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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Fifty-fourth Meeting  
Montreal, 7-11 April 2008

**PROJECT PROPOSALS: INDIA**

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

Phase-out

- National CFC consumption phase-out plan focussing on the refrigeration service sector: 2008 work programme  
Germany, Switzerland  
UNDP, UNEP, and  
UNIDO

Production

- CFC production sector gradual phase-out: 2008 annual implementation programme  
World Bank

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## PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

### India

<b>(I) PROJECT TITLE</b>	<b>AGENCY</b>
CFC phase out plan	Germany, Switzerland, UNDP, UNEP, UNIDO

<b>(II) LATEST ARTICLE 7 DATA (ODP Tonnes)</b>					<b>Year: 2006</b>
CFC: 3560.3	CTC: 1127.5	Halons: 0	MB: 0	TCA: 0	

<b>(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP Tonnes)</b>											<b>Year: 2006</b>		
Substances	Aerosol	Foam	Halon	Refrigeration		Solvent	Process Agent	MDI	Lab Use	Methyl Bromide		Tobacco fluffing	Total Sector Consumption
				Manufacturing	Servicing					QPS	Non QPS		
CFC				72.5	1,105.3			700.					1,877.9
CTC						1,104.4			23.1				1,127.5
Halons													0
Methyl Bromide										198.2			198.2
TCA													0

<b>(IV) PROJECT DATA</b>			2002	2003	2004	2005	2006	2007	2008	2009	2010	Total		
<b>Maximum Allowable Consumption (ODP Tonnes)</b>		CFC			3,489.	2,266.	1,560.	964.	417.	273.	0.			
	<b>Project Costs (US\$)</b>	UNDP	Project Costs	3,500,000.	2,226,536.	2,027,200.	877,050.	732,377.	167,860.	152,340.	199,460.		9,882,823.	
			Support Costs	303,971.	196,743.	173,411.	74,216.	58,980.	12,590.	11,426.	14,960.		846,297.	
		UNIDO	Project Costs	500,000.	173,200.									673,200.
			Support Costs	65,000.	19,052.									84,052.
		Germany	Project Costs			414,370.	100,000.	105,090.	436,200.	436,200.	923,400.			2,415,260.
			Support Costs			53,868.	13,000.	13,662.	56,706.	56,706.	120,042.			313,984.
		Switzerland	Project Costs			353,020.	256,650.	256,650.	367,140.	367,140.				1,600,600.
			Support Costs			45,893.	33,365.	33,365.	47,728.	47,728.				208,079.
		UNEP	Project Costs			256,300.	256,300.	85,000.	85,000.	85,000.	85,000.	32,400.		800,000.
			Support Costs			33,319.	33,319.	11,050.	11,050.	11,050.	11,050.	4,212.		104,000.
		<b>Total Funds Approved in Principle (US\$)</b>		Project Costs	4,000,000.	2,399,736.	3,050,890.	1,490,000.	1,179,117.	1,056,200.	1,040,680.	1,155,260.		15,371,883.
				Support Costs	368,971.	215,795.	306,491.	153,900.	117,057.	128,074.	126,910.	139,214.		1,556,412.
	<b>Total Funds Released by the ExCom (US\$)</b>		Project Costs	4,000,000.	2,399,736.	3,940,890.	1,779,117.	1,056,200.	0.	0.	0.		13,175,943.	
		Support Costs	368,971.	215,795.	406,954.1	170,494.	128,074.	0.	0.	0.		1,290,288.1		
<b>Total Funds Requested for Current Year (US\$)</b>		Project Costs							1,040,680.			1,040,680.		
		Support Costs							126,910.			126,910.		

<b>(V) SECRETARIAT'S RECOMMENDATION:</b>	<b>For individual consideration</b>
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## **NATIONAL CFC CONSUMPTION PHASE-OUT PLAN FOCUSSED ON THE REFRIGERATION SERVICE SECTOR: 2008 WORK PROGRAMME**

### **PROJECT DESCRIPTION**

1. The Government of Germany, as the lead implementing agency, submitted on behalf of the Government of India the implementation report on the fourth phase of the National CFC Consumption Phase-Out Plan (NCCoPP) covering the period from April 2006 to March 2007, and is requesting the release of the fifth tranche of funding at the amount of US \$1,040,680 plus support costs of US \$126,910 for the implementation of the 2008 work programme. The fifth phase of the implementation plan provides detailed information on activities, objectives and planned expenditures, and indicates the agencies associated with the implementation of those specific activities. The submission includes the annual implementation plan for the period April 2008 to March 2009, and is accompanied by a verification report concerning the year 2006. The project is being implemented jointly with Switzerland (as bilateral), UNDP, UNEP and UNIDO.

