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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
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**REPORT OF THE EXECUTIVE COMMITTEE TO THE OPEN-ENDED WORKING GROUP
ON THE PROGRESS MADE IN REDUCING EMISSIONS OF CONTROLLED
SUBSTANCES FROM PROCESS-AGENT USES (FOLLOW-UP TO
DECISION XVII/6 OF THE SEVENTEENTH MEETING OF THE PARTIES)
AN UPDATE FOR THE PERIOD 2009 AND 2010**

This revision is issued in response to decision 62/68 and takes into account the feedback provided by members of the 62nd Executive Committee by means of a discussion forum that the Multilateral Fund Secretariat set up on its intranet site.

**REPORT OF THE EXECUTIVE COMMITTEE TO THE OPEN-ENDED WORKING GROUP
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SUBSTANCES FROM PROCESS-AGENT USES DURING 2009 AND 2010**

I. INTRODUCTION

1. This report is prepared further to decision XVII/6 of the 17th Meeting of the Parties and decision XXI/3 of the 21st Meeting of the Parties, which *inter alia* requested the Technology and Economic Assessment Panel (TEAP) and the Executive Committee of the Multilateral Fund to prepare a joint report for future meetings, reporting on progress with phasing out process agent (PA) applications. Decision XVII/6 required a report to the Open-ended Working Group (OEWG) at its 27th Meeting in 2007, and every other year thereafter, unless the Parties decide otherwise, on the progress made in reducing emissions of controlled substances from process agent uses; the associated make-up quantity of controlled substances; on the implementation and development of emissions-reduction techniques and alternative processes and products not using ozone-depleting substances.

2. The 22nd Meeting of the Parties decided in decision XXII/8, in paragraph 2, to update Table B of decision X/14 specifying the limits for process agent uses in several countries. The decision also includes in its paragraph 6 a proviso that, once all process agent projects approved by the Executive Committee are completed, reporting by the Executive Committee to the Parties as requested in decision XVII/6 will no longer be required. Presently, not all such projects have been completed.

3. This document provides the information that will enable the Executive Committee to fulfil the mandate for a joint report with TEAP, taking into account that TEAP will be preparing its report prior to the 63rd Meeting of the Executive Committee. The document consists of an update to the report of the Executive Committee submitted to the OEWG at its 29th Meeting in response to decision XVII/6. It presents the progress made until the end of 2010 by the Multilateral Fund in assisting Article 5 countries in reducing the emissions of controlled substances from process agent use to “levels agreed by the Executive Committee to be reasonably achievable in a cost-effective manner without undue abandonment of infrastructure” (decision X/14). It lists the projects and activities that were funded during the period of 2009 to 2010, with information on the levels of funding approved, the impact and the date of completion of such projects. It also presents information on progress with on-going projects as reported by the implementing agencies.

II: OVERVIEW OF PROCESS AGENT USES OF ODS IN ARTICLE 5 COUNTRIES IN THE REPORTING PERIOD

4. In its first report submitted to the 25th Meeting of the OEWG (2005), the Executive Committee estimated that the total consumption of ODS as a process agent in Article 5 countries in 2003 was some 13,623 ODP tonnes, 97 per cent of which was reported as being used in three countries, China (10,538 ODP tonnes), India (2,268 ODP tonnes) and the Democratic People’s Republic of Korea (432 ODP tonnes) (document UNEP/OzL.Pro/WG.1/25/INF/4).

5. On the basis of Article 7 data, the total reported CTC consumption for process agent and all other uses in Article 5 countries in 2008 was 1,031.40 ODP tonnes. Of this total, 98.7 per cent is consumed in four countries, namely India (680.5 ODP tonnes), China (219.2 ODP tonnes), Mexico (88.0 ODP tonnes) and the Republic of Korea (30.7 ODP tonnes). The consumption for all Article 5 countries decreased to 149.3 ODP tonnes in 2009. Ninety six point five per cent of this consumption is reported by three countries, namely China (86.8 ODP tonnes), India (38.2 ODP tonnes) and the Republic of Korea (19.1 ODP tonnes).

