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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Sixty-fifth Meeting
Bali, Indonesia, 13-17 November 2011

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

Introduction

1. The Secretariat requested bilateral and implementing agencies to submit to the 65th meeting outstanding progress reports on the implementation of national phase-out plans (NPPs), terminal phase-out management plans (TPMPs), sector plans, and HCFC demonstration and investment projects, where specific reporting requirements are contained in the agreements and in the relevant decisions of the Executive Committee taken between the 59th and 64th meetings.

Structure of the document

2. The Secretariat has grouped the progress reports into four sections:

Section I: National phase-out plans (NPPs) and terminal phase-out management plans (TPMPs);

Section II: Methyl bromide phase-out plans;

Section III: Sector phase-out plans; and

Section IV: HCFC demonstration and investment projects.

I. NATIONAL PHASE-OUT PLANS (NPPs) AND TERMINAL PHASE-OUT MANAGEMENT PLANS (TPMPs)

3. UNDP, UNEP, UNIDO and the World Bank have submitted the following reports:

(a) Afghanistan: National phase-out plan: Verification report for 2009 and 2010 (UNEP);

(b) Ecuador: National CFC phase-out plan: Progress report and 2010 annual programme (UNEP/UNIDO);

(c) Egypt: National CFC phase-out plan: 2010 progress report (UNIDO);

(d) Philippines (the): National CFC phase-out plan: 2003-2010 cumulative progress report (World Bank);

(e) Tunisia: National ODS phase-out plan: Progress report on 2010-2011 biennial implementation plan (World Bank).

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

5. The Secretariat also noted that reports for the following countries had been submitted after the eight week deadline for the 65th meeting: Burkina Faso (TPMP verification report); China (solvent sector progress and verification reports); Côte d'Ivoire (TPMP verification report); Indonesia (NPP verification report); Kyrgyzstan (TPMP progress report); Sao Tome and Principe (TPMP verification report). The Secretariat was unable to review these and the reports will be submitted for consideration at the 66th meeting.

Secretariat's recommendation

6. The Executive Committee may wish to request the relevant bilateral and implementing agencies to submit to the 66th meeting complete progress reports on the implementation of the national phase-out plans and terminal phase-out management plans that are due, as per specific decisions taken between the 59th and 64th meetings, that have not yet been submitted.

Afghanistan: National phase-out plan: verification report for 2009 and 2010 (UNEP)

7. The NPP, which commits the Government of Afghanistan to phase out all CFCs by 1 January 2010 and CTC by 1 January 2007, was approved by the Executive Committee at its 47th meeting. Progress reports, annual implementation plans and consumption verification reports were submitted to the 51st, 54th, 57th and 60th meetings. A progress report was also submitted to the 64th meeting; however no verification reports were attached. The Executive Committee requested UNEP to submit the verification report for 2009 and 2010 no later than the 65th meeting of the Executive Committee (decision 64/13(b)).

Verification report

6. In 2009, an audit of the 2009/2010 ODS consumption was undertaken by an independent auditor, who concluded that total ODS consumption, excluding HCFCs, was 27.0 ODP tonnes of CFC-12 in 2009 and zero in 2010. The verification report also indicated that the national ozone unit did not issue any licences for the import of CFCs in 2009 or 2010 and that the consumption in 2009 had resulted from the regularized release of 27 ODP tonnes of CFC-12 that had been imported during 2008. In 2008 a shipment of 67 ODP tonnes was stopped by Afghan Customs. Forty ODP tonnes were released as per the 2008 quota while the excess 27 ODP tonnes were held by customs. Since the excess tonnage imported was released into the domestic market in 2009 it was counted as consumption in that year. The report also concluded that adequate systems are in place to ensure implementation of the ODS rules and regulations".

Secretariat's comments

8. The Secretariat noted the verification report submitted by UNEP on behalf of the Government of Afghanistan is in accordance with decision 64/13(b). The verified levels of 27 ODP tonnes of CFC for 2009 and zero for 2010 concur with country programme data submitted by the Government for those years. The 2009 verified consumption also corresponds to the amount reported under Article 7. Since 2007, the Government has reported zero consumption of CTC under Article 7 of the Montreal Protocol. As of 10 October 2011, Afghanistan has not yet reported Article 7 data for 2010 although the verification report, dated May 2011, stated that the 2010 data was being submitted to the Ozone Secretariat.

9. Upon a request for clarification of the potential risks of illegal trade in ODSs, UNEP indicated that despite the prevailing difficult situation in the country, the ODS import/export control system is working well.

Secretariat's recommendation

10. The Executive Committee may wish to take note of the verification report on the 2009 and 2010 audit of ODS consumption in Afghanistan.

Ecuador: National CFC phase-out plan: Progress report and 2010 annual programme (UNEP/UNIDO)

11. The NPP, which commits the Government of Ecuador to phase out all CFCs by 1 January 2010, was approved by the Executive Committee at its 41st meeting to be implemented by the World Bank. Total funding of US \$1,689,800 plus agency support costs of US \$126,135 was approved in principle by the Executive Committee. All five tranches foreseen under the NPP were released. The Agreement

between the Government of Ecuador and the World Bank expired in September 2009, and the unspent funds from the last three tranches were transferred from the World Bank to UNEP, as lead agency, and UNIDO, as co-operating implementing agency, in accordance with a revised agreement made at the 61st meeting (i.e., US \$193,155 for UNEP and US \$280,000 for UNIDO). UNEP was requested to submit a progress report on the implementation of the NPP no later than the 64th meeting (decision 61/36).

Progress report

12. UNEP, and UNIDO planned to implement the following activities: upgrade of ODS legislation; training programmes for customs officers and for refrigeration technicians in good practices and provision of service tools for MAC workshops; establishment of a CFC reclamation centre; implementation of a CFC end-user programme for chillers; and creation of a CFC destruction facility. So far, UNIDO had implemented the end-user programme, the reclamation center, the destruction facility and part of the training of technicians. Since most of the chillers were no longer using CFCs, the end-user programme intended for chillers was refocused on the recovery of CFCs from 330,000 domestic refrigerators to be replaced by energy efficient units as part of a programme implemented by the Ministry of Industry and Productivity. Experts from the national training institute (SECAP) were trained on recovering CFCs from these appliances and an agreement was made with the NOU and SECAP to provide training, certification and equipment to technicians. In addition, a CFC destruction mini plasma unit was installed in SECAP for the destruction of all the CFC collected from the domestic refrigerator replacement programme. The reclamation centre was also established in SECAP, but focused on HCFC-22 instead of CFC-12. The reclaiming and destruction units are expected to start operating in November 2011.

13. With regard to UNEPs activities, the project document between the Government of Ecuador and UNEP was signed in September 2011. The ODS legislation was upgraded, including the HCFC import permit and quota system, and a ministerial decree is currently in the process of approval. Customs officers will only be trained when the decree is approved in the last quarter of 2011. The Government of Ecuador continued to implement policy measures related to control of ODS import/exports including CFC-based equipment, and public awareness.

Financial report

14. As of September 2011, UNIDO had expenditures of US \$272,000 out of the US \$280,000 approved, while UNEP had expenditures of US \$40,000 and obligations for US \$153,511 out of the US \$193,155 approved. The balance from UNIDO's tranches (US \$8,000) will be used to install and start up the purchased recovery and reclaim machines in 2011, while the balance from UNEP's tranches (US \$153,155) will be used in programmed activities that will extend up to July 2012.

Secretariat's comments

15. In reviewing the progress report of the NPP the Secretariat took into consideration the submission of stage I of the HPMP for Ecuador to the present meeting (document UNEP/OzL.Pro/ExCom 65/31). It pointed out to the agencies that the mandatory independent consumption verification reports for the years 2009 and 2010 had not been submitted. UNEP advised that the verification reports were currently under preparation and would be submitted if possible, prior to the 65th meeting.

16. The Government of Ecuador reported zero consumption of CFCs in 2010 under Article 7 and therefore the country is in compliance with the Montreal Protocol's 2010 control measure for CFCs. It was noted that, notwithstanding the total phase-out of CFCs achieved by 1 January 2010, there were still planned activities that had not started, and at the same time the HPMP submitted included activities in the refrigeration and air conditioning servicing sectors. In view of this, and in the context of the discussion on stage I of the HPMP, it was suggested that the remaining activities associated with the NPP should be refocused to address HCFC consumption. UNIDO and UNEP agreed to this proposal and suggested the

following activities for implementation: two custom training workshops for 40 custom officers from Quito and Guayaquil on the HCFC licensing system; training of 120 technicians on HCFC alternatives and a training module to operate recovery, recycling and reclaiming centres. UNEP assured the Secretariat that the unspent balance from the NPP would allow immediate implementation of these activities pending the availability of HPMP funding. All NPP components will be completed by July 2012.

Secretariat's recommendation

17. The Executive Committee may wish:

- (a) To take note of the 2010 progress report on the implementation of the national CFC phase-out plan for Ecuador;
- (b) To request UNEP and UNIDO to expedite the completion of the remaining activities under the NPP, noting that they will assist Ecuador to sustain zero consumption of CFCs and facilitate the phase-out of HCFCs, and to report to the Executive Committee at its 67th meeting on the completion of the implementation of the NPP; and
- (c) To request UNEP to submit the verification reports on the 2009 and 2010 CFC consumption of Ecuador no later than the 67th meeting of the Executive Committee.

