemen: Terminal phase-out of MB (2009 progress report) (Germany).

Chillers' Projects

- (j) Brazil: progress report on the demonstration project for integrated management of the centrifugal chiller sub-sector, focusing on application of energy-efficient CFC-free technologies for replacement of CFC-based chillers (UNDP)
- (k) Colombia: progress report on the demonstration project for integrated management of the centrifugal chiller sub-sector, focusing on application of energy-efficient CFC-free technologies for replacement of CFC-based chillers (UNDP)
- (l) Cuba: progress report on the demonstration project for integrated management of the centrifugal chiller sub-sector, focusing on application of energy-efficient CFC-free technologies for replacement of CFC-based chillers (UNDP and Canada)
- (m) Syrian Arab Republic: Progress report on the demonstration project on the replacement of CFC centrifugal chillers (UNIDO)
- (n) Global: progress report on the global chiller replacement project (China, India, Indonesia, Jordan, Malaysia, Philippines, and Tunisia) (World Bank)
- (o) Region – Africa: progress report on strategic demonstration project for accelerated conversion of CFC chillers in 6 African countries (Cameroon, Egypt, Namibia, Nigeria,

Senegal and Sudan) (UNIDO, France, Germany, and Japan)

- (p) Region – Europe: progress report on demonstration project on the replacement of CFC centrifugal chillers (Croatia, FYR Macedonia, Montenegro, Romania, and Serbia) (UNIDO)
- (q) Region – Latin America and the Caribbean: demonstration project for integrated management of the centrifugal chiller sub-sector in the Caribbean, focusing on application of energy-efficient CFC-free technologies for replacement of CFC-based chillers (UNDP)

2. The Secretariat reviewed the progress reports in light of the original project proposals, ODS data reported by the Governments concerned under Article 7 of the Montreal Protocol, and relevant decisions taken by the Executive Committee and the Meeting of the Parties.

China: Sector plan for phase-out of CFC-11 in the China foam sector: financial audit report (World Bank)

3. The 56th Meeting of the Executive Committee, through its decisions 56/13 and 56/52, decided to continue monitoring activities and the utilization of project balances beyond the end of the Agreement with the Executive Committee for, *inter alia*, the foam sector plan and the related accelerated phase-out sector plan in China, with certain simplified procedures. These provided that China would submit a final work plan for the foam sector and would use this work plan as a basis for the implementation of work in 2009 and beyond, with the understanding that it had flexibility to make necessary adjustments to those plans. With this flexibility, China would not be required to submit any additional work plans unless there were major changes made to them. On this basis, the Executive Committee approved the 2009 programme of the plan for phasing-out CFCs in the polyurethane foam sector in China and the associated tranche, on the understanding that funding for activities beyond 2009 would be released by the World Bank only after a work plan to be submitted to the 57th Meeting had been approved.

4. The World Bank had submitted a plan for the foam sector to the 57th Meeting, including four main activities planned to last until 2012. In decision 57/14 (c), the Executive Committee approved the work plan for the foam sector in China for 2010 to 2012; and provided China with the flexibility defined in decision 46/37.

5. In its decision 56/13, the Executive Committee had also decided that China would continue to have independent financial audits conducted on the sector plan account. The financial audit reports based on the format used in the previous years would be provided to the Executive Committee on an annual basis from 2009 and beyond. China would also provide the necessary information for the project completion reports. The World Bank was to facilitate the review and submission of any adjustments to the work plans and financial audit reports to the Executive Committee, and submit the related project completion reports upon the final expenditure of funds.

6. The Secretariat has received a submission from the World Bank consisting of, *inter alia*, a “report to the 59th Executive Committee meeting on status of Annual Plans and the use of unallocated MLF funding for the PU Foam Sector Plan”, consisting of:

- (a) “Balance Sheet of Project for Year 2008” for the accounting period 1 January 2008 to 31 December 2008 for “The Fourth Montreal Protocol Ozone Depleting Substances Phase-out Project Granted by the Montreal Protocol Multilateral Fund”, which includes an account of the payments for the foam sector; and

- (b) Two tables entitled:
 - (i) “Approved MLF funding and disbursements 1999-2009 APs (Status as of June 30, 2009)”; and
 - (ii) “Monitoring the use of unallocated MLF funding under the PU Foam Sector Plan”.

7. The information shows that, while activities in the four areas of screening and evaluation of CFC-free substitutes and development of new substitutes (technical service for the foam enterprise for better application of new alternatives; continued monitoring of CFC phase-out in the foam sector; and additional provincial foam activities) were planned for 2009, the status as of 30 June 2009 was that no related disbursements had taken place.

8. The World Bank reported the activities in a purely tabular format. The submission of the balance sheet (see para. 6(a) above) allows the accounts to be checked against the remaining information provided, in particular against the information of the table mentioned in para. 6(b)(i) above, which contains detailed information on China’s commitments undertaken and disbursements made by China’s Foreign Economic Cooperation Office in the Ministry of Environmental Protection; these fund flows are documented separately for each by approval. Only in the table mentioned in para. 6(b)(ii) above, information is provided on an activity level, where for each activity the planned and actual disbursements are shown for the years 2008, 2009, 2010 and 2011/2012. This format also provides room for comments.

9. In the Secretariat’s view the information presented fulfils the information requirements defined in decision 56/13, and therefore China and the World Bank have fulfilled their respective reporting obligations for the foam sector plan.

10. The Secretariat therefore recommends that the Executive Committee takes note the submission of the independent financial audit of the account for the foam sector plan, and approves the reporting format used for future reporting for the foam sector plan under decision 56/13.

China : Halon production and consumption phase-out programme (World Bank)

11. The Government of the People’s Republic of China, through the World Bank, has submitted an audit report on the phase-out of production and consumption of halons in the People’s Republic of China for the year 2008.

Background

12. In November 1997, the Executive Committee approved a total of US \$62 million for the implementation of a Halon Sector Phase-out Plan (HSP) in the People’s Republic of China. Consistent with this Plan, China committed itself to agreed annual production and consumption ceilings for both halon 1211 and halon 1301, under the Agreement for the Accelerated Phase-out of CFCs, Halons and CTC. At its 56th meeting, the Executive Committee agreed to release the final tranche of the China halon sector plan (decision 56/53). At that same meeting, the Executive Committee decided “(a) to continue monitoring activities and the utilization of project balances beyond the end of the agreement with the Executive Committee for the foams and halons and CFC production sector plans and the related accelerated phase-out sector plans in China, with the following simplified procedures... (ii) China would continue to have independent financial audits conducted of the account of the three sector plans. The financial audit reports based on the format used in the previous years would be provided to the Executive Committee on an annual basis from 2009 and beyond...; and (iii) the World Bank would facilitate the review and submission of any adjustment to the work plans and financial audit reports to the Executive Committee...” (decision 56/13(a)(ii) and (iii)).

13. Accordingly, the World Bank carried out an audit to ensure that the annual production and consumption was within limits ceiling for 2008. The mission visited the following companies: Zhejiang Lantian Environmental Protection Hi-Tech Co., Ltd., a halon 1301 producer, and Bayer CorpScience (China) Co., Ltd., and Zhejiang Yongnong Chemical Industry Co., Ltd., both users of halon 1301 as feedstock for producing non-ODS chemicals as assigned in the TOR.

14. A financial report on accounts as at 31 December 2008 was submitted by the Government of the People's Republic of China and the World Bank.