6. A list of all process agent investment projects supported by the Multilateral Fund is provided in Table 1 in Annex I. The projects funded by the Multilateral Fund have supported the recipient Article 5 countries in reducing the emissions of controlled substances from process agent uses to levels that are reasonably achievable in a cost-effective manner. According to the knowledge of the Secretariat, and as a result of considerable monitoring and verification activities, there is no indication that new plants using controlled substances other than for essential use have been installed or commissioned after 30 June 1999. The same monitoring and verification activities strongly suggest that the provisions of decision X/14 of the Meeting of the Parties regarding the use of ODS as process agents have been followed.

7. A number of countries have received support from the Multilateral Fund in the previous five years, and their Article 7 data indicate no consumption for the year 2009:

- (a) Mexico has reported zero consumption in 2009;
- (b) The Democratic People's Republic of Korea reported zero CTC consumption from 2006 to 2009;
- (c) Brazil reported zero CTC consumption in 2008 and 2009; and
- (d) Romania reported 42 ODP tonnes of CTC consumption in 2006. As of 1 January 2007, Romania joined the European Union (EU); since that time there has been no separate data reporting from Romania because its consumption is reported in an aggregated figure referring to all EU member states¹.

8. Although the Republic of Korea is an Article 5 country with CTC consumption, the country has never received funding from the Multilateral Fund. Consequently the Executive Committee has not considered the use of CTC in the Republic of Korea, and no related information has been obtained.

9. While Article 7 consumption data provides a useful insight into general trends, it may not fully reflect the use of CTC for process agent applications. It includes any remaining non-process agent consumption, such as the use as a solvent. It would not include use in applications that are considered feedstock applications under the Montreal Protocol, while the same applications might be viewed by some technical experts as, technically, a process agent use. Such use would not need to be reported as Article 7 data until a decision of the Meeting of the Parties defines such specific uses as process agent uses, i.e. controlled uses.

III: NEW PROJECTS APPROVED BY THE EXECUTIVE COMMITTEE

10. No new projects have been approved for the phase-out of CTC as a process agent during the years 2009 and 2010.

¹ A consumption of zero tonne of CTC for 2008 has been verified for Romania.

IV: STATUS OF IMPLEMENTATION OF ON-GOING PROJECTS AND PROGRAMMES APPROVED PRIOR TO 2009

Project in Brazil

11. The project in Brazil received retroactive funding, the completion of the related conversion having taken place in 2002. Information on the project has been reported in document UNEP/OzL.Pro.WG.1/29/4 submitted to the 29th Open-Ended WorkingGroup. Some information is cited here again to provide an overall picture of the on-going project.

12. The two applications in which CTC was used as a process agent in the Brazil project were the production of vinyl chloride monomer and the removal of nitrogen trichloride during the production of chlorine. Both applications were included as process agent uses in decision XIX/15 of the Parties. The project was retroactive. In each case the activities necessary to eliminate CTC consumption were implemented in 2002.

13. In regard to production of vinyl chloride monomer, a process change was undertaken resulting in cessation of use of CTC in the process. In regard to production of chlorine, emission reductions were undertaken to improve the efficiency of destruction of the CTC used in the process. The destruction technology has been reported by the country and the implementing agency as being consistent with the destruction requirements specified by the Parties. The current, improved destruction efficiency has been reported as reducing CTC use by the company by 98.4 per cent.

14. In this context the Government of Brazil has undertaken to limit the consumption for all process agent applications approved to date by the Meeting of the Parties to zero tonnes of CTC, with the exception of annual use for the production of chlorine of up to 2 ODP tonnes per year until and including 2013, by which time the emissions control process will be changed to eliminate the use of CTC at no additional cost to the Multilateral Fund. The Government of Brazil has also committed to reporting the resulting data on the amounts of CTC destroyed as well as the import of CTC for this application annually to the Ozone Secretariat as part of the reporting of Article 7 data.

15. The approval of the Brazil project by the Executive Committee, and the associated performance and reporting undertakings, is considered to be consistent with the requirement in decision X/14 of the Meeting of the Parties in which it is indicated that the Executive Committee may consider a range of options to reduce the emissions of controlled substances from process agent use by Article 5 Parties to levels agreed by the Executive Committee to be reasonably achievable in a cost-effective manner without undue abandonment of infrastructure. Therefore, the use by Brazil of up to 2 ODP tonnes of CTC per year, as well as the necessary related imports, between 2010 and the end of 2013 for the production of chlorine is consistent with decision X/14 of the Parties and will therefore not constitute consumption as defined by the Protocol.