Egypt: National CFC phase-out plan: 2010 annual programme (UNIDO)

18. The NPP for Egypt was approved at the 46th meeting at a total cost of US \$3,100,000 plus agency support costs of US \$232,500 for UNIDO to completely phase out CFC consumption by the end of 2009. Since the 46th meeting, all funding available has been approved in several tranches with the fourth and fifth (final) tranches being released at the 60th meeting when the Executive Committee requested the Government of Egypt, with the assistance of UNIDO, to submit a progress report on the implementation of the work programme associated with those tranches no later than the 63rd meeting. The 2010 implementation plan was approved taking into account that CFCs used in all sectors except for the manufacture of metered-dose inhalers (MDIs), had been completely phased out by 2009 (decision 60/36).

Progress report and future activities

19. During 2010/2011 the retrofit incentive programme was implemented in the form of a demonstration project, which provides technical assistance and training to Misr Import and Export Company and the National Egyptian Railway Company that both operate a large number of commercial refrigeration and air conditioning (RAC) equipment. At two branches of Misr Import and Export Company 17 refrigeration units of 80kW capacity were converted to HFC-507A (a 50:50 mixture of HFC-125 and HFC-143a), a refrigerant with similar performance and cooling capacity as CFC-12. The installations are fully operational and the disbursement of US \$50,000 (incremental capital costs) by UNIDO is imminent.

20. The National Egyptian Railway and UNIDO signed a contract in June 2011 to retrofit A/C units in 125 carriages with HFC-134a as the refrigerant. UNIDO will disburse funds for retrofitting 15 carriages minimum per month based on a bimonthly report verifying that retrofits have taken place. Funding will include the costs for parts needed; retrofitting equipment (tools, flare sets and cleaning machines) has already been purchased. The first disbursement of US \$44,000 has been made while the remaining funds of US \$399,000 have been obligated. Three one-day workshops to demonstrate good recovery and recycling practices, promote drop-in refrigerant replacements and retrofits will be

undertaken during the renovation of the railway carriages units in December 2011, February 2012 and May 2012. The workshops will each train 20 technicians.

21. A computerized customs control and data management system for all ODSs including HCFCs is under development. Data collection was completed in May 2011 and the system is expected to be operational by mid-2012. The National Ozone Unit (NOU) also plans to support the implementation of awareness activities including the preparation of a booklet on ODS legislation and custom guidelines together with a one day workshop.

Financial report

22. As of September 2011, of the total budget of US \$664,000 consisting of funds remaining from the third tranche (US \$364,000) and those approved for the fourth and fifth tranches (US \$300,000), US \$148,000 has been disbursed and US \$516,000 have been obligated.

Secretariat's comments

Verification report

23. The Secretariat pointed out that the mandatory independent verification report for the years 2009 and 2010 was not included in the report. UNIDO advised that the verification will start in October 2011 and is expected to be finalised by the end of 2011. UNIDO also added that the verification would be more meaningful once Article 7 data had been reported.

CFC consumption in 2010

24. Decision XXI/4 of the meeting of the Parties authorized Egypt to consume up to 227.4 ODP tonnes CFCs for essential uses (i.e., manufacturing of metered-dose inhalers or MDIs). Egypt has reported Article 7 data of 172.5 ODP tonnes of CFCs for 2010. In the context of the HPMP for Egypt submitted to the 65th meeting (UNEP/OzL.Pro/ExCom/65/32), UNIDO explained that the CFC consumption reported in 2010 is related to the production of MDI and remains below the maximum allowable consumption level of 227.4 ODP tonnes. The phase-out project for CFC-MDIs is expected to be completed at the end of 2011. Four production lines in two companies have already been converted and the technology transfer for the last production line is scheduled for November 2011. CFC-free salbutamol inhalers have been registered and are on the market. The awareness campaign was launched with a workshop in the beginning of June 2011 and another is scheduled for October 2011, with three more workshops are planned to be held by the end 2011.

Ongoing CFC phase-out activities

25. The Secretariat noted that although the third tranche of the NPP was approved at the 54th meeting (April 2008) and the fourth and fifth tranches at the 60th meeting (April 2010), implementation of the Misr Import and Export component started only in February 2010, while the contract with the National Egyptian Railway was only signed in June 2011 and collection of the basic data required for the development of the ODS database component was only completed in May 2011. UNIDO explained that the component of the project at the National Railway was delayed for a number of reasons including the need to negotiate a more detailed work plan and the disbursement schedule between UNIDO and the beneficiary, and lately due to the political developments in Egypt. The retrofit of the air-conditioning units will be carried out in the context of the renovation of the carriages, which have not been in operation since 2009, and should be completed by the end of 2012.

Secretariat's recommendation

26. The Executive Committee may wish:
- (a) To take note of the 2010 progress report on the implementation of the national CFC phase-out plan for Egypt; and
 - (b) To request UNIDO to submit the independent consumption verification report for the years 2009 and 2010 to the 67th meeting of the Executive Committee together with a timetable for completion of the remaining activities in the national CFC phase-out plan.

Philippines (the): National CFC phase-out plan: 2003-2010 cumulative progress report (World Bank)

27. The National CFC phase-out plan (NCP) for the Philippines was approved in principle at the 38th meeting of the Executive Committee in November 2002, with a total value of US \$10,575,410 and agency support cost of US \$896,788, to phase-out 2,017.6 ODP tonnes of CFCs. The first tranche of US \$3,010,873 with agency support cost of US \$259,979 was approved at the same meeting. Subsequent tranches were approved at the 41st, 44th, 47th, 51st and 54th meetings to cover the due activities from 2003-2008.

Verification report

28. The maximum allowable CFC consumption level in the Philippines for 2008 was set at 400 ODP tonnes and 300 ODP tonnes for 2009. Verified CFC consumption based on actual import in 2008 was 169.44 ODP tonnes, which is 230.5 ODP tonnes lower than that allowed for 2008. The report also included information on the licenses issued for 2009, which shows that the recorded actual imports are 208.64 ODP tonnes which is well below the maximum allowable consumption of 300 ODP tonnes for 2009. Data reported under Article 7 of the Montreal Protocol shows that the country's CFC consumption for 2009 and 2010 was 208.64 ODP tonnes and zero ODP tonne respectively.

Progress report

29. The World Bank had submitted a cumulative report of the progress made from the date of inception of the project up until September 2011. It summarised all activities undertaken in the areas of policy, investment and non-investment activities (training capacity building and public awareness) identified under the NCP. The implementation highlights for the period 2003-2010 are summarized below.

Industry actions/manufacturing sector

30. The foam and refrigeration equipment manufacturing sector has eliminated its use of CFCs in the last few years. Most foam manufacturers have already switched to methylene chloride (MC), and some have stopped operations due to the economic conditions in the country. Through the technical assistance activities for the aerosol and MDI sectors, these have also phased out the use of CFCs.

31. The MDI transition strategy continues to be implemented through the Department of Health (DOH) and Bureau of Food and Drug (BFAD). Based on the latest market monitoring by Food and Drug Administration (FDA), there are no more CFC-containing MDIs in the market today, including the three remaining CFC-based MDIs that were still available in 2009.

Technical assistance activities

32. For the servicing sector, the programme continued to focus efforts in coordinating certification of suppliers of tools and equipment; training and assessment (certification) of technicians, and the implementation of mandatory inspection of motor vehicles with mobile air-conditioning (MAC) systems. Based on records from the Land Transportation Office (LTO), the number of registered vehicles equipped with CFC-based air-conditioning systems (R-12) decreased by 14 per cent in 2009 as compared to 2007 figures. Starting from 2012, registration and renewal of registration of vehicles still equipped with CFC-based air-conditioning systems will no longer be allowed.

33. The voucher system was launched in 2006. Some 3,030 vouchers, or about 61 per cent of the estimated 5,000 service shops, were prepared. Out of these 2,521 were approved as grantees and awarded vouchers to purchase equipment by 2009. By 2010, 48 per cent of the voucher grantees were accredited with the Department of Trade and Industry (DTI) accreditation scheme for service shops.

34. The progress report identified the following key issues for the future, for the NCPP:

- (a) The need to mainstream the NCPP project management unit (PMU) with the Environment Management Bureau of the Department of the Environment and Natural Resources (EMB-DENR) for sustainability of activities;
- (b) The need to strengthen the capacity of EMB-DENR in monitoring and enforcement particular in overseeing activities of the service shops for the servicing sector; and
- (c) The need to allocate funds from the regular Government budget for the continued operation of the NCPP-PMU when funds from the NCPP run out.

35. In addition, it also provided some key lessons learned from the project, which include:

- (a) The importance of sustained capacity development for the local government units (LGUs) especially for activities concerning the servicing sector;
- (b) Tighter coordination between and among LGUs implementing these activities require dedicated and committed focal points;
- (c) Constant changes in project management staff impede continuity in project implementation; and
- (d) Changing behaviours and practices among service technicians, enterprises and end-users must be addressed as it will continue to challenge the phase-out in the service sector.

36. By the end of 2010, the project had disbursed 77 per cent of the US \$10,575,410, approved for the NCPP. This brings the balance of the project to US\$2,432,344. The World Bank did not submit a work programme for the remaining balance of the project.

Secretariat's comments

37. The Secretariat noted that for the verification report, there were a number of recommendations which had been carried over from the previous report to the 60th meeting, in particular concerning internal document management that affects recording imports and exports, that has not yet been resolved. The Secretariat sought clarification from the World Bank regarding audit recommendations and how these have been dealt with. It also noted a reference to seized shipments of CFC-12, which are currently under the supervision of the Bureau of Customs and have been proposed for auction. The Secretariat sought

information on when these shipments had been seized as well as the volume and what are the plans for their disposal.