Audit of production and consumption

15. The verification was carried out between 28 June and 4 July 2009 by two independent consultants: Hua Zhangxi, a technical expert and Wu Ning, a financial analyst. The mission was accompanied by a representative from the Ministry of Environmental Protection (MEP).

16. The verification confirmed that there was neither production nor import/export of halon 1211, halon 1301 or halon 2402 in 2008. The 2008 national consumption of halon 1211, halon 1301 and/or halon 2402 is, therefore, zero.

17. National production of halon 1301 for controlled uses in 2008 was 97.733 mt, which is 2.267 mt lower than the limit of 100 mt that is specified in the Agreement. Production of halon 1301 as feedstock for the manufacture of non-ODS products is 594.917 mt. The overall production of halon 1301 of China in 2008 was 692.65 mt.

18. Sales of halon 1301 for controlled uses from the producer to ninety-one purchasers amounted to 65.007 mt. Therefore, the balance was stockpiled.

19. There were no imports or exports of halon 1301 for controlled uses in 2008. However, halon 1301 was exported to Germany for feedstock uses. The amount exported was 0.001 mt.

20. A total of 594.917 mt of halon 1301 was sold to 8 pesticide producers, to be used as feedstock for the production of Friponil. The Auditing Team received answers from the management of two pesticide producers who used halon 1301 as feedstock (Bayer CorpScience Hangzhou and Zhejiang Yongnong) confirming that they never transferred any of the halon 1301 they bought to any company or person.

Financial report

21. The financial report provides an account of disbursements in 2008 and cumulative disbursements for the China halon sector plan since its inception in November 1997. Since 1997, cumulative disbursement amounts to US \$49,523,169 itemized as follows US \$31,852,930 for enterprises; US \$3,528,410 for technical assistance; US \$13,799,322 for special initiatives, and US \$342,508 for the management fee. Technical assistance activities included:

- General Technical Condition of Aerosol Fire Extinguishing Agent initiated in the 2003 Annual Plan;
- Study on the Test. Equipment and Tech. of Aerosol Fire Extinguishing Agent initiated in the 2003 Annual Plan;
- Standard for Performance Requirements and Test Methods of Components for Water Mist Fire Extinguishing Systems-Tianjin Fire Research Institute initiated in the 2004 Annual Plan;
- Design Code for Dry Powder Fire Extinguishing Systems-Tianjin Fire Research Institute initiated in the 2004 Annual Plan;
- Verification of CO₂ Fire Extinguishing Production-Shanghai Fire Research Institute initiated in the 2005 Annual Plan;

- Study on the Condition Evaluation Method and the Requirement of Disposal Technology for Halon System initiated in the 2006 Annual Plan;
- Study on Market Admittance Standard for Gaseous Extinguishing System initiated in the 2006 Annual Plan;
- Performance Audit conducted for the 2008 Annual Plan as well as other years;
- Workshop on Demonstration Project of Halon Recycling in Guangdong initiated in the 2008 Annual Plan;
- Audit Training initiated in the 2008 Annual Plan; and
- Workshop of Phase-out Halon 1301 Extinguishing System and 1301 Agent Recycling initiated in the 2008 Annual Plan.

22. Special initiatives included:

- Development of 3600 mt Plant-Pro. Foam Fire Fighting Agent Pro. Line -Dalian Honsen Fire-fighting Hi-tech Co., Ltd. in the 2002 Annual Plan;
- Standard for HFC236 Extinguisher HFC236-Tianjin Fire Research Institute in the 2004 Annual Plan;
- Development of HFC236Fa Extinguisher HFC236Fa-Shanghai Fire Research Institute in the 2004 Annual Plan;
- Demonstration of Project of Halon Banking Management in Guangdong in the 2007 Annual Plan; and
- Guangdong Shengjie Fire Protection Co., Ltd. in the 2007 Annual Plan

23. The total amount unallocated is US \$12,476,831. Table 1 presents an accounting of the allocation and use of these remaining funds.

Table 1

**ALLOCATION AND USE OF REMAINING FUNDS FOR THE CHINA HALON
SECTOR PLAN**

Period	Activity	Tentative Allocation (US\$)	2008		2009 (Actual until Sept 1, 09)	
			Planned	Actual	Planned	Actual
2008	CO2 fire extinguisher penalty	1,200,000	0	0	0	0
2008-2009	Halon 1301 system manufacture conversion	339,840	339,840	0	Carry over from 2008	0
2009	Closure of the halon 1301 production for controlled consumption	520,000	0	0	520,000	
2008-2010	TA activities, training and awareness activities	990,000	200,000	135,318	100,000	93,110
2009-2010	Halon sector closure activities, PCR, audits Bank reporting and verifications etc.	300,000	30,000	0	100,000	70,000
2008-2015	Central and Provincial halon banking and management activities	7,626,991	40,000	38,186	500,000	0
2010-2015	Halon management supervision activities, monitoring/controlling feedstock uses, preventing illegal halon production and export, etc.	1,500,000	0	0	0	0
Total		12,476,831	609,840	173,504	1,220,000	163,110

24. There are three annexes to the audit report: Annex I contains the halon 1301 2008 Verification Data Summary, which includes data, by year, on the halon 1301 quota, production sales and stocks, the HCFC-22/halon 1301 ratios and bromine/halon 1301 ratios, the monthly halon 1301 Production and Raw Material Consumption (HCFC-22 and bromine), a summary of sales of halon 1301 as an extinguishing agent and as feedstock in 2008; Annex II is a financial verification of 2008 halon production and consumption in China; and Annex III is a letter of confirmation from the Government of China confirming the status of production of halon 1211 in China.

25. Table 2 shows results of the verification with respect to feedstock and controlled uses of 2008 production and the opening and remaining stock of halon 1301 for controlled uses as at 31 December 2008. The closing stock of halon at the end of 2008 was about 168.4 mt.

Table 2

PRODUCTIONS AND SALES OF HALON 1301 BY ZHEJIANG LANTIAN IN 2008 (in metric tonnes)

Product	Total Production	Sales to Pesticide Producers	Production Under Quota	Opening Stock	Other Uses	Sales as Fire Extinguisher	Closing Stock
	A	B	C=A-B	D	E	F	G=C+D-E-F
Halon 1301	692.65	594.917	97.733	135.7732	0.132	65.007	168.3672

Secretariat's comments

26. The Secretariat noted that China achieved its target and has monitored the use of halon 1301 in the eight pesticide producers using it as a feedstock, as well as having accounted for the allocation and use of the remaining funds in the halon sector plan.

27. According to the audit report, eight pesticide producers in China use halon 1301 as feedstock. However, only Bayer CorpScience Hangzhou has installed an effective tail gas incineration system to destroy any halon 1301 in the tail gas before it emits to the atmosphere. The auditors noted that the use of halon 1301 with this incineration equipment was not harmful to the ozone layer and was acceptable. But they also noted that the other pesticide producers using halon 1301 as a feedstock do not have this equipment, cost of which could be US \$2 million with annual operating costs of 10 million RMB, and that without such equipment there might be some halon 1301 emission into the atmosphere.