16. As mentioned above, Brazil reported zero consumption in 2008 and 2009. It is known from the progress report of the implementing agency that a project verification mission was completed in May 2009. CTC phase out was verified in two plants and a protocol to import CTC as feedstock and report it to the local environmental enforcing agency (Ibama) was agreed with the enterprise. The final disbursement to the enterprise is pending due to finalization of legal documentation. The disbursement is expected to take place during the first half of 2010. It was estimated that the project completion report be submitted in August 2010, but none has been received yet.

Romania

17. In Romania, the production of CTC and its consumption as a process agent in the manufacture of the chemical intermediate di(ethylhexyl)-peroxydicarbonate (DEHPC) ceased by the end of 2007. Verification reports were received up to and including the year 2008 (document UNEP/OzL.Pro/ExCom/59/10). Subsequent to the 59th Meeting (2009), the Secretariat did not receive any verification report. UNIDO informed in their progress report in the year 2010 that the Government of Romania, UNIDO and the enterprise had jointly decided to initiate a request for project cancellation, since, *inter alia*, the production cost of DEHPC at the enterprise is higher than at any European manufacturer with higher production capacity, and the costs of purchasing this chemical would be lower than those to produce it. The remaining funds will be returned.

China sector plan for phasing out ODS process agent applications (phases I and II)

18. The World Bank provides verifications on the two related sector plans in China to the Executive Committee's first and second meetings, respectively, of each year, i.e. typically prior to the reporting of Article 7 data by the country. Although Article 7 data subsequently reported 86.8 ODP tonnes of consumption of CTC in 2009, the verification reports provided by the World Bank indicated 462.15 ODP tonnes of CTC consumption from Process Agent (PA) applications covered by PA Plan I sources (Table 2 in Annex I) and 3,792.44 ODP tonnes from applications covered by PA Plan II sources (Table 3 in Annex I); the CTC consumption of the different applications belonging to PA plan I and PA plan II as well as other CTC consumption in China is quantified in the Agreement between the Executive Committee and China approved at the 48th Meeting, in particular in its Appendix 2-A². In addition, 870.80 ODP tonnes (Table 4 in Annex I) were used in PA applications listed in the interim Table A-bis of decision XVII/8 and in potential future process agent applications³ as identified and reported by China in its annual verification report; of this total, 261.27 ODP tonnes from two applications are to be considered as consumption under the Montreal Protocol, since these applications are contained in the list of uses of controlled substances as process agents in Table A of the Annex to decision XXII/8. With that, the aggregated consumption of the different process agent uses in China amounts to 4,515.86 ODP tonnes. The World Bank and China were advised of this discrepancy. The World Bank advised that in the two agreements, consumption is defined differently from the definition used under the Montreal Protocol, since obligations needed to be defined on an enterprise basis. Each enterprise is considered to act as an independent entity, and the definition for consumption of the enterprise is the same as that of consumption for a country under the Montreal Protocol. Consequently, "consumption" in the context of the two sector plans is used as the amount of CTC procured by the enterprises. The World Bank provided aggregate figures for the CTC stockpile located at the CTC producers, which were 3,157 ODP tonnes for 2007, 1,911 ODP tonnes for 2008 and 1,751 ODP tonnes for 2009. The World Bank also advised that some CTC might come from existing stocks at the dealers, about which no information is available.

Phase I of the China PA sector plan

19. Phase I of the China process agent sector plan (PA plan I) was approved in December 2002 to address 25 CTC and CFC-113 process agent applications included in List A of decision X/14. Total CTC consumption, reported as 3,382 ODP tonnes in 2003, has been reduced to 462.15 ODP tonnes in 2009. This is within the maximum allowable limit of 493 ODP tonnes set in the Agreement. The consumption of CFC-113 ceased in 2006 and the phase out was verified by the World Bank.

² For the purpose of reporting of consumption related to different specific uses of CTC in China, the CTC consumption for a given year for the different applications is defined as CTC procured by the relevant enterprise for PA use in that year.