38. In its response, the World Bank had indicated that the document management issue has not yet been rectified and that discussions are continuing with the Government of the Philippines on how this can be resolved. It also pointed out that the electronic database for maintaining these records was found satisfactory; the concerns of the auditor were on maintaining hard copies of the records. With regard to the seized shipments, the World Bank was unable to provide the information requested by the Secretariat, but had been advised that these were not reported as consumption and would be included in the quantity proposed for destruction of unwanted ODS.

39. The Secretariat further noted that the project implementation report did not specifically highlight any activities undertaken for the reporting period (implementation of 2010 annual work plan) as required in decision 60/8(i). According to the World Bank, it was more useful to submit a report that provided the full picture and highlighted overall achievements of the NCPP given that the implementation of planned activities as per the original NCPP are now completed and that the project between the Government of the Philippines and the World Bank has closed as of 30 June 2011. Nonetheless, while the Agreement between the Government of the Philippines and the World Bank has been terminated, the agency acknowledged that the Government of the Philippines had advised that there are still additional activities that are needed to ensure the sustainability of the NCPP and the CFC phase-out.

40. The World Bank has also indicated that, for the remaining funds under the NCPP, it has advised the country to approach another implementing agency for accepting the transfer. DENR is currently preparing a request to the Executive Committee for an extension of the NCPP from 2011 until 2013 in order to allow the Philippines to complete tasks which are deemed critical to the sustainability of CFC phase-out. It indicated that despite the achievements of the NCPP in phasing out CFC imports, activities focusing on ending residual demand for virgin CFCs in the servicing sector as identified in the 2009 audit report should be implemented urgently. These include enhancing the accreditation of service shops, addressing the potential illegal import of CFCs, border controls, enhanced customs training, and training for service technicians. Support will also be needed for operations or capacity building for the existing recovery and recycling centres, and the collection of recovered CFCs from service shops and chiller owners for proper disposal.

41. With regard to the financial reporting, the World Bank mentioned that it is still in the process of finalizing the accounts of the umbrella ODS project under which the NCPP falls. The deadline for finalizing the accounts is the end of October 2011 and, at that time, the PMU should be in the position to provide final figures on disbursements, as well as the balances, up to the closing of the umbrella project.

42. The Secretariat noted that as of writing this document, it has not yet received a formal request from the Government of the Philippines for a change of agency to implement the remaining activities in the NCPP.

Secretariat's recommendation

43. The Executive Committee may wish:

- (a) To note the progress report on the implementation of the national CFC phase-out plan (NCPP) for Philippines for the period 2003-2011;
- (b) To note the verification report of 2008 CFC consumption; and
- (c) To note that the grant agreement between the World Bank and the Government of the Philippines closed on 30 June 2011, and to encourage the Government of Philippines to

submit, with the assistance of their selected implementing agency, a verification report for 2009 and 2010, an implementation plan for 2012-2013 for the remaining funds under the NCPP by the 66th meeting.

Tunisia: National ODS phase-out plan: Progress report on 2010-2011 biennial implementation plan (World Bank)

44. The World Bank has submitted, on behalf of the Government of Tunisia, a progress report for the national ODS phase-out plan (NOPP), covering the years 2010 up to the middle of 2011, a verification report for the years 2008 and 2009, and a biennial implementation plan for the remainder of the year 2011 and 2012. This information has been provided in response to decision 61/39, which required submission of this information, in particular if significant funds remained uncommitted at the beginning of 2011.

Verification

45. The verification established the imports into the country in 2008 and 2009, and included data on the 2008 and 2009 quotas for importers, the number of licenses provided, and the amount of substance imported against those licenses. The amount imported in 2008 was 12.186 tonnes of CFC-12, and 16.524 tonnes of CFC-12, 181 kg of CFC-115 and 94 kg of CFC-11 in 2009; resulting in a total of 16.72 ODP tonnes. The maximum allowable consumption under the NOPP for both years had been 130.5 ODP tonnes. The verification has therefore determined that Tunisia has adhered to the consumption limits under the NOPP Agreement. Halon, which is also covered under the NOPP and its Agreement, was not imported during 2008 and 2009. The NOPP had foreseen a maximum level of imports of halons for both years of 42 ODP tonnes.

Secretariat's comments

46. The verification showed an import of 94 kg of CFC-11 in 2009 without a licence by an enterprise that has a non resident status vis-à-vis the Tunisian law. Such enterprises can be set up and allowed to import with minimum importation restrictions on the condition that the products manufactured are being exported. The 94 kg (metric) of CFC-11 had not been cross-checked by customs against a licence, since these types of enterprises have limited import restrictions applied to them. The same is true for an import in 2009 of 181 kg (metric) of CFC-115 (also without a licence). As a result, the quantity imported of 16.7 ODP tonnes was 0.1 ODP tonne higher than that reported under Article 7 to the Ozone Secretariat. The World Bank has been advised by the Secretariat to suggest to the Government of Tunisia to amend the Article 7 data accordingly.

47. The World Bank informed that the implementation of the biennial programme for 2010/2011 has been significantly delayed, partially due to the unrest in Tunisia during the first half of 2011. According to the World Bank, all planned activities have been set back by about one year: including five additional training sessions for the customs officers, the procurement of an additional 32 refrigerant identifiers, provision of recovery and recycling units, training and provision of tools to the refrigeration service sector. A metered dose inhaler study, a transition workshop, and technical assistance activities in the halon sector were also completed, and awareness activities and funding for the programme management unit are to continue. The currently available funding is still very significant at US \$998,367. There has been some progress in implementation, and the World Bank undertook a mission in June 2011 to establish which changes are necessary to the programme as a result of the government changes in Tunisia. The World Bank reported that there was a continued need for CFC-12 in the country, which is estimated to be currently 15 ODP tonnes per year but with constant reductions due to the attrition of the existing equipment and its replacement with alternative technologies.

48. The Secretariat raised a number of questions, among them the reasons for the continued need for CFC-12 in the country, and the applicability of the currently implemented and planned activities to HCFC phase-out. The World Bank informed the Secretariat that 77 recovery and recycling machines currently purchased are usable for CFCs, HCFCs, and HFCs and are intended for stationery refrigeration and air conditioning, which would cover the typical HCFC applications. The World Bank provided some further clarifications on the planned activities and assured that, while HCFC issues were not factored in for a number of activities, in particular in the training of refrigeration technicians and supply of equipment, the Government of Tunisia “could entertain to include those to the extent possible”, i.e. where technicians and shops or installations are dealing with HCFCs.

49. The Secretariat requested a verification report for the year 2010, the last year mentioned in the Agreement with a target consumption, in this case, of zero ODP tonnes. The World Bank replied that the two previous audits have shown that the system of controls functions well and zero consumption of Annex A substances has been reported to the Ozone Secretariat. The Government of Tunisia therefore advised the World Bank that it does not see the necessity of a third consumption verification for 2010. The Secretariat maintains its position that such a verification would be necessary to fulfil the terms of the Agreement between the Executive Committee and the country.

Secretariat’s recommendation

50. The Executive Committee may wish:

- (a) To take note of the submission of the verification report for 2008/2009 and the annual progress report for 2010 and the first half of 2011;
- (b) To approve the biennial implementation plan as modified for the remainder of 2011 and 2012; and
- (c) To request the World Bank to submit a verification of the 2010 consumption of CFCs and halons to the 67th meeting of the Executive Committee.

II. METHYL BROMIDE PHASE-OUT PLANS

51. UNEP and UNIDO have submitted the following reports:

- (a) Guatemala: National phase-out of methyl bromide (phase II, first tranche) (UNIDO/UNEP); and
- (b) Honduras: National methyl bromide phase-out plan (phase II) (UNIDO).

Guatemala: National phase-out of methyl bromide (phase II, first tranche) (UNIDO/UNEP)

52. At its 38th meeting, the Executive Committee approved a project to phase out 468 ODP tonnes of MB used for soil fumigation in Guatemala, to meet the 20 per cent reduction in MB baseline consumption (e.g., 400.7 ODP tonnes) by 2005, at a funding level of US \$3,257,377 plus agency support costs for UNIDO to phase out 468.0 ODP tonnes of MB by 2005 (decision 38/42).

53. Phase II of the MB project was approved at the 59th meeting, at a cost of US \$2,243,047 plus agency support costs of US \$168,228 for UNIDO, and US \$70,000 plus agency support costs of US \$9,100 for UNEP, to completely phase-out all controlled uses of MB by 2013 totalling 265.7 tonnes (decision 59/37). The first tranche was approved at a cost of US \$1,300,000 plus agency support costs of US \$97,500 for UNIDO, and US \$70,000 plus agency support costs of US \$9,100 for UNEP. At the

64th meeting, the Executive Committee requested an additional status report to the 65th Meeting owing to low rate of disbursement of approved funds was requested (decision 64/10).