28. In this respect, the audit team recommended a new policy instrument that would require the incineration equipment to be installed and operated effectively after a certain acceptable period, and if this is not achieved within that period, the supply of halon 1301 to such companies should be stopped. The Secretariat asked if the Government of China agreed with the recommendation of the auditors. In response, the Bank indicated that the issue of a tail gas treatment system has been under discussion between the Foreign Economic Cooperation Office (FECO) and MEP for some time. While FECO would agree to enforce such requirements, they have neither the legal instrument nor the mandate to do so. Enforcement would have to be done on a provincial and municipality level. In order to require such investment, a regulation would have to be developed and issued by the Ministry of Environment, adopted by the provinces, and then enforced by the local environmental protection bureaus.

29. Moreover, it was noted that as the product produced from halon 1301 use as a feedstock – Friponil – is toxic, there is now a concern by the Government of China that the growing use of Friponil might lead to other environmental problems, such as water pollution. This might have an impact on whether the Government would continue to support this product in the future.

30. The issue of emissions of ODS during the use of ODS as a feedstock was addressed at the Fourth Meeting of the Parties, at which the Parties decided *inter alia* "that insignificant quantities of controlled substances originating from inadvertent or coincidental production during a manufacturing process, from unreacted feedstock, or from their use as process agents which are present in chemical substances as trace impurities, or that are emitted during product manufacture or handling, shall be considered not to be covered by the definition of a controlled substance contained in paragraph 4 of Article 1 of the Montreal Protocol and to urge Parties to take steps to minimize emissions, reduction of emissions using practicable control technologies or process changes, containment or destruction" (decision IV/12, paras. 1 and 2).

31. The Secretariat enquired as to the amount of halon 1301 emitted through tail gas emissions without the incineration system. The World Bank indicated that the experts are now trying to provide an estimate.

Secretariat's recommendations

32. The Secretariat recommends that the Executive Committee request that the Government of China and the World Bank to report to the Fund Secretariat on the amount of halon 1301 emitted through tail gas emissions resulting from production of Friponil without incineration systems, for inclusion in the report on approved projects with special reporting requirements to be submitted to the 60th Meeting.

China: Sector plan for CFC production phase-out: financial audit report (World Bank)

33. The Government of the People's Republic of China, through the World Bank, has submitted a financial audit report on the phase-out of production of CFCs in the People's Republic of China for the year 2008.

Background

34. In March 1999, the Executive Committee approved a total of US \$150 million for the implementation of the Agreement for the CFC Production Sector in the People's Republic of China. Consistent with this Plan, China committed itself to agreed annual production and consumption ceilings for CFCs, under the Agreement for the Accelerated Phase-out Plan (APP) for CFCs, Halons and CTC. Having resolved the issue with respect to post-2009 monitoring of the agreement as per decision 56/13, the Executive Committee decided "to approve the 2009 work programme of the China CFC production closure programme at US \$7.5 million and agency support costs of US \$562,500 for the World Bank, noting that the request for funding and support costs would be submitted by the World Bank to the 57th Meeting, together with a verification report on the implementation of the 2008 annual programme" (decision 56/62). At its 57th meeting, the Executive Committee agreed to release the final tranche of the sector plan for CFC production closure (decision 57/31).

35. At its 56th Meeting, the Executive Committee addressed the issue of the management of unspent fund balances from three Multi-Year Agreements (MYAs) in China. It decided to continue monitoring activities and the utilization of project balances beyond the end of the agreements with the Executive Committee for the foams and halons and CFC production sector plans and their related accelerated phase-out sector plans in China, with the following simplified procedures: China would continue to have independent financial audits conducted on the account of the three sector plans. The financial audit reports based on the format used in the previous years would be provided to the Executive Committee on an annual basis from 2009 and beyond. China would provide the necessary information for the project completion reports (decision 56/13(a)(ii)).

Financial report

36. The financial report provides an account of disbursements in 2008 and cumulative disbursements for the China CFC production sector since its inception in March 1999. Since 1999, cumulative commitments for contracts amount to US \$146,319,981 itemized as follows: US \$93,354,316 for enterprises; US \$3,003,300 for technical assistance; US \$45,737,365 for special initiatives, and US \$4,225,000 for the management fee. Technical assistance activities included:

- Policy training;
- CFC site supervision training;
- Performance audits;
- Workshop on the management of stockpiled CFC; and

- Dealers Training.

37. Special initiatives included:

- The construction of the HFC-134a plant;
- Screening for alternatives to methyl bromide in soil fumigation; and
- China Country Compliance Center activities.

38. The total amount unallocated is US \$8,500,000. Table 1 presents an accounting of the allocation and use of these remaining funds. As shown in the table, there were no disbursements for these activities in 2008 or 2009.

Table 1

ALLOCATION AND USE OF REMAINING FUNDS FOR THE CHINA CFC PRODUCTION CLOSURE PLAN

Period	Activity	Tentative Allocation (US\$)	2008		2009 (Actual until 30 June 2009)	
			Planned	Actual	Planned	Actual
2009-2013	National and international consultants for activities such as the organization of the alternative technology workshops	500,000	0	0	0	0
2009-2012	Incremental operating costs for the CCC Building	3,300,000	0	0	0	0
2009-2012	ODS import and export management activities such as training activities	500,000	0	0	0	0
2009-2013	Research and construction of ODS alternatives	4,200,000	0	0	0	0
Total		8,500,000	0	0	0	0

Secretariat's comments

39. The Secretariat asked for clarifications on some of the component parts of the financial statement. For example, the Secretariat enquired if the category entitled "Research and construction of ODS alternatives" was for the construction of new non-ODS production facilities and what type of chemicals would be produced. The World Bank indicated that China had been exploring the use of unallocated funds to potentially construct new non-ODS production facilities. The first step would be a feasibility study evaluating options for the refrigeration and the foam sectors. Upon completion of the feasibility study, any proposed actions would be resubmitted to the Executive Committee for review.

40. The Secretariat also requested the total commitments to date for the two special initiatives. The World Bank indicated that US \$25,410,000 had been committed to the two-phased construction of an HFC-134a plant, US \$227,365 for the screening of alternatives to methyl bromide in soil fumigation, and US \$20,000,000 had been allocated for the China Country Compliance Centre.

41. The Secretariat also enquired if the US \$20 million allocated to the China Country Compliance Centre activities had been used for the construction of the building itself. The World Bank indicated that the total cost of the complete operational centre had been over US \$58 million and it was not able to provide a break down between different types of expenses as it had been a turn key contract and the CFC sector funding was blended with international and national support.

42. The Secretariat noted that the Executive Committee normally does not pay for the construction of buildings. The Committee, however, had been informed that CFC production sector funds would be provided for the construction of a HFC-134a plant, the screening of alternatives to methyl bromide in soil fumigation and the China Country Compliance Center (CCC) at its 41st Meeting in the context of the 2004 work programme.

43. In its 2004 work programme request, the Government of China stated that “A new program is being introduced by China in 2003 with implementation to begin as soon as the legal arrangements can be made operational. As China approaches the second major obligation milestone under the Montreal Protocol in 2005, it is foreseen that the drastic required reductions in production and consumption of ODS will require rigorous compliance and enforcement measures, especially to prevent illegal activity in this regard. China therefore proposes to establish the Country Compliance Center (CCC) in 2003. The CCC will be the central management unit for the ODS program when it is established, and will be responsible for all management and enforcement activities under the Program. The CCC will be located in a new building which will be procured for the purpose and will house the CCC. The CCC including some staff costs, operating costs and purchase of the building, which will be partially supported with MLF funding available from the CFC Production Sector Plan, by using some of the not yet allocated balances from previous years’ annual programs and also partially supported by bilateral contributions to China.”