³ Refer to line 6 of Appendix 2-A of that Agreement.

20. Complete phase-out has been achieved in 31 of the 32 plants that had used CTC or CFC-113 as a process agent in 2001, through either plant closure or conversion to non-ODS processes. During 2009, two plants using CTC for chlorinated rubber production were discontinued and are waiting to be dismantled. All the plant closures or discontinuations were verified by the World Bank and verification reports were submitted to the Secretariat.

21. The one remaining plant, Jilin Chemical Industrial Co. Ltd (JCIC) will continue to produce and use CTC as a process agent in the production of chlorosulphonated polyethylene (CSM). JCIC has gone through alterations in technical processes in order to reduce its CTC/CSM ratio since 2004. It had two production lines before 2004 that used CTC as a PA. Line 1 was shutdown in 2004 and fully dismantled in 2006. The first planned improvement introduced a new line 3 including two larger reactors and an integrated CSM/CTC colloid dry exclusion system using solvent stripping to replace the open to air operated water stripping system. The intention was to use the new line 3 to replace the older lines 1 and 2, which should have reduced the CTC/CSM ratio to 0.06. However, the new line 3 did not generate the expected result due to inadequate design. Instead, JCIC combined the new reactors with the separation system in line 2 and has been operating at 30 per cent capacity, limited by the CTC procurement quota issued by the Ministry of Environment (MEP). In addition to the effort made in 2008 to reduce its CTC/CSM ratio from the previous value of 0.32-0.35 to 0.31 MT/MT, this ratio was reduced further to 0.26 MT/MT by the end of the 2009 verification year through the following improvements:

- (a) Adding four graphite condensers (40 m² each) to the existing tail gas separation process to enhance CTC recovery from the new line 3 reaction tail gas and the existing line 2 water-stripping tower tail gas before they are released to the atmosphere;
- (b) Adding two buffers to the existing CTC recycling process to enhance CTC recovery from the gas streams arising from the top of line 3 reactors and line 2 water-stripping towers; and
- (c) Adding one separated CTC distillation vessel to the existing system to enhance collection and recovery of the contaminated CTC from the batch operations and equipment maintenance.

22. In 2009, JCIC received 286 ODP tonnes of CTC use quota from MEP, and the verified CTC consumption was 284.2 ODP tonnes. For the year 2010 and beyond, for applications falling under the PA plan I, the Agreement approved by the Executive Committee in decision 38/60 specifies a maximum consumption of 220 ODP tonnes of CTC in 2010⁴, which will be entirely used by JCIC. In view of the limited stock of 121.9 ODP tonnes and the limited consumption quota of 220 ODP tonnes of CTC, the Secretariat was informed by the World Bank that JCIC will continue to optimize the process to reduce its CTC/CSM ratio. JCIC is subject to the strict quota control implemented in China and will have to limit its production to the level achievable with the supply of 220 ODP tonnes of CTC, a restriction imposed by the Government of China to remain in compliance with the Agreement with the Executive Committee. JCIC has been allowed to procure new CTC in 2010 based on quotas to be issued by the Foreign Economic Cooperation Office (FECO) of MEP and at the quantity determined in the Agreement as corresponding to the level of emissions of controlled substances from process-agent use reasonably achievable in a cost-effective manner without undue abandonment of infrastructure; these figures from the Agreement formed the basis of the decision XXII/8 of the 22nd Meeting of the Parties, where the report shows a related limit in its Table B in the Annex to the decision. The local Environmental Protection Bureau (EPB) and FECO will monitor the CSM production and CTC consumption at this facility.

⁴ The Agreement approved in decision 48/26 of the Executive Committee, covering also the PA Plan II, reconfirmed the same figure, with the proviso, at that time, that emissions are accepted by the Parties as eligible, under decision X/14. Decision XXII/8 of the Meeting of the Parties has accepted the levels stipulated in the said Agreements.

Phase II of the sector plan

23. The verification reports of Phase II of the China process agent sector plan indicated that the total consumption for listed applications referred in row 4 of Appendix 2-A to the PA II Agreement in 2009 was 3,792.44 ODP tonnes, which is less than the 2009 maximum allowed consumption of 6,945 ODP tonnes; the total consumption and uses for applications referred in row 6 of Appendix 2-A to the Agreement is 870.8 ODP tonnes, which is also well below the maximum allowed amount of 14,300 ODP tonnes.