Progress report and future activities

54. The project focuses on the elimination of MB consumed by four melon growers (i.e., Agripromo, Fruta Mundial, PAO, and La Labor) that have decided to adopt alternative chemicals, biological controls, and grafting as replacement of MB. All four growers finalized their respective plans of action. PAO signed an agreement and commenced implementation of activities while implementation in the other three companies is pending signature of their respective agreements. The following activities were carried out under the first tranche: melon farmers took part in a study tour to Mexico on application of grafting in melon and watermelon (March 2011); assistance and support to PAO to implement chemical alternatives (September 2011); preparation of the terms of reference to purchase laboratory equipment as part of the implementation of the biological control programme for Fruta Mundial (July 2011). The monitoring system for MB imports, implemented through the Ministry of Environment in close cooperation with the farmers, is working effectively.

55. Subject to signature of the three pending agreements the following activities will be implemented: the purchase of the laboratory equipment and provision of training for the implementation of the biological control alternatives for Fruta Mundial (first quarter 2012); additional support to PAO in the application of alternative chemicals (July-September 2012); modalities to support La Labor, which wishes to start activities in biological control activities while the same time continuing with grafting in watermelons (mid 2012); support to Agripromo in the application of alternative chemicals; and a visit to Honduras to study biological control.

Financial report

56. As at 31 August 2011, only US \$170,939 of the first tranche of US \$1,300,000, had been obligated and disbursed.

Secretariat's comments

57. The 2010 consumption of MB of 249.0 ODP tonnes reported for Guatemala under Article 7 of the Montreal Protocol is less than the maximum level of consumption required by the agreement made at the 59th meeting (265.7 ODP tonnes).

58. Given that the activities in the four companies that are taking part in the project are at the initial stage of implementation as reflected in the progress report and by the low level of disbursement the Secretariat requested a further explanation of how Guatemala proposes to phase-out 48.0 ODP tonnes of MB required by the agreement in 2011 to reach the maximum allowable level of consumption of 217.7 ODP tonnes of MB for 2011. UNIDO advised that currently one company has committed to a reduction in MB consumption however the main tool to reduce MB consumption will be the quota system that is being applied by the Government. The quota, based on the maximum allowable consumption, is distributed between the four companies taking part in the project and one multinational.

Secretariat's recommendation

59. The Executive Committee may wish:

- (a) To take note of the progress report on the implementation of the national phase-out of methyl bromide (phase II, first tranche);
- (b) To urge the Government of Guatemala, with the assistance of UNIDO, to speed up the

implementation of the first tranche of the phase-out plan; and

- (c) To request UNIDO to submit a progress report on the implementation of the project no later than the 68th meeting of the Executive Committee.

Honduras: National methyl bromide phase-out plan (phase II) (UNIDO)

60. At its 37th meeting, the Executive Committee considered a project proposal to completely phase out the use of MB as a soil fumigant in melons, bananas and tobacco seedlings (i.e., 412.0 ODP tonnes) and approved funding for phase I of the project amounting to US \$1,977,454 excluding agency support costs (decision 37/50).

61. The Executive Committee approved in principle at its 50th meeting, the second phase of the project for Honduras at a total cost of US \$1,806,301, plus agency support costs of US \$135,472 for UNIDO. Under phase II of the project, the Government of Honduras committed itself to achieving a 20 per cent reduction in its MB consumption by 2008 and complete phase-out by 2012. Since then, the Executive Committee has approved all four tranches of the project at a total amount of US \$1,806,301 plus agency support costs of US \$135,473 for UNIDO. Disbursement of the fourth tranche was conditional on the submission to the Fund Secretariat of an official communication from the Government of Honduras stating that the level of MB consumption in 2009 was below 183.6 ODP tonnes (i.e., the maximum allowable level of consumption in the Agreement). UNIDO was also requested to submit an annual progress report on the implementation of the project until MB is completely phased out.

Progress report

62. The following activities associated with the fourth tranche have been implemented: training of 15 staff from the three melon producers by an international expert in grafting technologies and melon growing and a study tour for three technicians to a number of locations in Mexico where melons are grown, which was carried out jointly with two producers from Guatemala. In addition, at no cost to the project, exchange visits took place between one producer and melon producers from Costa Rica to share information on each others' projects. Farm material has been provided to the three growers, industrial ventilators and some laboratory have been provided and additional polyurethane trays are being purchased.

Financial report

63. As of 8 September 2011, of the total funding of US \$1,806,301 approved so far, US \$39,483 remains from the third and fourth tranches yet to be disbursed.

Secretariat's comments

64. The 2010 consumption of MB of 139.6 ODP tonnes reported for Honduras under Article 7 of the Montreal Protocol is less than the maximum level of consumption required by the agreement made at the 59th meeting i.e., 163.2 ODP tonnes. Import quotas agreed by the three melon farms for 2011 and 2012 are consistent with the maximum allowable consumption limits in the agreement.

65. Upon a request to further explain the long-term sustainability of the alternative technologies and integrated pest management, UNIDO advised that the project aimed to build capacity by hiring the best available experts to transfer their knowledge to melon producers and by providing each producer with the laboratory equipment and tools necessary for the alternative technologies they selected. The laboratories of two melon growers were equipped and staff trained for the production of indigenous bio-control; the third grower was visited by the experts in grafting technologies and also received the equipment required for the introduction of this technology. Furthermore the project had focused on sustainability, the actual

requirements of the markets and the use of successful alternatives. UNIDO expects the melon growers to confirm the use of the alternative technologies they had chosen and there by ensure the sustainability of the project.

Secretariat's recommendation

66. The Executive Committee may wish to note the progress report on the implementation of the national methyl bromide phase-out plan in Honduras.

III. SECTOR PHASE-OUT PLANS

67. The World Bank has submitted the following reports:

- (a) China: Sector plan for phase-out of CFC-11 in the foam sector: financial audit report;
- (b) China: Halon sector plan: financial audit; and
- (c) India: CTC phase-out plan for the consumption and production sectors: 2010 verification report.

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

68. The World Bank, on behalf of China, has submitted to the 65th meeting two documents, namely a "Balance sheet of project", which includes an overview of all current World Bank administered projects of the Multilateral Fund in China and a "PU Foam Sector Plan - report to the 65th ExCom meeting on status of Annual Programs", that addressed the status, as of June 2011, of the approved funding and disbursements for all annual plans.

Background

69. The Agreement on CFC phase-out in the polyurethane foam sector in China was approved at the 35th meeting of the Executive Committee in December 2001 at a total cost of US \$53.846 million plus agency support costs for the World Bank.

70. 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 any 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. The Executive Committee therefore 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.

71. In its decision 56/13, the Executive Committee had also agreed that China would continue to have independent financial audits conducted of the sector plan account that would be provided to the Executive Committee on an annual basis from 2009 onwards. At the 57th meeting, the Executive Committee had taken decision 57/14 (c), approving an implementation plan for the foam sector including the screening and evaluation of CFC-free substitutes and development of new substitutes (US \$2,700,000), technical

service to foam enterprises for better application of new alternatives (US \$1,100,000), continued monitoring of CFC phase-out in the foam sector (US \$600,000), and additional foam activities at the provincial level (US \$500,000). The plan foresaw expenditures of US \$2,000,000 to be disbursed in 2010, US \$2,050,000 in 2011 and US \$850,000 in 2012. This decision also provided China with the flexibility as defined in decision 46/37.

72. At the 59th meeting, the World Bank had submitted 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” and two tables entitled “Approved MLF funding and disbursements 1999-2009 APs (Status as of June 30, 2009)” and “Monitoring the use of unallocated MLF funding under the PU Foam Sector Plan”. In decision 59/8, the Executive Committee concurred with the Secretariat’s view that the information presented fulfils the information requirements defined in decision 56/13, noted the submission of the independent financial audit of the account for the foam sector plan, and approved the reporting format.

Submission to the 65th meeting

73. The report submitted by the World Bank to the 65th meeting contains account status information for all of the tranches, and identified commitments in the foam sector plan amounting to US \$47.053 million, or 87.4 per cent of the approved funds. The commitments have increased since the last report (2009) by US \$2.379 million. The actual disbursements during that time have amounted to US \$9.465 million. At present, the percentage of actually disbursed funds in China in relation to funds committed is 93.6 per cent. However, while 99.2 per cent of the funds have been transferred from the World Bank to China, 11.9 per cent of those, totalling US \$6.342 million, remain currently uncommitted.

74. At present, and on the assumption that the World Bank stays strictly within the activities and the funding frame approved at the 57th meeting, the implementation in the China foam sector plan appears to be within the limits authorized. However, the Secretariat raised concerns with the World Bank that the funding available at the end of 2009 for future activities might have been higher than the expenditures of US \$6.8 million authorized at the beginning of that year for those activities, that the progress in implementation appears to be slower than anticipated, and that the objectives might not be met within the time frame anticipated.

75. The World Bank advised that activities had been programmed for each annual plan, and for some of those activities funds could be committed until enterprises signed the related contracts; consequently, the amount of funds shown as committed in the accounts is an important indicator for progress. The remaining funds unallocated at the end of 2009 were indeed US \$6.8 million, as approved. The delays in implementation were a matter of serious concern to both the Government of China and the World Bank, and several meetings have been conducted to expedite the implementation of the remaining activities. The Government of China foresees that all of the activities can be completed in the time-frame planned, i.e. before the end of 2012.

Secretariat’s recommendation

76. Based on the information provided by the World Bank, the Executive Committee may wish to take note of the status report on the implementation of the approved annual programmes for 2009 up to June 2011 in the CFC foam sector, submitted by the World Bank on behalf of the Government of China.

China: halon sector plan: Financial audit (World Bank)

77. 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 and consumption of halons in the People's Republic of China for the year 2010 together with a balance report for the sector.

Background

78. 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)).