44. Having informed the Executive Committee of its intended use of funds for the CCC in its 2004 work programme, it reiterated the same paragraph as mentioned above in its 2005 work programme request and stated that “Based on the Executive Committee approval of the 2004 annual program, procedure was agreed between the World Bank and SEPA in February 2004.” (para. 21 of the 2005 Annual Plan of CFC production sector attached to UNEP/OzL.Pro/ExCom/44/33).

45. It should be noted that the Executive Committee provided China “with maximum flexibility in using the agreed funds to meet the reduction requirements... and that funds provided to China pursuant to this agreement may be used in any manner that China believes will achieve the smoothest possible CFC production phase-out possible” (decision 27/82, para. d)

46. However, it should also be noted that there had been no accounting of the allocation to the CCC for staff costs, operating costs and the purchase of the building until this audit was presented. As noted above, China is considering the possible use of the remaining funds for new non-ODS production facilities and indicated that following a feasibility study, any proposed actions would be submitted to the Executive Committee for review.

Secretariat’s recommendation

47. The Executive Committee may wish to note that the Government of China has agreed to provide information on the use of any remaining funds for new non-ODS production facilities to the Executive Committee for review in advance of the release of any funding for such activities.

Colombia: National phase-out plan for Annex A (Group I and II) substances (UNDP)

48. The national CFC phase-out plan (NPP) was approved by the Executive Committee at its 41st Meeting. Under the NPP, the Government of Colombia committed to phasing out all CFCs and halons by 1 January 2010. The Executive Committee approved in principle US \$4.5 million for

implementation of the NPP, and approved the funding for two tranches at its 41st (US \$2,146,820) and 47th (US \$2,353,180) Meetings.

Progress report

49. A number of results have been achieved so far during the 2008-2009 work programme of the Colombia NPP, including: the certification of an additional 700 refrigeration servicing technicians, reaching over 3,500 technicians certified since the beginning of the programme; providing training equipment and materials to 44 training centres, and completing six regional training workshops for trainers on environmentally sound management of refrigerants, with over 1,350 technicians trained so far; distribution of recovery and recycling equipment to some 200 service workshops, as well as full conversion of foaming operations in the commercial manufacturing sector. Many information and awareness activities were also implemented. Technical assistance has been provided to halon end-users for the adequate disposal of their existing halon. Support has been given to one company to export about 8 metric tonnes of halon-1301 to the United States for the critical use bank.

50. The breakdown of the approved project budget (in US \$) is presented in the table below:

Project component	(US \$)			
	Approved	Revised	Expenditure	Balance
Phase-out of CFCs in the commercial refrigeration manufacturing sector	450,000	189,253	189,253	0*
Technician-licensing programme for the refrigeration and air conditioning service sector	2,730,000	2,990,747	2,781,473	209,004
Technical assistance for legal framework	142,000	142,000	74,643	67,357
Technical assistance for information and awareness	320,000	320,000	284,632	35,368
Halon bank management programme	58,000	58,000	4,194	53,806
Technical assistance for implementation and monitoring	800,000	800,000	756,847	43,153
Total	4,500,000	4,500,000	4,091,042	408,958

(*) Balance from the Commercial Refrigeration project has been reallocated to the technician-licensing programme in order to procure additional equipment for the technicians.

Independent verification

51. In 2009, an audit of the 2008 consumption verification report was undertaken by an independent auditor who concluded that “2008 data on imports of ODS reported by the OTU (Ozone Technical Unit) are totally reliable; and that Colombia is accomplishing its targets on internal consumption as agreed.” The auditor also recommended that “the control system for imports and exports and the institutional strengthening is widely consolidated. The main recommendation is to persevere on this path.”

2010 work programme

52. From the end of 2009, the Colombia NPP's work programme will focus on strengthening the refrigeration management plan by certifying 600 refrigeration technicians, strengthening the recovery/recycling network through the establishment of five refrigerant reclamation centres, and promoting the use of hydrocarbon-based refrigerants. It will also provide technical assistance and support to major ODS end-users in all sectors. Finally, the work programme will strengthen the national legal framework and the control of ODS trade, and strengthen the implementation and monitoring units.

Secretariat's comments

53. The Secretariat noted the comprehensive and well written progress report on the implementation of the Colombia NPP, together with the supporting documents, including the verification report on national ODS consumption in Colombia. The 2008 CFC consumption of 208.0 ODP tonnes reported by the Government of Colombia under Article 7 of the Montreal Protocol is already 123.2 ODP tonnes below the allowable level of CFC consumption for that year of 331.2 ODP tonnes.

54. Upon a request for additional information on the status of implementation of the MDI Phase-out project, UNDP indicated that a mission by UNDP's expert to the manufacturing plant will take place during the last quarter of 2009 to review progress achieved so far in product formulations and to provide technical assistance for the conversion process. The company has already started the process of product formulation with HFA; once an acceptable formulation is achieved, a pilot production for laboratory and stability testing will be conducted with the new production equipment.

55. The Secretariat sought clarification from UNDP on whether the Government of Colombia will be able to achieve the complete phase-out of CFCs by the end of 2009 and sustain that level of consumption through the activities proposed in the final work programme. UNDP reported that the objective of the Government of Colombia is to completely phase out CFC consumption by the end of 2009. This is being achieved through a combination of technical assistance provided to the servicing sector including end-users, and the application of the ODS legislation which bans the imports for CFCs from 1 January 2010. Furthermore, the last year of the plan will focus on further strengthening national capacities to monitor CFCs, and completing technical assistance to the servicing sector to reduce CFC demand.

56. Noting that funding for the preparation of the HPMP was approved by the Executive Committee at its 55th and 57th meetings, the Secretariat also suggested that, during the implementation of the final work programme of the NPP, UNDP considers advising the Government on undertaking some preliminary action to facilitate the phase-out of HCFCs in due time. UNDP pointed out that since 2009 it has been working together with the Ozone Unit in the preparation of the HPMP, which is expected to be submitted in 2010. Wherever is possible, the experience and contacts gained through the implementation of the NPP have been used in the preparation of the HPMP.

Secretariat's recommendation

57. The Executive Committee may wish to take note of the progress report on the implementation of the national CFC phase-out plan (NPP) for Colombia, covering the 2008-2009 period, and approve the annual implementation programme for 2010.

India: CTC phase-out plan for the consumption and production sectors: additional verification for feedstock use (World Bank)

58. The World Bank, on behalf of India, submitted to the Secretariat before the 59th Meeting of the Executive Committee a document entitled "Additional verification for feedstock use" with reference to the submission of the "CTC phase-out plan for the consumption and production sectors: 2009 annual

programme” to the 58th Meeting. In its decision 58/35 regarding this plan, the Executive Committee noted that the World Bank had informed the Secretariat that India intended to use the full difference between allowed consumption and actual consumption of CTC in 2008, i.e. 1,063 metric tonnes (1,169 ODP tonnes), as feedstock in future years.

59. The Committee approved the funding for the implementation of the 2009 work programme, but requested the World Bank not to commence disbursement until verification had been submitted to the Secretariat that the excess amount of 1,169 ODP tonnes had been used as feedstock, and until that verification had been found sufficient by the Secretariat. The Executive Committee requested further that the Secretariat inform the Executive Committee at its 59th Meeting on the progress achieved.