24. As previously advised, Phase II, approved by the Executive Committee in December 2005, targets the CTC consumed by the process agent applications set out in decision XV/6 of the 15th Meeting of the Parties, and will reduce the total consumption of CTC in these uses from an allowed maximum of around 6945 ODP tonnes in 2006 to 994 ODP tonnes in 2010 and beyond. Table 1 below presents the major applications, CTC consumption in 2009 for each application, and the number of lines remaining in production. Based on the verification report, the total CTC consumption for the listed applications referred in row 4 of the Appendix 2-A of the Agreement in Phase II of the sector plan was 3,792.44, ODP tonnes in 2009.

Table 1 - Major applications, production lines and consumption of CTC as a process agent

Application	Annual consumption			No. of production lines		Recent	Activities aggregated
	Year of data	2003 (Metric tonnes)	2009 (Metric tonnes)	2009 (ODP tonnes)	2003	2009	(2009 and 2010)
Cyclodime	152.85	0	0.00	9	0	No new information provided.	All 9 plants have closed. No CTC production was reported in 2008 and 2009.
CPP/CEVA	2,730.40	2,060.67	2,266.74	18	3	1 line was closed and dismantled. 1 line should have been closed 01/2010, but was operating in 03/2010 during verification, intended to close after stock finishes, approximately 06/2010.	14 lines closed and dismantled. 1 additional line supposedly closed; was still operating in 03/2010.
						2 lines were closed and are waiting to be converted to non-ODS technology.	2 lines to be converted to non-ODS technology.
						1 line was configured into 3 lines in 2009 which are all in operation.	1 line was configured into 3 lines, all of them are in operation.
MIC	574.54	697.70	767.47	8	3	3 lines were closed and dismantled in 2009, 1 line was converted to non-ODS technology.	4 lines were closed and dismantled. 1 line was converted to non-ODS technology.
						3 lines are in operation, contracts have been signed to phase out CTC in 12/2010.	

Application	Annual consumption			No. of production lines		Recent (2009 and 2010)	Activities aggregated (2003 to 2010)
	2003 (Metric tonnes)	2009 (Metric tonnes)	2009 (ODP tonnes)	2003	2009		
MPB	679.95	0.00	0.00	3	0	Jintan Huasheng was closed and dismantled in November 2008 after stock run out, no activities reported in 2009 and 2010.	1 line was converted and 2 lines were closed and dismantled.
Imidacloprid/ Mospilam	264.81	108.65	119.52	4	0	1 line was closed in 2009 and converted to non-ODS in Jan 2010; no line is in operation now.	2 lines were converted.
							2 lines were closed and dismantled.
Bupropfenin	316.87	81.60	89.76	3	0	2 lines were closed and dismantled.	All production lines are closed and dismantled.
Oxadiazon	57	0.00	0.00	3	0	No activities reported and status information provided.	1 line was closed due to bankruptcy.
							2 lines were closed and dismantled.
CNMA	136.12	499.05	548.96	1	0	1 line was shut and converted in 2009.	1 line was closed and converted to non-ODS technology.
Mefenacet	6.93	0.00	0.00	2	0	No activities were reported and status information provided.	1 line was converted and the other was dismantled.
DCBT	0	0.00	0.00	0	0	No activities reported and status information provided.	No activities and status information provided.
Chlordane/ Mirex	N/A	0.00	0.00	2	0	No CTC use was reported in 2009.	Both enterprises signed contracts with MEP to dismantle the equipment in 2009.
Total	4,919.47	3,447.67	3,792.44	53	6		

25. The strategy to achieve the necessary reductions in consumption during 2008 to 2010 continues to be predominantly conversion to non-ODS technology or plant closure. China has undertaken initiatives to develop non-ODS substitutes to phase out CTC. In 2008, one CPP and one MPB production line were shut down and dismantled. Subsequently a new CPP production line was being built using non-ODS technology. Eight contracts were signed with enterprises to phase out CTC. According to the progress report by the World Bank, in 2009, another nine contracts were signed and two MIC production lines and one Bupropfenin production line in Jiangsu Changlong were planned to be discontinued and replaced with non-ODS technology.