Secretariat comments

79. At its 63rd meeting, the Executive Committee addressed the issue of the amount of halon 1301 emitted through tail gas emissions without the incineration system. The Committee decided to address this issue by 2013 as per decision 63/13. No information was provided to the present meeting in light of that decision.

80. The financial report considered at the 59th meeting in November 2009 indicated the cumulative disbursement amounting 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. The status of disbursements as of 30 June 2011 is US \$49,525,001. This means that only US \$1,832 has been disbursed over the last two years, and the Secretariat therefore enquired as to the reason for this slow disbursement.

81. The World Bank advised that the slow disbursement rate is due to the legal issue associated with transportation of halons from dismantled fire protection equipment and systems. Efforts are being made to resolve this issue in order to allow the establishment of the halon banking facility and initiation of all other supporting activities (i.e., technical assistance activities including training and public awareness, management of the halon bank). The Government of China has confirmed that the remaining balance is needed for financing these activities which have already been agreed to by the Executive Committee.

Secretariat's recommendation

82. The Executive Committee may wish to request the Government of China and the World Bank to report to the Fund Secretariat at the 66th meeting, on the status of the legal issue with respect to the transportation of halons from dismantled fire protection equipment and systems in the context of additional status reports for the agenda item on the status of delays and compliance.

India: CTC phase-out plan for the consumption and production sectors: 2010 verification report (World Bank)

83. The World Bank as the lead implementing agency has submitted, on behalf of the Government of India, the verification of the achievements of the 2010 annual programme. The verification report is not attached to this document but could be made available upon request.

Background

84. At its 40th meeting in July 2003, the Executive Committee approved, in principle, a total of US \$52 million to assist India in complying with the Montreal Protocol control schedule for the production and consumption of carbon tetrachloride (CTC). At the 58th meeting, the final tranche of the project had been released. A summary of the CTC phase-out targets and funding tranches of the sector plan is presented in the following table:

Table 1: CTC phase-out targets and funding provided

	Base-line	2003	2004	2005	2006	2007	2008	2009	2010
Max allowable total consumption (ODP tonnes)	11,505	N/A	N/A	1,726	1,147	708	268	48	0
Max allowable total production (ODP tonnes) for this agreement	11,553	N/A	N/A	1,726	1,147	708	268	48	-
WB agreed funding		8,520,843	9,180,112	399,045	9,556,267	4,020,938	3,211,875	3,211,874	-
France agreed funding		-	1,000,000	1,000,000	500,000	500,000	-	-	-
Germany agreed funding		-	700,000	700,000	300,000	300,000	-	-	-
Japan agreed funding		-	2,500,000	2,500,000	-	-	-	-	-
UNIDO agreed funding				3,500,000	399,046				
Total agreed funding (US \$)		8,520,843	13,380,112	8,099,045	10,755,313	4,820,938	3,211,875	3,211,874	

85. India submitted to the 61st meeting a verification of CTC consumption and production for the year 2009, as well as an implementation report, and an implementation plan for the remaining funding. In decision 61/18, the Executive Committee requested the World Bank to continue verification of the CTC phase-out plan for the consumption and production sectors in India, using the established format, until verification of consumption and production for 2011 had been submitted. The Executive Committee also requested the World Bank to provide reports on implementation for 2010, 2011, and 2012 in time for the second meeting of the Executive Committee in each subsequent year and to include in the submissions any major changes to the planned activities approved at the 61st meeting.

Verification for the year 2010

86. The verification framework for this phase-out plan, which was developed by the World Bank and noted by the Executive Committee, requires the verification to be based on the Montreal Protocol definitions of production and consumption. It also requires the total annual CTC production, imports and exports to be covered, as well as the breakdown of CTC production for feedstock and non-feedstock applications. It includes the checking and validation of records such as production logs, production ratios between product and its feedstock, quotas and quantity of imports, excise records and other related documents.

87. The verification was carried out in March and April 2011 by a four-member team from Mukund M Chitale & Co. Chartered Accountants, the firm which has been involved in the same exercise for the

past four years. Two of the members of the verification team have extensive experience in the chemical industry while the other two are knowledgeable in financial accounting.

88. The objectives of the verification was to confirm that the CTC production and consumption of controlled uses in 2010 had not exceeded the maximum allowable limits set in the agreement, namely zero ODP tonnes in each case. The methodology employed was to verify the CTC production and imports from the supply side, and deduct from the total supply the CTC used as feedstock in the production of primarily CFCs and dichloro vinyl acid chloride (DVAC). The balance would represent the CTC consumption for non-feedstock uses controlled under the Montreal Protocol.

89. Prior to visiting the industries, the verification team collected information through the Ozone Cell of the Ministry of Environment and Forests that forwarded a questionnaire to each CTC producer and feedstock user for completion, which were then verified during site visits. The verification team visited the three remaining CTC storage installations in the only port where bulk CTC is imported. It also inspected the four CTC producers, eight DVAC producers, and one vinyl chloride monomer (VCM) producer. The findings of the verification team include the level of total CTC production, sales for feedstock and for controlled use, the feedstock use and the overall mass balance.

90. The findings of the verification for 2010 in comparison to 2009 are as shown in the following table:

Table 2: Findings of the verifications in 2009 and 2010

Year	2010	2009
	(metric tonnes)	
Total CTC production	15,223	11,248
Assumed feedstock use	16,424	15,792
Of that in VCM production	69	92
Imports	417	1,593
Increase in stock	-785	-3,069
From current year production	15,223	11,130
Direct sales to non-feedstock users	0	113
Inventory built up from 2004; status at year end	48	48
CTC destroyed	0	0
Export of CTC	0	0

91. Due to rounding errors, the mass balance incorrectly appears to have a differential of 1 metric tonne (mt). In actual, the mass balance appears to be accurate.

92. The verification found that sales to non-feedstock users were zero mt.

Secretariat's comments

93. The verification has been carried out according to the agreed verification framework, the contracted team has the relevant expertise and experience in this field, and the methodology used is appropriate in light of the current Indian Government policy controls on CTC production, imports, consumption and distribution. CTC producers and feedstock users must be registered with the government and are the only entities allowed to import CTC. CTC dealers and CTC users of controlled applications are not allowed to import and can only purchase CTC from CTC producers who have a list of all the dealers and the major non-feedstock users; however, during the year 2010 the Government made no quota for non-feedstock sales available to CTC producers. The Government had also decided in the past that for the purpose of the verification, sales from CTC producers to dealers and non-feedstock users were deemed to be non-feedstock uses even if the stock was subsequently diverted to feedstock use. One

of the key objectives of the verification is to confirm that CTC imported and locally purchased by feedstock users was not diverted to non-feedstock uses, to the degree that the uses were correctly identified in their classification as feedstock or non-feedstock.

Stockpile from 2004

94. At the end of 2009, the producers of CTC had a quantity of 48 ODP tonnes left from a 2004 stockpile, which in 2004 had already been reported as consumption, but was not used; consequently, a non-feedstock user could use this quantity without it constituting consumption. The verification report informed that during the year 2010 there was no quota for non-feedstock sales available to CTC producers. The Secretariat requested advice from the World Bank whether this is due to a general policy of India not to issue any quotas for non-feedstock uses anymore in the future, and pointed out that in this case it might no longer be necessary to account for the related amounts separately. The World Bank replied that the quota for non-feedstock sales was available as part of the CTC phase-out programme until 2009. Since the phase-out programme has been completed, the Ozone Cell has not issued any quota for non-feedstock sale. Prior to the discussion on the use of CTC as a process agent for VCM production in India (see below), the Government of India saw no need to maintain the accounts for the quantity of 48 ODP tonnes. However, in light of the discussions on compliance related to CTC use as process agent in VCM production, the Secretariat will assume that this quantity might be maintained.

Use of CTC in the production of VCM

95. The Secretariat found that one process treated as feedstock in the verification was actually a process agent use. The 19th Meeting of the Parties, in its decision XIX/15 "Replacement of table A and table A-bis in relevant process agent decisions", had adopted new process agent applications, among them with number 30 the use of CTC in the production of vinyl chloride monomer (VCM).

96. Since 2004, India had treated the use of CTC in VCM production as feedstock use. With the decision XIX/15 of the 19th Meeting of the Parties, the use of CTC in VCM should have been treated as a process agent use, starting from 2008, the year after the Meeting of the Parties. However, the verification continued to treat the production of VCM as a feedstock use, based on the established patterns from the early verification. The use of CTC for this particular process agent application in India is shown in Table 3, combined with additional information related to the impact of this additional consumption on compliance with the Agreement.

Table 3: Use of CTC as process agent for the production of VCM

Year	2007	2008	2009	2010
Stockpile from 2004 at end-of-year (mt)	403	134	41	41
Use of CTC as a process agent for VCM production (mt)	n/a	81	92	68
CTC destroyed (mt)	No information available			
Reported consumption (mt)	-942.7	216	27	0
Reported consumption (ODP t)	-1037	237.6	29.7	0
Actual consumption, taking into account VCM production (mt)	-942.7	297	119	68
Actual consumption, taking into account VCM production (ODP t)	-1037	326.7	130.9	74.8
Maximum allowable consumption under the Agreement (ODP t)	708	268	48	0
Amount above "Maximum allowable consumption" (ODP t)	0	58.7	82.9	74.8

97. The World Bank was advised of this observation shortly before the 64th meeting to which the verification had originally been submitted. The World Bank, on behalf of India, withdrew the submission and resubmitted the verification to the 65th meeting. The verification was accompanied by a document entitled "Usage of carbon tetrachloride for the manufacture of vinyl chloride monomer" from Protech Consultants PVT Ltd., in India with date of November 2005 for the director of ozone cell in the Ministry of Environment and Forest in India. This document describes the use of CTC for VCM production and provides a number of process details. It states, *inter alia*, that in the production of VCM the CTC used is recovered almost in total and taken to the incinerator along with other components. It is further concluded that there is no emission of organics from the incinerator, and that the destruction and emissions are as per EPA standards for atmospheric emission. This information pre-dates the decision of the Meeting of the Parties on the reclassification of VCM as a process agent.