60. The Secretariat found the extent and content of the verification submitted by the World Bank to the 59th Meeting to be fully sufficient. It consisted of a verification of the CTC production and use for feedstock during the first six months of 2009 in India. In total, the feedstock use of CTC during that time was 6,209 metric tonnes (6,830 ODP tonnes). Over this period, the stocks of the CTC producers were reduced by 623 metric tonnes (685 ODP tonnes), and the stocks of the CTC feedstock users by 1,522 metric tonnes (1,674 ODP tonnes).

61. The 2008 verification report had suggested a remaining stockpile of 1,047 metric tonnes (1,151.7 ODP tonnes) stored at the users for feedstock purposes and 16 metric tonnes at one manufacturer of CTC. Both the use of CTC for feedstock in India as such, as well as the reductions in stock at each the manufacturers of CTC and the feedstock users, are sufficient to prove that an amount equal to the excess amount has been used for feedstock, and that therefore the conditions of decision 58/35 are fulfilled. The World Bank has been informed that the Secretariat had found the verification provided by it to be sufficient and that the World Bank could consequently commence disbursement of the funds approved at the 58th Meeting.

Libyan Arab Jamahiriya (the): Phase-out of MB in horticulture: tomatoes, cucumbers, peppers and others (UNIDO)

62. The project for the phase-out of MB in horticulture: tomatoes, cucumbers, peppers and others, was approved by the Executive Committee at its 47th Meeting. Under the phase-out plan, the Government of the Libyan Arab Jamahiriya committed to phasing out all controlled uses of MB by 1 January 2010. The Executive Committee approved in principle US \$1,243,000 for implementation of the project by the Government of Spain and UNIDO. The Executive Committee approved the two funding tranches at its 47th (US \$743,000) and 56th (US \$500,000) meetings.

Progress report

63. Training of farmers and monitoring only started in 2008, when the team of experts was established. Since then, several activities have been implemented. Soil solarization, alternative chemicals and biofumigation have been introduced on a few farms. Farm material has been distributed to some farmers for the application of solarization (alone and in combination with chemicals), soilless cultivation and biofumigation; and growers have been trained in the application of these alternative technologies. In 2007, tomato and eggplant grafted seedlings were imported into the country for the first time, and distributed to farmers. A greenhouse for the production of grafted seedlings has been under construction since 2008 and will be operational by the end of 2009. A group of national experts and technicians that will manage the grafting unit were trained in grafting technology in Morocco, where UNIDO has been implementing a similar project. Additional training will be provided to growers for the application of solarization (alone and in combination with biofumigation and chemicals), and for best agronomic practices to prevent and/or minimize the infestation of pathogens and weeds. Field days will be organized at the farms where alternatives have been applied.

64. Despite the delays in beginning implementation of the project, the National Project Coordinator informed UNIDO that the level of MB consumption in the country was below 55 ODP tonnes, as agreed with the Executive Committee. Also, of the US \$1,363,725 (including support cost) so far approved, US \$699,775 has been disbursed.

65. During the growing season, however, all tomato plants were heavily infected by different types of nematodes, which had a negative impact on the introduction of the grafting technology. Other unfavourable factors included: reduced resistance of grafted plants due to unusually high temperatures during the cropping season; and/or poor management operations such as the supply of organic matter in adequate amounts, the cropping density, and proper use of water.

66. Given the relatively high infestation of grafted seedlings, technicians and policy makers discussed the feasibility of introducing alternative chemicals, including 1,3-dichloropropene (1,3-D), as an effective nematicide used worldwide. However, ongoing negotiations on the use of this chemical (and others) at the European Union led the Government of the Libyan Arab Jamahiriya to decide not to introduce alternative chemicals. Accordingly, the national team further elaborated a strategy for the adaptation of the grafting technology in the country, including the selection of rootstock considering the local conditions of soils and climate, training in the proper use of the technology and better management operations. The process will take two additional years to be fully implemented.

Request for change in the phase-out schedule

67. Due to the difficulties experienced with the introduction and adaptation of alternative technologies in Libyan Arab Jamahiriya, the Government is requesting to extend the date for the complete phase-out of MB from 2010 to 2012, without any further request for funding from the Multilateral Fund.

Secretariat's comments

68. The 2008 MB consumption of 51.6 ODP tonnes reported by the Government of the Libyan Arab Jamahiriya under Article 7 of the Montreal Protocol is already 23.7 ODP tonnes below the allowable level of MB consumption for that year of 75.3 ODP tonnes. This level of consumption is also 3.4 ODP tonnes below that in the agreement between the Government and the Executive Committee. The estimated level of consumption in 2009 will only be known in March 2010.

Secretariat's recommendation

69. Noting that the 2008 methyl bromide level of consumption in Libyan Arab Jamahiriya is similar to that in its agreement with the Executive Committee, the difficulties experienced with the introduction and adaptation of grafting technology in local conditions, and that a revised strategy for the adaptation of the grafting technology in the country has been developed by major stakeholders, and in light of decision 43/14 (on accelerated phase-out of methyl bromide by Article 5 Parties), the Executive Committee may wish to consider approving the following revised methyl bromide phase-out schedule in its agreement with Libyan Arab Jamahiriya:

Year	Maximum level of MB consumption (ODP tonnes)	
	Original	Revised
2006	96.0	96.0
2007	75.0	75.0
2008	55.0	55.0
2009	30.0	30.0
2010	-	30.0
2011		25.0
2012		-

Romania: Verification of CTC production (UNIDO)

70. At the 47th Meeting, the Executive Committee approved the Agreement for the Romania ODS production sector. When UNIDO submitted a funding request for the final tranche to the 53rd Meeting, the Executive Committee took decision 53/35, approving the last tranche of this plan. One element of this decision requested UNIDO to withhold disbursement of that tranche until it had verified completion of the 2007 work programme and had cleared with the Secretariat that the targets for 2007 had been achieved. UNIDO submitted this verification in 2008, and the Secretariat was able to confirm that the targets for 2007 had been met.

71. A second element of the same decision requested UNIDO to carry out the verification of the ODS production sector and the terminal phase-out of CTC for the process agent project in 2008 and 2009. UNIDO submitted a verification report to the Secretariat in time for the 59th Meeting covering the CTC production and use in 2008 in Romania. Two plants in Romania have been producing CTC, Oltchim and Chimcomplex. The verification report covers both plants.

Production and destruction

Oltchim

72. The Oltchim plant had produced CTC and also produces Diethylhexylperoxycarbonate (DEHPC) in which CTC is used as a process agent, that is listed under decision XVII/7 of the Meeting of the Parties (item no. 36). The verification showed that Oltchim has not produced any CTC in 2008. The company had a stockpile of CTC in the beginning of 2008 of 82.9 metric tonnes (91.2 ODP tonnes) from production in earlier years. This stockpile was used for the production of DEHPC during the year 2008, and consequently no stocks remain; therefore, production and consumption of CTC in Oltchim was zero in 2008. The verifiers ascertained in July 2009 that the plant at Oltchim, which produced both CTC and Perchloroethylene (PCE), has not been in operation for production of CTC since March 2007 and for production of PCE since August 2007.