26. Subsequent to the results of a survey of consumption in 2006 for those process agent applications listed under Table A-bis of decision XVII/8 and any other applications which were not identified at the time of the approval of Phase II, the Executive Committee agreed in decision 52/32 to reduce the national annual CTC consumption control target for all process agent applications other than the applications listed in Phases I and II, from 14,300 ODP tonnes to 6,600 ODP tonnes. China had committed to completely phasing out the CTC consumption in these applications by the end of 2009. Table 4 in Annex I provides

a list of all CTC uses identified by China and notified to the Executive Committee in the 2009 sector plan progress reports as being newly identified potential process agent applications additional to those listed in decisions X/14, XV/6 and XVII/7.

Project in Mexico

27. A project in Mexico covered the use of some 87 ODP tonnes of CTC as a process agent in the manufacture of chlorine. The project involved a process change and, when implemented, CTC will no longer be used. The project was completed in January 2009 and a project completion report was submitted to the Secretariat. CTC consumption has ceased and equipment destroyed. The new technology that uses CTC-free process has been installed. The total annual CTC consumption of 87.3 ODP tonnes at Mexichem has been phased out.

Democratic People's Republic of Korea

28. The sector plan for phase-out of CTC production and consumption in the Democratic People's Republic of Korea was originally approved in December 2003 and a supplementary plan was approved in 2006 at a total cost to the Multilateral Fund of US \$6,995,504. The total phase-out under the plan was 2,027 ODP tonnes of CTC, of which approximately 228 ODP tonnes was for approved process agent uses. CTC production ceased in 2005. Stockpiles were established before production ceased, but these were fully used prior to the end of 2008. As indicated earlier, for 2009, the country reported zero ODP tonnes of CTC consumption in Article 7 data to the Ozone Secretariat and zero consumption of CTC as a process agent to the Multilateral Fund Secretariat.

29. However, although the use of CTC has ceased, conversion of two process agent applications at the 2.8 Vinalon Factory Complex and the Sinuiju Chemical Fibre Complex has not been able to proceed because certain equipment items already purchased for the conversion were deemed to fall under the dual use restrictions of the International Chemical Weapons Convention, to which the country has not acceded yet.

30. UNIDO sold the equipment which could not be delivered to the Democratic People's Republic of Korea and submitted a proposal to the Executive Committee at its 59th Meeting with a funding request of US \$3,071,000 plus support costs for the conversion of these two enterprises through an alternative technology. The Executive Committee decided at its 59th Meeting (decision 59/39) to postpone a decision on whether to approve the project to phase-out CTC as a process agent at the 2.8 Vinalon Complex and the Sinuiju Chemical Fibre Complex to its 61st Meeting.

31. At the 61st Meeting, UNIDO submitted a project proposal for the phase out of CTC use in the above mentioned two plants using alternative technology at total cost of US \$729,164 plus support costs of US \$54,688 for UNIDO. The Executive Committee decided at its 61st Meeting (decision 61/33) not to consider the project as it was not required for compliance.

India

32. Phase-out of CTC as a process agent in India is being accomplished through a sector plan for phase-out of both production and consumption of CTC. The sector plan was approved in principle in July 2003 at a total cost of US \$52 million. Under the plan, India committed to reducing the consumption of CTC used as a process agent and as a solvent from a baseline of 11,505 ODP tonnes to zero by 2010. For 2009, consumption of CTC uses had been reduced to 38.2 ODP tonnes, according to Article 7 data. The verification report in 2009 indicated that the consumption of CTC as a process agent was 29.7 ODP tonnes, which is below the allowable limit of 48 ODP tonnes for 2009, and consistent with the overall consumption reported under Article 7.

33. The progress report on the implementation of the 2009 annual programme seems to indicate that the phase out of both the production and consumption of CTC is proceeding well. Policies of the Government of India reduce the supply of CTC, and the industry conversion activities have reduced the demand for the substance. The various activities implemented by UNDP, UNIDO, the World Bank and the Government of Germany have been progressing well. Among the 103 identified enterprises, 52 have technical assistance for conversion to alternative technologies, two enterprises are under review, and the rest of the enterprises were deemed not eligible. In 2010, the Government will focus *inter alia* on the supervision of imports and production.