98. The Secretariat has analyzed the information available and has made the following observations:

- (a) The Agreement between the Government of India and the Executive Committee specifies in its paragraph 2 that "The Country agrees to phase out consumption and production of [CTC], as defined by the Montreal Protocol, in accordance with the annual phase-out targets...". The Montreal Protocol defines in its Article 1 paragraph 5 that "Production" means the amount of controlled substances produced, minus the amount destroyed by technologies to be approved by the Parties and minus the amount entirely used as feedstock in the manufacture of other chemicals" and "'Consumption" means production plus imports minus exports of controlled substances";
- (b) It appears that CTC is inevitably formed as a by-product in ethylene dichloride (EDC) production, with a fraction that cannot be increased (or reduced) at will. EDC is produced as an interim product for VCM production, and its production forms an integral part of the overall production process;
- (c) Decision IV/12 of the Meeting of the Parties clarifies "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". This decision might be applicable to the CTC content in EDC;
- (d) The CTC added to the process as process agent is meant to increase the CTC content from the level of a by-product from EDC production to a higher level to facilitate the subsequent chemical reactions;
- (e) A mixture of CTC and some other substances is subsequently removed from the process, and destroyed; and
- (f) It might be concluded that, in the case that the same amount or more of CTC is destroyed as compared to what is added as process agent, and the destruction is compliant with Montreal Protocol requirements, that
 - (i) There is a use of CTC as process agent;
 - (ii) Given the definition of production, allowing a deduction of the destroyed amounts, the overall balance for production might be negative, leading to an offset for the value of consumption according to above definition;

- (iii) If India would re-allocate stockpiles to cover the excess consumption, it could be assumed to be in compliance with the Agreement in 2008. However, the quantities in the stockpile would be insufficient to also cover fully the excess amounts in 2009 and 2010; and
- (iv) Once quantities destroyed were known, and given the previously available stockpile, India might be found to be in compliance with the Agreement, or the discrepancies might be significantly smaller than it currently appears.

99. As a result of the above observations, the Secretariat notes that there is a use of CTC as a process agent, which has been determined by the type of application of CTC and the related definition of the Meeting of the Parties and not on any subsequent treatment. Such treatment of CTC including its destruction has no relevance to the question of whether it is used as a process agent. However, given the definition of production, which allows for the deduction of the destroyed amounts, the overall balance for production of CTC might still be zero or even negative, leading to an accordingly reduced value of consumption according to the above definitions. Based on these considerations, the Secretariat requested from the World Bank additional information to assess whether India is or might be in compliance with the Agreement. This information was requested to cover.

- (a) The amounts of CTC or CTC-containing mixture destroyed, and its composition;
- (b) The annual VCM production as well as the content of CTC in the different stages of the process; and
- (c) Documentation certifying or verifying the compliance of the destruction equipment with the Montreal Protocol's requirements regarding destruction.

100. The World Bank informed, that in its view, any residues of CTC in the end product VCM would fall under the clarification provided by the Meeting of the Parties in decision IV/12 concerning insignificant quantities, cited in paragraph 16 (c) above, that this issue goes beyond the purview of the verification report, and that responding to the questions asked by the Secretariat would be beyond the mandate of the World Bank. The World Bank further points out that there appears to be no emission of CTC since what is recovered from the process is completely destroyed and impurities in the product would not be considered as controlled substance. The World Bank therefore believes that the audit report has fulfilled the requirements of the Executive Committee. The Bank further pointed out that they have no mandate to verify the process, since the enterprise involved was not part of the CTC sector plan, and that the question whether this is a process agent application lies between India and the Parties. The World Bank therefore suggested that this issue should be directed to the Parties, if necessary, in order to allow TEAP to carry out any analysis needed.

101. The Secretariat concurs with the World Bank's argument related to the verification report and its completeness to the extent that the necessary information is indeed completely included in the verification report. As per the decision of the Meeting of the Parties, it is clear that the use of CTC in the production of VCM is a process agent use and, consequently, the related use of CTC will have to be added to the CTC consumption of India. Since the World Bank was not in the position to provide information whether a related quantity had been destroyed, an offset of the consumption by a similar amount of destroyed CTC is currently not possible. The Secretariat believes therefore that, in lieu of other information, India has been in non-compliance with the Agreement for the years 2008 to 2010.

102. In the margins of the 64th meeting of the Executive Committee discussions were held regarding the compliance of India with its Agreement in light of its use of CTC to produce VCM, which involved the World Bank, several members of the Executive Committee and members of the delegation from India as well as the Secretariat. In these discussions it was suggested that the Government of India might wish

to address with the VCM manufacturer the consistent use of CTC as a process agent. The information provided by the World Bank to this Meeting did not include any indication whether steps into this direction have been undertaken.

Miscellaneous issues related to the verification

103. The Secretariat sought further information on the reduction of CTC storage installations and surveyors visited during the verification for 2010 as compared to 2009, and on the fact that one producer of di-fluoro benzophenone (DBBP), where CTC is used as a feedstock, had been visited for the 2009 verification but not for 2010. The World Bank replied that the DBBP producer is Navin Fluorine, which had not produced any DBBP during the year 2010 and has also orally confirmed that it does not have any plans for producing DBBP in subsequent years. Thus the World Bank has removed the reference to a visit to a DBBP producer. However, the audit team has actually visited Navin Fluorine, since it is also a CFC manufacturer. Regarding the issue of storage, the World Bank informed that, in earlier years, CTC at Kandla used to be stored in four storage locations; storage refers here to an interim storage process by an external party on behalf of the owners of CTC, for the time between unloading from ships and transfer of the CTC to be used, and thus can entail multiple additions and removals to and from the same storage site during the year; however, the storage owner is not the owner of the CTC stored. One storage facility had no closing stock at the end of 2009 and no storage contract with any of the CTC owners, and was therefore not verified. In 2010 all of the CTC imported during the year was handled by only one storage owner, and the other two simply transferred the opening stocks lying with them to the respective owners, thereby having no closing stock as at 31 December 2010.

Remaining activities

104. For the year 2010, the World Bank had indicated at the 61st meeting that it would focus its work on post phase-out monitoring and capacity building of local monitoring authorities as well as supervision of the imports and production. The World Bank had also advised that support for enterprises previously not identified was planned, and the programmes finalized. On this basis, the Executive Committee had approved, in its decision 61/18, the implementation plan and requested reporting. The World Bank had responded to a letter from the Chief Officer regarding progress report issues in projects under implementation by the World Bank that, for this particular project, the implementation in the consumption sector is complete with the exception of some limited units. The World Bank further informed that the technical assistance activity has been extended from its original closing date of September 2010 to December 2012. The Ozone Cell would develop a strategic and comprehensive plan for technical assistance and activities to target different groups of ozone-depleting substances, including HCFCs. To support the implementation of technical assistance activities across the country, the Ozone Cell is discussing with the World Bank and UNEP to review whether an arrangement similar to CFC production can be formalized, whereby UNEP would support the Ozone Cell in implementing most of the capacity building activities. The Secretariat advised that this information, which is cited here in full, does not fulfil the requirement of decision 61/18 regarding reporting on implementation for the year 2010 and providing indication of any major changes for the planned activities approved at the 61st meeting, and advised the World Bank to submit an implementation report and, if applicable, a revision of the planned activities to the 66th meeting.

Secretariat's recommendation

105. The Secretariat recommends the Executive Committee to consider whether to adopt the following recommendations:

- (a) To take note of the submission of a verification of the CTC production and consumption in India for the year 2010;

- (b) To take note that within the verification, the use of CTC for VCM production had been classified as feedstock, since the beginning of the year 2008, when it has been agreed by the Parties to be a process agent use;
- (c) To request the World Bank to advise the Government of India to update the CTC consumption data reported under Article 7 of the Montreal Protocol to the Ozone Secretariat for the years 2008 to 2010 accordingly;
- (d) To request the World Bank to co-ordinate with the Government of India to investigate to what degree the quantities of CTC destroyed would offset the quantities of CTC used as process agent, and to provide a related report to be submitted not later than eight weeks before the 66th meeting of the Executive Committee;
- (e) To request the World Bank to provide an implementation report for the year 2010 in time for the 66th meeting of the Executive Committee; and to include in the submission any necessary revision to the implementation plan approved at the 61st meeting; and
- (f) To request the Secretariat to inform the Executive Committee on progress at the 66th meeting under “Special reporting requirements”.

IV. HCFC DEMONSTRATION AND INVESTMENT PROJECTS

106. In relation to all HCFC demonstration and investment projects that have been approved separately from an HPMP, the Executive Committee requested relevant bilateral and/or implementing agencies to provide the Secretariat with accurate data on incremental capital and operating costs, and data relevant to the application of the technologies, in line with the objectives of decision 55/43(b). Accordingly, the Secretariat requested the submission of outstanding reports on the HCFC demonstration and investment projects so far approved. The Governments of Japan and Italy, UNDP and UNIDO submitted short reports on the current status of implementation of the projects listed in the table below.