Chimcomplex

73. The verification showed continued production and destruction of CTC at Chimcomplex. Chimcomplex produces chloroform by chlorinating methane fed as a natural gas and removing the chloroform from the resulting mixture of chlorinated hydrocarbons. The residue contains some chloroform, CTC and a number of other chlorinated hydrocarbons (C2-C5). The fraction of CTC in the residue varies between 25 per cent and 35 per cent because of the varying content of hydrocarbons (other than methane) in the feed gas from the national network pipeline, which is fed directly, and the low selectivity possible in the high temperature chlorination process. The enterprise stores the mixture in eleven wagons and one fixed tank, in which batches from different years are often mixed. The verification includes a chemical analysis for each storage tank or wagon to determine the amount of CTC in it. Consequently, while the present stockpile of CTC in the mixture is known accurately, there is a small uncertainty in the amount of CTC added to the storage from production and removed from the storage for incineration. This is caused by the fact that only the quantity of the mixture that has been added or removed is known, but not its exact composition and therefore the exact amount of CTC added or removed cannot be ascertained. However, this difference seems to be insignificant as long as the company can account for all of the mixture and it is ensured that all of the mixture is being incinerated. This appears to be the case.

74. Chimcomplex has produced 149 metric tonnes of a mixture containing CTC in the year 2008. The closing stock of mixture containing CTC at the end of December 2008 was 509.50 metric tonnes; on the date of the verification the CTC mixture stock was 556.50 metric tonnes. There was no incident or occurrence leading to a major loss of raw material or finished product. In addition to the company

stockpiles of this mixture, 307 metric tonnes of a similar mixture containing CTC are stored on the company's premises, as the customer has not taken delivery of the material despite making full payment. The exact composition of that mixture remains unknown.

75. The destruction is performed using incineration. The verifiers informed that the incineration plant had commenced operations on 16 November 2007.

76. The verification resulted in the following figures:

	CTC [metric tonnes]	CTC [ODP tonnes]	Mixture containing CTC [metric tonnes]
Production	40.9	45.0	149.0
Destruction	43.4	47.7	151.5
Stockpile at Chimcomplex - company owned	172.4	189.6	509.5
Stockpile at Chimcomplex – third-party owned	unknown	unknown	307
Net production	-2.5	-2.7	-2.5

77. The verifiers pointed out that Chimcomplex should accelerate the pace of incineration, and advised that the capacity of the incineration plant is 580 metric tonnes per annum.

Equipment used to produce CTC

78. In Chimcomplex, the verifiers were told that in view of very competitive price of methylene chloride the management has not been operating the plant in 2009. They have submitted a letter to the Ministry of Environment and Sustainable Development stating their wish to discontinue production in the methylene chloride plant.

79. In Oltchim, the verifiers certified that one of the two distillation columns has been removed from the process and has been installed in another facility after certain modifications were carried out. The second column will be removed as soon as an alternative use for it is found in the plant complex. The verifiers were informed that the remaining equipment related to CTC production such as reactor, receiver tanks, control and monitoring instruments were still on location and that the management has no plans to use the remaining equipment.

80. On the basis of the physical verification and discussion with the management of Oltchim, the verifiers confirmed that it is not possible to produce CTC from the existing plant without modification. At the time of the plant visit it was found that there was no further removal of equipment from the CTC plant as reported in ESS JAY Consultants 2008 report. The plant was in a decontaminated state and not been used to produce PCE.

Secretariat's comments

81. According to data provided by the Ozone Secretariat, Romania has reported a CTC production of 166.7 ODP tonnes for 2008. This information is not consistent with the results of the verification showing a production according to Article 7 definition of 2.7 ODP tonnes. UNIDO has been requested to advise Romania to provide updated 2008 Article 7 data to the Ozone Secretariat.

82. The verifiers pointed to the slow progress of the destruction of stockpiles at the destruction facility of Chimcomplex, which was only marginally larger than the production. The Secretariat had

already indicated in its letter to UNIDO of December 2008 that the destruction of the CTC stored at Chimcomplex would need continuous monitoring, and pointed to the related decision of the Executive Committee requesting verification of the 2008 and 2009 production and destruction. The Secretariat requested UNIDO to provide information when the complete destruction of the stockpiles in possession of Chimcomplex would be achieved. UNIDO advised that the destruction facility had at first experienced technical problems, which have been resolved in the meantime. The destruction of the remaining stockpile of 509.5 metric tonnes of CTC-containing mixture is expected by the end of 2009.

83. At Chimcomplex, two separate stockpiles exist: A quantity of 509.5 metric tonnes of a CTC containing mixture which is in the possession of Chimcomplex and therefore subject to verification and destruction. Another quantity of a similar CTC containing mixture of 307 metric tonnes is stored on the premises, but the customer who paid for that mixture has not taken steps to facilitate its delivery; according to the verifiers, this status has been observed for more than one year. The Secretariat raised the concern with UNIDO that the mixture containing CTC stored for a customer might have been abandoned by that customer. The Secretariat requested UNIDO to discuss the issue with the Government of Romania and report, when submitting the 2009 verification report, about the steps taken and, if applicable, the schedule for the destruction of this material.

84. The verifiers noted that for Oltchim the CTC production plant was partially disassembled, but largely still intact; they also informed that further production of CTC would only be possible with modifications to the production plant as compared to the status when the verifier visited it. The Secretariat requested UNIDO to discuss with Romania steps which could ensure a sustainable phase-out of the production. UNIDO advised that presently the Terms of Reference for Oltchim are being prepared to complete the dismantling of the CTC/PCE production plant in the next five months. UNIDO will reflect the dismantling in the submission of the 2009 verification report.

85. The verification of the plant site, as well as of the production, purchase and consumption of raw materials have demonstrated that both plants and, by extension, the Government of Romania have met the targets specified in the Agreement for the Romania ODS production sector for the year 2008.

Secretariat's Recommendation

86. The Secretariat recommends that the Executive Committee notes that Romania has submitted verification showing its compliance with the Agreement between Romania and the Executive Committee for all years up to and including 2008.

Venezuela (Bolivarian Republic of): CFC production phase-out programme (World Bank)

87. The Government of the Bolivarian Republic of Venezuela, through the World Bank, has submitted the 2009 progress report and Annual Programme for activities associated with the CFC production phase-out programme in the Bolivarian Republic of Venezuela.

Background

88. In 2004, at its 44th Meeting, the Executive Committee approved in principle a total of US \$16.5 million for the implementation of the Agreement for the Bolivarian Republic of Venezuela CFC production sector, under which the Government of the Bolivarian Republic of Venezuela committed to a condition of a maximum levels of total CFC production for the period 2004-2006, with a total phase-out by 2007 (decision 44/59). By the end of 2006, PRODUVEN, the sole producer of CFCs in the Bolivarian Republic of Venezuela terminated its CFC production and refitted its facility to produce HCFC-22. The World Bank submitted the verification report of the 2007 levels of CFC production in 2007 to the 54th Meeting of the Executive Committee and received the final funding tranche of US \$1.05 million, plus the associated support cost.

89. As a condition of approval of the final funding tranche, the Executive Committee requested the World Bank to continue the verification of the PRODUVEN facility in 2009 to ensure the permanent closure of the plant's CFC production capacity (decision 54/15(a)). A verification report was submitted to the 58th Meeting and the Committee "commended the Government of the Bolivarian Republic of Venezuela and the World Bank for the good efforts made to comply with decision 54/15(a) and for successfully implementing the audit for 2008 to confirm the sustained cessation of CFC production at the PRODUVEN plant in Venezuela" (decision 58/15(d)(i)).