34. In 2010, India is to completely phase out the use of CTC as a process agent. The maximum amount permissible under the sector plan Agreement is zero ODP tonnes. The achievements of the implementation programme for 2010, including the consumption level, will be reported to the 64th Meeting of the Executive Committee in 2011.

Annex I

Table 1 - Projects for phasing out process agent use supported by the Multilateral Fund

Investment project number	Total funds approved (US \$)	Funds disbursed (US \$)	Consumption to be phased out (ODP tonnes)	Consumption phased out (ODP tonnes)	Production to be phased out (ODP tonnes)	Production phased out (ODP tonnes)	Status*
BRA/PAG/54/INV/281	1,178,554	24,740	0.0	0.0	0.0	0.0	ONG
CPR/PAG/58/INV/488	1,500,000	0	6,896.0	0.0	0.0	0.0	ONG
CPR/PAG/38/INV/397	2,000,000	2,000,000	0.0	0.0	0.0	0.0	COM
CPR/PAG/39/INV/402	20,000,000	20,000,000	0.0	0.0	2,638.0	2,638.0	COM
CPR/PAG/43/INV/416	16,000,000	16,000,000	0.0	0.0	6,657.0	6,657.0	COM
CPR/PAG/46/INV/432	2,000,000	2,000,000	4,556.0	4,556.0	16,171.0	16,171.0	COM
CPR/PAG/47/INV/437	15,000,000	15,000,000	0.0	0.0	0.0	0.0	COM
CPR/PAG/48/INV/440	16,000,000	16,000,000	0.0	0.0	6,642.0	6,642.0	COM
CPR/PAG/48/INV/441	10,000,000	10,000,000	0.0	0.0	0.0	0.0	COM
CPR/PAG/51/INV/448	5,000,000	5,000,000	0.0	0.0	6,642.0	6,642.0	COM
CPR/PAG/52/INV/452	10,000,000	10,000,000	0.0	0.0	0.0	0.0	COM
CPR/PAG/54/INV/458	3,000,000	1,500,000	0.0	0.0	10,594.0	10,594.0	COM
CPR/PAG/55/INV/463	10,000,000	5,500,000	0.0	0.0	0.0	0.0	COM
CPR/PAG/57/INV/483	1,000,000	0	6,587.0	0.0	2,591.0	0.0	ONG
COL/PAG/48/INV/66	114,480	10,117	2.0	2.0	0.0	0.0	ONG**
IND/PAG/34/INV/313	155,830	155,830	16.7	16.7	0.0		FIN
IND/PAG/35/INV/338	383,913	383,913	38.5	38.5	0.0		FIN
IND/PAG/34/INV/320	1,964,316	1,964,316	248.8	248.8	0.0	0.0	FIN
IND/PAG/34/INV/314	238,180	238,180	34.1	34.1	0.0		FIN
IND/PAG/28/INV/217	366,000	366,000	375.0	375.0	0.0	0.0	FIN
IND/PAG/34/INV/311	278,991	278,991	133.9	133.9	0.0		FIN
IND/PAG/34/INV/303	132,880	132,880	23.0	23.0	0.0		FIN
IND/PAG/32/INV/291	288,638	288,638	94.6	94.6	0.0		FIN
IND/PAG/32/INV/287	259,474	259,474	27.9	27.9	0.0		FIN
IND/PAG/32/INV/284	249,547	249,547	54.2	54.2	0.0		FIN

Investment project number	Total funds approved (US \$)	Funds disbursed (US \$)	Consumption to be phased out (ODP tonnes)	Consumption phased out (ODP tonnes)	Production to be phased out (ODP tonnes)	Production phased out (ODP tonnes)	Status*
IND/PAG/32/INV/283	145,736	145,736	69.7	69.7	0.0		FIN
IND/PAG/34/INV/316	127,667	127,667	17.9	17.9	0.0		FIN
DRK/PAG/49/INV/46	883,600	883,600	229.9	229.9	0.0		COM
MEX/PAG/52/INV/133	1,518,094	830,784	87.3	87.3	0.0		COM
PAK/PAG/35/INV/42	485,701	481,998	80.0	80.0	0.0		COM
ROM/PAG/50/INV/36	1,019,768	981,107	120.5	120.5	0.0		ONG

Note: * COM represents the project has been operationally completed; FIN represents the project is completed and the remaining balance was returned to the Fund Secretariat; ONG represents the project is still on-going.