Country	Agency	Project/approval decision
Algeria	UNIDO	Phase-out of HCFC-141b at Cistor (domestic refrigeration foam) (decision 62/30)
Argentina	UNIDO/ Italy	Phase-out of HCFC-22 in the RAC manufacturing sector (decision 61/34)
China	UNIDO	Phase-out of HCFC-22 in the manufacturing of RACs at Midea and conversion of RAC compressors at Meizhi (decision 61/35)
Colombia	UNDP	Phase-out of HCFCs to hydrocarbons at Mabe Colombia, Industrias Haceb, Challenger and Indusel S.A. (decision 60/30)
Croatia	Italy	Phase-out of HCFC-141b at Poli Mix (decision 60/31)
Egypt	UNDP	Conversion from HCFC-141b to methyl formate in the manufacture of polyurethane spray foams at Specialized Engineering Contracting Co. (decision 62/32)
Egypt	UNDP	Conversion from HCFC-141b to n-pentane in the manufacture of polyurethane rigid insulation foam panels at MOG for Engineering and Industry (decision 62/32)
Egypt	UNDP	Conversion from HCFC-141b to methyl formate in the manufacture of polyurethane rigid insulation foam for water heaters at Fresh Electric for Home Appliances (decision 62/32)
Egypt	UNDP	Conversion from HCFC-141b to n-pentane in the manufacture of polyurethane rigid insulation foam panels at Cairo Foam (decision 62/32)
Jordan	UNIDO	Phase-out of HCFC-22 and HCFC-141b at Petra Co. (decision 60/41)
Mexico	UNDP	Phase-out HCFC-141b at Mabe Mexico (decision 59/34)

Country	Agency	Project/approval decision
Pakistan	UNIDO	Phase-out of HCFC-141b in the manufacture of PU foams at United Refrigeration, HNR, Varioline Intercool, Shadman Electronics and Dawlance (decision 60/32)
Philippines	UNIDO/Japan	Sector plan for the phase-out of HCFC-141b in the foam sector (decision 62/34)

107. Although implementation of the projects in the above table is ongoing, detailed information on the actual costs of the equipment items being purchased is not yet available. Thus incremental capital cost data will only become available in 2012 when the procurement processes are completed, while data on the incremental operating costs and on technologies will become available once the conversions take place. Given this situation, the Secretariat will be periodically requesting relevant bilateral and/or implementing agencies for the detailed information required in line with the objectives of decision 55/43(b).

108. In addition to the brief reports on the HCFC projects listed in the above table, the World Bank submitted three detailed progress reports on the following HCFC projects in China:

- (a) Conversion demonstration from HCFC-141b-based to cyclopentane-based pre-blended polyol in the manufacture of rigid polyurethane foam at Guangdong Wanhua Rongwei Polyurethane Co. Ltd. This report also includes a request for the change of one of the downstream foam enterprise approved in the original project;
- (b) Conversion from HCFC-141b-based to HFC 245fa-based spray polyurethane foam at Harbin Tianshuo Building Materials Co. Ltd.; and
- (c) Conversion of the Foam Part of Jiangsu Huaiyin Huihuang Solar Co., Ltd., from HCFC-141b to Cyclopentane.

China: Progress report on conversion demonstration from HCFC-141b-based to cyclopentane-based pre-blended polyol in the manufacture of rigid polyurethane foam at Guangdong Wanhua Rongwei Polyurethane Co. Ltd. (World Bank)

109. The World Bank has submitted to the 65th meeting a progress report on the conversion from HCFC-141b-based to cyclopentane-based pre-blended polyol in the manufacture of rigid polyurethane foam at Guangdong Wanhua Rongwei Polyurethane Co., Ltd. (WHRW).

110. The project was approved at the 59th meeting at a total cost of US \$1,214,936, plus agency support costs of US \$91,120, to demonstrate the feasibility of pre-blending polyol with cyclopentane and the supply of the pre-blended polyol to foam producers and testing the approach in four downstream foam producing enterprises. Funding for stage II of the project amounting to US \$635,275 was released at the 63rd meeting in view of the report on safety and technical feasibility of the project, submitted by the World Bank.

Progress report

111. Following a public bidding process, WHRW purchased equipment (pre-mixing facilities, storage tank and electrical and construction alteration) from four different suppliers and completed the conversion of its plant in line with safety regulations in August 2011. The local fire-fighting bureau and Environmental Protection Bureau inspected and approved the safety installations in the plant. WHRW then commenced trials and, by September 2011, was providing one of the downstream enterprise, Zhongshan Minea, with cyclopentane based pre-blended polyol. Zhongshan Minea had procured and installed equipment related to the production of foam, completed the related construction work, and had

passed an inspection by the local fire-fighting bureau which allowed its trials to commence in September 2011. Its two foam dispensers have been replaced and will be disposed of in November 2011.

Proposal to change downstream enterprise

112. One of the downstream enterprises, Zhongshan Jinli Refrigeration Equipment Manufacturing Co., Ltd. (Zhongshan Jinli), requested to withdraw from the demonstration project in July 2011 since it needed to relocate in the future and thus conversion was currently uneconomic. WHRW has suggested one of its customers, Guangdong Vanward New Electric Co., Ltd (Guangdong Vanward), including its subsidiary Foshan Gaoming Vanward Electric Co. (Foshan), as a replacement in stage II. Guangdong Vanward, a locally owned company located in Shunde, Foshan City, is one of the largest manufacturers of electrical water heaters and sterilizers. In 2008 Guangdong Vanward manufactured 205,000 kitchen disinfection (sterilizer) units and 41,500 water heaters with a total consumption of 8.20 mt (0.90 ODP tonnes) of HCFC-141b. In 2010, its production increased to 253,000 units and 573,000 units, respectively with a total consumption of 72.84 mt (8.01 ODP tonnes) of HCFC-141b. The project proposes to replace the two foaming machines currently in operation by one new machine, at the same funding level as previously approved for Zhongshan Jinli.

Secretariat's comments

Change of enterprise

113. The Secretariat noted that Zhongshan Jinli had applied to withdraw from the demonstration project in July 2011 as the land currently occupied by the enterprise will be converted from industrial to commercial purposes and the enterprise will have to relocate. The World Bank informed the Secretariat that the existing foaming line will be installed as is in the enterprise's new location. An HCFC phase-out contract, based on the consumption originally recorded for the demonstration project, would be signed with Zhongshan Jinli once it resumed production in its new facility. The Foreign Economic Cooperation Office (FECO) will discuss with the enterprise whether the new facility can be designed for the use of hydrocarbon-based pre-blended polyols.

114. The Secretariat requested clarification on whether the subsidiary, Foshan, will also be converted to pre-blended hydrocarbon technology. The World Bank explained that Guangdong Vanward is the head of a company group and that its foaming equipment for the manufacture of water coolers and kitchen disinfection (sterilizer) units has been moved to its subsidiary Foshan. Furthermore, Foshan has another high pressure foaming unit procured in 2009 (after the 21 September 2007 cut off date) for which no funding is being requested; neither the head company nor its subsidiary will use HCFC-141b after completion of the demonstration project.

115. The Secretariat pointed out that the conversion of Guangdong Vanward will result in the phase-out of 72.84 mt (8.01 ODP tonnes) which is more than the 7.93 mt (0.87 ODP tonnes) of HCFC-141b consumed by the original enterprise, Zhongshan Jinli, at the time of the preparation of the project. The World Bank contended that the amount of HCFC-141b phase-out resulting from the conversion should be based on the 2008 consumption (8.2 mt) and not on 2010 consumption as it should be consistent with the other downstream enterprise. However, once the project is completed the enterprise will completely phase-out its HCFC-141b consumption.

HCFC consumption

116. It was noted that since the time of the preparation of the demonstration project, the production of HCFC-141b polyols systems increased from 1,820 mt (2008) to 4,021 mt (2011) with the corresponding increase in HCFC-141b consumption from 364.67 mt to 928.96 mt. In response to a request for an indication of the expected production levels until HCFC-141b is phased out, the World Bank advised that

it was difficult to provide such an estimate in advance of the preparation of the HCFC production sector plan. The agency further stated that, due to the up-front investment costs and the additional cost of hydrocarbon pre-blended polyols to downstream companies, WHRH may find it difficult to introduce them to companies industry wide and may continue to sell HCFC-141b pre-blended polyols until the complete phase-out of HCFC-141b by 2020-2025. However, this would only be confirmed when the demonstration project is completed.

117. The consumption of HCFC-141b of one of the enterprises Zhongshan Minea increased from 15.99 mt when the project was prepared to 65.88 mt in 2010. The World Bank explained that the enterprises selected for the demonstration projects are leading companies in different sub-sectors and thus their market share has increased in the last three years. Once the project is completed Zhongshan Minea will completely phase-out its HCFC-141b consumption. On the issue of whether WHRW will supply hydrocarbon-based polyols to any other of its downstream foam customers, the World Bank responded that it is in the interest of the enterprise to introduce hydrocarbon-based polyols to all of its customers however it will mainly be in the sub-sectors covered by the Foam Sector Plan for China and those in the South of China due to transportation cost and competition from other polyol suppliers.