90. The Secretariat had advised the Committee that an annual plan had not accompanied the audit report. The annual plan would not request additional funding, but would instead indicate which activities were to be undertaken during 2009 and which activities had been done in 2008. The Bank advised that it was working with the Bolivarian Republic of Venezuela to provide the annual plan, but that the plan could not be available for the 58th Meeting. The Committee then requested the Government of the Bolivarian Republic of Venezuela and the World Bank to submit the annual plan for 2009 to the Fund Secretariat for inclusion in the report on approved projects with special reporting requirements to be submitted to the 59th Meeting (decision 58/15(d)(ii)(a)).

2009 Annual Programme

91. The 2009 Annual Programme includes a brief annex on the status of activities implemented under the 2008 Annual Programme. It reiterates that the ban of ODS imports was implemented in November 2004 and that the production cap continued to the end of 2007. Technical assistance activities completed in 2008 include support to the Government to strengthen technical capacity of local staff, a public awareness campaign, development of environmental guidelines for dismantling PRODUVEN's CFC production capacity, a study on the impact of PRODUVEN's early plant closure, PRODUVEN audits and the cost of a full-time professional staff. A total of US \$411,000 of the US \$450,000 approved for technical assistance under the project had been disbursed during 2008. All remaining funds were allocated for PRODUVEN and have been disbursed.

92. In 2009, the technical assistance component will continue to provide support to strengthen the technical capacity of local staff. The public awareness campaign will continue by supporting the Second International Fair on Clean Technologies in 2009. Efforts will also continue to identify CFC end users to promote conversion, reclamation or facilitate the transition to alternatives. The remaining funds will also be used for the 2009 audit.

Secretariat's recommendations

93. The Executive Committee may wish to note the 2009 Annual Work Programme for the CFC production phase-out plan in the Bolivarian Republic of Venezuela.

Yemen: Terminal phase-out of methyl bromide (Germany)

94. The terminal phase-out of MB was approved by the Executive Committee at its 56th Meeting. Through this project, the Government of Yemen committed to phasing out all controlled uses of MB by 1 January 2015. The Executive Committee approved in principle US \$601,450 for implementation of the project, with funding of US \$201,450 approved at its 56th (US \$109,740) and 57th (US \$91,710) Meetings. Funding for the second tranche of the project (US \$200,000 plus agency support costs) will be requested in 2010.

Progress report

95. A number of results have been achieved so far during 2009, including: implementation of seven on-site training courses on solarization for about 240 participants, introduction of solarization technology

on 41 farms, with assistance provided by agricultural experts; implementation of a training programme for 10 members of the largest agricultural association in Sadah Governorate (most farmers are members of this association); training of agricultural engineers in grafting technology outside the country; implementation of a round table meeting on issues related to the phase-out of MB in cut flower cultivations with assistance from agricultural engineers. Agreements were also signed between the MB management project and two non-governmental organizations in Hadramout areas; and awareness material focusing on MB alternatives were disseminated among stakeholders. Specifications of materials for solarization and biofumigation technologies were provided to a MB importer, to import these materials into the country. As of August 2009, US \$128,283 had been disbursed.

Secretariat's comments

96. The 2008 MB consumption of 29.8 ODP tonnes reported by the Government of Yemen under Article 7 of the Montreal Protocol is already 13.8 ODP tonnes below the allowable level for that year of 43.6 ODP tonnes. This level of consumption is similar to that in the agreement between the Government and the Executive Committee.

97. Upon a request for additional information on capacity-building activities that would be implemented for securing the long-term sustainability of the MB alternative technologies in Yemen, and providing know-how to growers once the project has been completed, the Government of Germany indicated that training was not only provided to agricultural engineers and farmers but also to key persons of one of the associations to which most of the farmers in the Sadah region belong. This association is a key stakeholder in the implementation of the MB phase-out project, and it is responsible for organizing training programmes, distributing farm materials needed for the alternative technologies and reporting to Germany.

Secretariat's recommendation

98. The Executive Committee may wish to take note of the progress report on the implementation of the terminal phase-out of methyl bromide for Yemen covering the 2009 period.

Chillers' projects:

Brazil: progress report on the demonstration project for integrated management of the centrifugal chiller sub-sector, focusing on application of energy-efficient CFC-free technologies for replacement of CFC-based chillers (UNDP)

Colombia: progress report on the demonstration project for integrated management of the centrifugal chiller sub-sector, focusing on application of energy-efficient CFC-free technologies for replacement of CFC-based chillers (UNDP)

Cuba: progress report on the demonstration project for integrated management of the centrifugal chiller sub-sector, focusing on application of energy-efficient CFC-free technologies for replacement of CFC-based chillers (UNDP and Canada)

Syrian Arab Republic: Progress report on the demonstration project on the replacement of CFC centrifugal chillers (UNIDO)

Global: progress report on the global chiller replacement project (China, India, Indonesia, Jordan, Malaysia, Philippines, and Tunisia) (World Bank)

Region – Africa: progress report on strategic demonstration project for accelerated conversion of CFC chillers in 6 African countries (Cameroon, Egypt, Namibia, Nigeria, Senegal and Sudan) (UNIDO, France, Germany, and Japan)

Region – Europe: progress report on demonstration project on the replacement of CFC centrifugal chillers (Croatia, FYR Macedonia, Montenegro, Romania, and Serbia) (UNIDO)

Region – Latin America and the Caribbean: demonstration project for integrated management of the centrifugal chiller sub-sector in the Caribbean, focusing on application of energy-efficient CFC-free technologies for replacement of CFC-based chillers (UNDP)

Introduction

99. The Executive Committee had approved at its 47th and 48th Meetings eight demonstration projects for the replacement of CFC-using chillers for UNDP, UNIDO, the World Bank, Canada, France, Germany, and Japan comprising individual country projects, regional projects, and a global project. The approved project proposals suggested co-financing from a variety of sources, namely, the Global Environment Facility (GEF), Carbon Financing, Canadian International Development Agency (CIDA), the French Global Environment Facility, implementing agency funding and counterpart funding.

100. Through decision 55/5(d), the Executive Committee requested the Secretariat to “consult the Global Environment Facility and the implementing agencies on resolving co financing issues with respect to the approval of chiller projects, and when applicable, the related release of funding, and to report to the Executive Committee at its 56th Meeting on progress made in all chiller projects.”

101. The Secretariat provided to the 56th Meeting information on the progress made in all chiller projects. The Executive Committee took decision 56/10 to note the report on progress made in all chiller projects and to request that the discussions held at the 56th Meeting be taken into account when preparing a revision of the desk study on the evaluation of chiller projects and when preparing a policy paper on "a facility for additional income from loans and other sources" in response to decision 55/2.

102. At the 58th Meeting, the interim Senior Monitoring and Evaluation Officer presented a desk study on the evaluation of chiller projects. The Executive Committee decided through decision 58/7 to take note of the desk study, to urge the agencies to accelerate implementation of the current chiller projects with co-funding modalities, to provide a progress report to the 59th Meeting, and to encourage agencies to continue in their efforts to explore the applicability of carbon market instruments and other forms of co-financing, as appropriate, for the replacement also of HCFC equipment, particularly chiller equipment.