** Workshops to assist the CTC users in laboratory and analytical applications to update their techniques were completed. With regards to PRODESAL, implementation continues. Company sent conversion plan to UNDP for review, plan agreed and bidding process started. Associated expenditures to take place in 2010. Completion expected in mid-2010.

Table 2 - List of the applications of CTC as a process agent in Plan I in China in 2009

Applications	CTC consumption* (Metric tonnes)	CTC consumption* (ODP tonnes)	CTC maximum emission** (Metric tonnes)	CTC maximum emission** (ODP tonnes)
Chlorinated rubber (CR; 2 enterprises)	161.74	177.91	294.55	324.01
Chlorosulphonated polyethylene (CSM)	258.40	284.24	296.57	326.23
Total	420.14	462.15	591.12	650.23

Note: * CTC consumption for these uses is defined as amount of CTC procured by enterprises.

** Maximum emission here is defined as the amount of CTC used by enterprises

Table 3 - List of the applications of CTC as a process agent in Plan II in China in 2009

Products that use CTC PA	CTC Consumption* (Metric tonnes)	CTC Consumption* (ODP tonnes)	CTC maximum emission** (Metric tonnes)	CTC maximum emission** (ODP tonnes)
CPP/CEVA	2,060.67	2,266.74	2,159.73	2,375.70
MIC	697.74	767.51	500.08	550.09
Imidacloprid	108.65	119.52	103.22	113.54
Bupropfenzin	81.56	89.72	148.28	163.11
CNMA	499.05	548.96	626.13	688.74
Total	3,447.67	3,792.44	3,537.44	3,891.18

Note: * CTC consumption for these uses is defined as amount of CTC procured by enterprises.

** Maximum emission here is defined as the amount of CTC used by enterprises

**Table 4 - Use of CTC in China in 2009 for potential process agent applications
not included in decisions X/14, XV/6 and XVII/7**

Applications	CTC consumption (metric tonnes)	CTC consumption (ODP tonnes)
Prallethrin/ ES-Prallethrin	56.26	61.89
O-Nitrobenzaldehyde / Mnitrobenzaldehyde / nitro benzyl alcohol	181.26	199.39
3-Methyl-2-Thiophenecarboxaldehyde	0.00	0.00
2-Thiophene ethanol	0.00	0.00
3,5-DNBC/triiodoisophthalic	10.00	11.00
1,2-Benzisothiazol-3-Ketone	0.00	0.00
Ticlopidine	15.00	16.50
Chloromethane-sulfoniceaster	0.00	0.00
2-(p-Bromomethylphenyl) propionic acid	40.00	44.00
2-methoxy-3-methylpyrazine	9.90	10.89
4-(trifluorometoxy)aniline (TFAM)	2.10	2.31
4-Bromoanisole	0.00	0.00
4-Bromo-benzenesulfonyl	0.00	0.00
4-Chloro-2-Trichloromethyl pyridine	0.00	0.00
Chloropyrazine	10.00	11.00
Diamino pyrazole sulfate	0.00	0.00
Dichloro-p-cresol	30.00	33.00
Dope	250.00	275.00
Doxofylline	0.00	0.00
Ethyl-4Chloroacetoacetate	106.32	116.95
Ozagrel	0.00	0.00
PVDF	0.00	0.00
Single-ester	0.00	0.00
Using as G.I.	0.00	0.00
â-Bromopropionicacid	0.00	0.00
Acrylamide (N-(1,1-dimethyl-3-oxobutyl) (DAAM)	0.00	0.00
2-Methoxybenzoylchloride	20.80	22.88
Levofloxacin	60.00	66.00
Fipronil	0.00	0.00
2-chloro-5- (trifluoromethyloxy) pyridine	0.00	0.00
Total	791.64	870.80