Capital costs

118. Following a request from the Secretariat for more detailed information on technical specifications and costs of major equipment items that has been purchased for the introduction of the alternative technologies at the system house and downstream foam enterprises, the World Bank advised the Secretariat that FECO would provide information based on the specifications used for the bidding process.

Operating costs

119. The Secretariat noted that the price of the hydrocarbon based polyol was US \$0.32/kg higher than that of HCFC-141b based polyols, and enquired whether a reduction in the price of hydrocarbon based polyols was expected once larger amounts of polyols are produced. In the case of Zhongshan Minea, the cost of manufacturing foam with hydrocarbon based polyols was nearly 13 per cent higher than with HCFC-141b, which may not be economically feasible given the strong competition among enterprises manufacturing similar goods. Furthermore, hydrocarbon based polyols are being transported in accordance with the regulation for transportation of flammable substances which resulted in higher costs. The World Bank responded, that since cyclopentane is already used by the larger domestic refrigerator manufactures in China, its consumption is already significant and the phase-out of HCFC-141b is not expected to affect its cost; furthermore, an increasing demand for pre-blended polyols by a larger number of enterprises could lead to an increase in the price. The World Bank agreed with the concern raised by the Secretariat and drew attention to the Foam Sector Plan's ban on the use of HCFC-141b in specific sub-sectors in order to avoid unfair competition.

Dissemination of results

120. In responding on how the results of the demonstration project will be disseminated, locally, regionally and globally, the World Bank explained that FECO will utilize domestic workshops, information materials (Foam Sector Plan) and network meetings to pass on the results and experiences gained in the implementation of the demonstration project and will also utilize contracts with enterprises to inform them of the costs and benefits of the technology. Issues such as increased operating costs related to the introduction of alternative technologies, particularly the hydrocarbon pre-blended, will be discussed with all stakeholder involved in the implementation of the Foam Sector Plan that has recently been approved. In addition a final report of the outcomes of the demonstration project will be prepared for the Executive Committee.

Secretariat's recommendation

121. The Executive Committee may wish:

- (a) To note the progress report on the conversion from HCFC-141b-based to cyclopentane-based pre-blended polyol in the manufacture of rigid polyurethane foam at Guangdong Wanhua Rongwei Polyurethane Co., Ltd., submitted by the World Bank;
- (b) To approve the request for the replacement of the downstream enterprise Zhongshan Jinli Refrigeration Equipment Manufacturing Co., Ltd., with Guangdong Vanward New Electric Co., Ltd., as requested by the Government of China;
- (c) To request the Government of China and the World Bank to submit a final progress report to the Executive Committee once the demonstration project, including conversion of the four downstream foam enterprises, has been completed.

China: Progress report on the conversion from HCFC-141b-based to HFC 245fa-based spray polyurethane foam at Harbin Tianshuo Building Materials Co. Ltd. (World Bank)

122. The World Bank has submitted to the 65th meeting a progress report on the conversion from HCFC-141b-based to HFC 245fa-based spray polyurethane foam at Harbin Tianshuo Building Materials Co. Ltd. (Harbin Tianshuo), which was approved at the 59th meeting at a total cost of US \$193,808 plus agency support costs of US \$14,536 for the World Bank. In approving the project, the Government of China and the World Bank were requested, *inter alia*, to identify and explore the feasibility of lower-GWP alternative technology for the foam sector plan (decision 59/29).

Progress report

123. In March 2010, FECO organized a workshop for Harbin Tianshuo on procurement regulations, financial management, and safety requirement related to the plant conversion and signed a contract with the company in April 2010 following a review of its implementation plan. Harbin Tianshuo purchased equipment through a public bidding process including a HCFC-245fa pre-mixing machine/pre-mixing tank, a delivery pump and piping system, a polyol tank, and a cooling machine. In August 2011, the pre-mixing machine was installed at Liaoning Tiansuo High-tech, one of Harbin Tianshuo's subsidiaries situated closer to its customers. Trials are scheduled to begin in October 2011. Following trials the company will provide FECO with comparison data on HCFC-141b and HFC-245fa.

124. Incremental capital costs for the project amount to US \$107,800 of which US \$88,000 were from the Multilateral Fund and US \$19,800 were counterpart funding for some of the costs of the pre-mixing machine and the poly tank.

Secretariat's comments

125. In responding to a request for more detailed information on equipment purchased, the World Bank informed the Secretariat that FECO would provide further information based on the specifications used for the bidding process i.e., the same as for the WHRW project (as explained above).

126. In addressing a concern on the long term sustainability of the technology given that annual operating costs increased by US \$105,508 based on the HFC-245fa formulation proposed, the World Bank explained that the company and foam experts are looking into this possibility of other formulations using lower amounts of HFC-245fa. Moreover, HFC-245fa is still covered by a United States' patent until July 2015 and its price is not expected to change before 2015. Following the receipt of the comments from the World Bank the Secretariat noted a report stating that Honeywell (the developer of HFC-245fa)

and Sinochem are considering a joint venture to produce and sell HFC-245fa in China. The World Bank advised the Secretariat that production of HFC-245fa is estimated to start in 2014 however it is not expected to reduce the price of HFC-245fa due to high investment and raw material costs.

127. In responding on how the results of the demonstration project will be disseminated, locally, regionally and globally, the World Bank explained the approach would be the same as for the WHRW project (as mentioned above).

Secretariat's recommendation

128. The Executive Committee may wish

- (a) To take note of the progress report on the project for the conversion from HCFC-141b-based to HFC-245fa-based spray polyurethane foam at Harbin Tianshuo Building Materials Co. submitted by the World Bank;
- (b) To request the Government of China and the World Bank to submit to the Executive Committee a final progress report once the demonstration project has been completed.

China: Progress Report of Conversion of the Foam Part of Jiangsu Huaiyin Huihuang Solar Co., Ltd., from HCFC-141b to Cyclopentane (World Bank)

129. The World Bank has submitted to the 65th meeting a progress report on the conversion of the foam part of Jiangsu Huaiyin Huihuang Solar Co. Ltd. (Huihuang) from HCFC-141b to cyclopentane. The project aims to demonstrate the use of cyclopentane in the production of insulation foam for solar water heaters and phase-out 46.71 mt (5.14 ODP tonnes) of HCFC-141b. The project was approved at the 59th meeting at a total cost of US \$786,668, plus agency support costs of US \$59,000 for the World Bank (decision 59/30).

Progress report

130. In March 2010, FECO organized a workshop for Huihuang on procurement regulations, financial management, and safety requirement related to the plant conversion. Following a public bidding process, Huihuang completed the purchase and installation of a cyclopentane storage tank, a foam dispenser, a pre-mixing system and safety related equipment, as well as structural alterations, in August 2011. The local fire-fighting bureau approved the plant's conversion; trials commenced in September 2011 and will be completed by November 2011. The three foam dispensers that were part of the baseline equipment will be disposed of in January 2012.

131. Incremental capitals cost for the project amount to US \$786,668 of which US \$511,488 was from the Multilateral Fund and US \$78,125 was counterpart funding. The counterpart funding was used to purchase an HFC-227ea gas fire extinguishing system (US \$18,750) in line with local safety standards and equipment to increase power capacity (US \$59,375).

Secretariat's comments

132. The Secretariat noted that since the time of the preparation of the demonstration project, HCFC-141b consumption had increased from 46.71 mt (5.14 ODP tonnes) in 2008 to 199.50 mt (21.95 ODP tonnes) in 2011. The World Bank confirmed these figures which reflect the growth across China in the sector and the fact that provincial and national policy promotes the use of solar water heaters to reduce energy consumption. The Bank also noted that the HCFC-141b consumption in 2011 must still be verified and confirmed by FECO.

133. In responding to a request for more detailed information on equipment purchased, the World Bank informed the Secretariat that FECO would provide further information based on the specifications used for the bidding process i.e., the same as for the WHRW project (as explained above).

134. It was noted that the cyclopentane foam formulation developed for the demonstration project was the same as that in other demonstration projects in China (i.e., WHRW). It would have been expected that through the demonstration project different formulations of hydrocarbon based polyols would have been tested in order to select one that would be technically feasible and economically viable. The World Bank agreed that that two companies, Zhongshan Minea Electrical Appliance Co. and Jiangsu Huaiyin Huihuang, could eventually have different formulations but since Jiangsu Huaiyin did not have experience in producing foam with hydrocarbon-based polyols it will commence trials for a base formulation that would be adjusted over time depending on their outcome.

135. In addressing a concern on the long term sustainability of the technology given that annual operating costs increased by US \$107,286, the World Bank explained that, through the Foam Sector Plan, more systems houses will be converted to produce hydrocarbon-based polyols in order to supply small and medium-sized enterprises (SMEs) but that an increase in supply would not necessarily result in the reduction of the price of hydrocarbon-based pre-blended polyols. The case of Zhongshan Minea demonstrates that there are inherent costs associated with this technology (e.g., transportation, increasing density) and the long term sustainability would depend on improving the production process to reduce costs or to pass them on to consumers.

136. In responding on how the results of the demonstration project will be disseminated, locally, regionally and globally, the World Bank explained the approach would be the same as for the WHRW project (as explained above).

Secretariat's recommendation

137. The Executive Committee may wish

- (a) To take note of the progress report of conversion of the foam part of Jiangsu Huaiyin Huihuang Solar Co., Ltd. from HCFC-141b to cyclopentane submitted by the World Bank; and
- (b) To request the Government of China and the World Bank to submit to the Executive Committee a final progress report once the demonstration project has been completed.