103. The progress report before the Executive Committee is in response to the above decisions, in particular decision 58/7. In doing so, it builds on the information already provided in document UNEP/OzL.Pro/ExCom/56/11/Add1., and does not repeat the information on the background of those projects but concentrates on a description of the incremental developments since the last report.

Progress Report

104. In order to prepare this progress report, the Secretariat distributed a three-part questionnaire to the three lead implementing agencies for chiller investment projects, namely UNDP, UNIDO and the World Bank. In the questionnaire, the agencies were requested to provide the following: a brief assessment of the experience to date and results achieved, a description of the co-financing mechanism used, and a summary of the activities undertaken. A draft summary generated by the Secretariat was then shared with

the agencies for comments. The result, building on the format developed for the 56th Meeting, is shown in the table forming Annex I.

105. It was noted by the Secretariat that all agencies focussed not only on the replacement of chillers on the basis of the CFCs used in them; a similarly important, if not more important issue was the energy consumption and, with that, the climate impact of the chillers. As envisioned when approving the projects, the co-funding was in most cases secured based on the expectation that the new chillers would realise substantial reductions in energy consumption.

106. The implementation has progressed well in the last year. In particular, a number of chillers have been replaced, and the programmes with a larger scope, namely the global programme and the programme in Brazil, have made significant steps forward in securing co-financing and, actually, increasing substantially the amount of co-financing.

107. At this point in time, financing for part of the funding sought from GEF totalling more than US \$20 million has been completed. The total level of co-funding for the chiller projects stands at US \$174 million, although with a very wide variety between projects. Seventy-eight per cent of the co-funding is related to one project of UNDP in Brazil, and another 18 per cent is related to the global chiller project from the World Bank; the other activities share the remaining 4 per cent or so of co-funding. However, considering the total funding provided by the Multilateral Fund for the chiller projects, amounting to US \$14.5 million, the co-funding has resulted in a 13-fold increase in the funds available up to a total of US \$188.5 million.

Secretariat's recommendation

108. The Executive Committee might wish to:

- (a) Note the progress report on progress made in all chiller projects provided in document UNEP/OzL.Pro/ExCom/59/10;
- (b) Commend UNDP and the World Bank for their successful and ongoing efforts to secure co-financing at levels significantly greater than the funding originally provided by the Multilateral Fund;
- (c) Commend all implementing and bilateral agencies involved for broadening the implementation activities beyond the issue of ozone protection and into climate change by addressing energy efficiency in their programmes, and using significant external funds for achieving both objectives in one activity; and
- (d) Request the Secretariat to provide another report on progress achieved in chiller projects to the 62nd Meeting.

Annex I

OVERVIEW OF PROGRESS ACHIEVED IN CHILLER INVESTMENT PROJECTS ACCORDING TO DECISION 45/4(c)

Implementing agency and country/region	Project funding (US \$)	Minimum co-funding requirement (US \$)	Originally proposed sources of co-funding	Changes to 2008 status (US \$)	2009 Amount of co-funding obtained / expected (US \$)	No. of chillers already converted / replaced under the project ¹
UNDP: Brazil	1,000,000	252,000	1. GEF 2. ESCOs	Additional funds: 70,109,000 New breakdown of additional funds: 1. 250,000 (GEF): approval of total can completed in 2009 2. 56,360,000 (ESCOs) 3. 249,000 (Govt.)	New Total: 135,524,000 Breakdown: 1. 13,750,000 GEF grant approved/completed 2. 106,360,000 Banks, ESCOs, beneficiaries* 3. 414,000 Govt. in kind, confirmed 4. 15,000,000 provided as a guarantee mechanism by IDB-confirmed	None
UNDP: the Caribbean (Barbados, Dominican Republic, Jamaica, and Trinidad and Tobago)	1,000,000	690,000	1. GEF 2. UNDP internal funds		Co-finance to replace 7 chillers in Jamaica has been secured from beneficiaries (the total amount still to be quantified).	7 CFC based chillers replaced in Jamaica.

¹ In brackets: Number of replacements or conversions presently ongoing

Implementing agency and country/region	Project funding (US \$)	Minimum co-funding requirement (US \$)	Originally proposed sources of co-funding	Changes to 2008 status (US \$)	2009 Amount of co-funding obtained / expected (US \$)	No. of chillers already converted / replaced under the project ¹
UNDP: Colombia	1,000,000	705,000	GEF	445,000 of additional funds Breakdown: 2. -670,000 Beneficiaries 3. 941,000 “Unidad de Planeacion Mineiro Energetica” (UPME) 4. 24,000 Govt. 5. 150,000 UNDP	New total: 4,445,000 Breakdown: 1. 1,000,000 GEF grant approved 2. 2,330,000* Beneficiaries 3. 941,000 (UPME in kind) 4. 24,000 Govt. in kind 5. 150,000 UNDP in kind In addition: Tax reduction approved by the Govt. for actual investments occur during project implementation. It is quantifiable only after implementation.	None
UNDP and Canada: Cuba	984,353	410,125	1. Govt. of Canada 2. UNDP internal funds		Total: 901,300** -completed Breakdown: 1. 655,000 CAN\$ (Govt. of Canada) 2. 335,000 CAN\$ (Priv. sector) 3. 40,000 (UNDP Energy TTF)	4 converted 5 under conversion
UNIDO: Eastern Europe (Croatia, FYR Macedonia, Romania, Montenegro, and Serbia)	1,069,074	416,175	Counter part funds	Five new chillers were installed and are operational.	Total: 470,000 Breakdown: 1. 230,000 (5 counterparts) 2. 240,000 (5 counterparts)	10 converted 1 under conversion

Implementing agency and country/region	Project funding (US \$)	Minimum co-funding requirement (US \$)	Originally proposed sources of co-funding	Changes to 2008 status (US \$)	2009 Amount of co-funding obtained / expected (US \$)	No. of chillers already converted / replaced under the project ¹
UNIDO: Syrian Arab Republic	585,961	27,195	Counter part funds	The three chillers at Le Meridien are installed and operational.	Total: 270,000 Breakdown: 1. 120,000 (Le Meridien Hotel) 2. 150,000 (El-Basel Hospital)	3 converted 4 under conversion
France, Germany, Japan and UNIDO: Africa (Cameroon, Egypt, Namibia, Nigeria, Senegal, and Sudan)	2,000,000	477,876	FGEF	Senegal was added bringing the total to six countries from African region as part of this project	Total: 1,027,500** (FGEF)	1 converted
World Bank: Global project (China, India, Indonesia, Jordan, Malaysia, Philippines, and Tunisia)	6,884,612	13,769,224	1. GEF 2. CDM	Jordan has started its chiller replacement project along with India and the Philippines; WB Board has approved the India chiller replacement project and Grant Agreement is signed; Buyer identified under the CDM mechanism for the Philippines and WB project appraisal completed. Malaysia will not participate in the project; China and Tunisia will most likely not participate in the project. Discussion is ongoing with Indonesia in terms of how best to meet co-financing requirements	Total: 31,670,000 Breakdown: 1. 6,300,000(GEF-India) 2. 2,600,000 (GEF-Philippines) 3. 15,000,000 (CDM-India) 4. 7,770,000 (CDM-Philippines) GEF approved and completed for India.	None

*Brazil and Colombia: Will only materialize when actual investments occur during project implementation. It also covers other elements of energy efficiency in buildings.

**Calculated based on the prevailing exchange rate of the contribution versus the US dollar at the time co-financing was approved.