#### Background

2. The “National Phase-out Plan for CFC Consumption in India focussing on the Refrigeration Service Sector” (NCCoPP), was approved by the Executive Committee of the Multilateral Fund at its 42<sup>nd</sup> Meeting in April 2004. Under the Plan, India will phase out the consumption of all CFCs by 1 January 2010. The project combines several previously approved sector plans and new activities into one national plan. To achieve the targeted reductions in CFC consumption, the Plan includes investment, non-investment, technical assistance, and capacity building activities. The four previous projects or planned activities: namely, service sector plan, customs and policy plan, refrigeration (manufacturing) sector plan, and foam sector plan originally had different performance and reporting requirements, which were largely harmonized in the process of creating one unified national plan. So far, further tranches have been approved at the 44<sup>th</sup>, 47<sup>th</sup> and 50<sup>th</sup> Meetings, in line with the original schedule.

3. Germany, as lead agency, submitted on behalf of India a request for the approval of the fifth tranche at the 53<sup>rd</sup> Meeting, but subsequently withdrew the request when it became clear that certain requirements regarding the verification could not be met in time for the 53<sup>rd</sup> Meeting. The available documentation for the 53<sup>rd</sup> Meeting suggested that India had exceeded the maximum allowable consumption under the agreement, and that the Government of India was under the impression that CFC consumption for MDIs did not fall under the consumption definition in the Agreement related to NCCoPP. Upon request of the lead agency, the Secretariat described the issue, and it was discussed during the 53<sup>rd</sup> Meeting. In its decision 53/13 the Executive Committee decided to discuss the issue of India’s CFC consumption in 2006 and its relation to performance-based agreements at the 54<sup>th</sup> Meeting of the Executive Committee.

#### Verification

4. The Government of Germany as the lead agency provided two verification reports, one concerning the CFC exports from India and one concerning the CFC imports, consumption calculation and activities. In addition, the production sector verification, carried out under the production sector agreement, provided the verification of India’s CFC production. The verification of activities and related ODS phase-out is sufficient.

5. At the 50th Meeting, the Executive Committee approved the fourth tranche on the understanding that in future verification reports, the Government of Germany takes into consideration all substances covered in the Agreement and ensures that information obtained through direct contact with exporters and customs forms part of the verification report. The requirements defined in the previous tranche approval were fulfilled.

6. The verification was covering the substances CFC-11, CFC-12 and CFC-113. The level of production was 6,904.67 ODP tonnes. To determine the consumption, imports of 152.312 ODP tonnes were added to the production and exports of 3,448.929 ODP tonnes subtracted, resulting in a consumption of 3,608.053 ODP tonnes. This is a higher figure than reported under Article 7 and indicated during the 53<sup>rd</sup> Meeting when the verification was not yet completed, the apparent increase stems mainly from one export which took place on 2 January 2007, while originally being recorded for December 2006. The limit for 2006, as set in the agreement, was 1,560 ODP tonnes, the difference between this limit and the reported consumption is 2,048.053 ODP tonnes.

#### Achievements

7. The implementation has progressed as originally intended, and in several cases actually faster than anticipated. For example, the annual objectives for technician training have been exceeded by about 25 per cent, and the costs reduced as compared to the estimate. Refrigeration technician training in the domestic and small commercial sub-sectors has resulted in 1,809 technicians being trained in 2006, as well as 238 MAC service technicians and 53 instructors for vocational training institutes. 330 tool sets have been delivered, and 20 vocational schools equipped.

8. For the purposes of awareness raising, three newsletters have been published and six workshops conducted. The customs training has almost been completed, and with the five workshops in the last reporting period the total has reached 20 of the planned 21 workshops.

9. For the refrigeration manufacturing sector, UNDP reported a phase-out of 288 ODP tonnes, which is 42 per cent and above the annual target, by completing 116-sub-projects. The annual CFC phase-out target for the foam sector was 128 ODP tonnes. Through completion of enterprise-level phase-out activities at the remaining 28 sub-projects, the actual phase-out achieved during 2006 was 107.10 ODP tonnes. Although the annual target was not reached, due to higher phase-out achieved in previous years, the accumulated phase-out in the foam sector is still slightly above the target. All enterprises in the foam and the refrigeration manufacturing sectors have been established prior to July 1995.

10. The report provided by GTZ contained an indication of the 2007 consumption in India, which still needs to be verified. According to the data available at present, i.e. preliminary and not taking into account possible CFC imports, it appears that in 2007 India consumed 1,049.3 ODP tonnes of CFCs, which is 85.3 ODP tonnes above the maximum allowable consumption defined in the agreement between the Government of India and the Executive Committee for that year. Any imports, which are, according to the report, likely to have taken place in the order of 100 tonnes will increase the excess consumption further.

2008 annual implementation plan and funding request

11. Activities planned include: training workshops for 1,850 technicians (standard service), courses for 360 MAC technicians, retrofit demonstration training for 64 technicians and equipment support for 205 technicians/enterprises. The awareness programme will continue to disseminate information about the strategy and various planned activities. No activities are foreseen for 2008 under the customs and policy training component.

12. The funding request of the Government of Germany consists of the following costs:

<b>Implementing Agency</b>	<b>Project Funding (US\$)</b>	<b>Support Cost (US\$)</b>
Germany	436,200	56,706
Switzerland	367,140	47,728
UNDP	152,340	11,426
UNEP	85,000	11,050
UNIDO	0	0

**SECRETARIAT'S COMMENTS AND RECOMMENDATION****COMMENTS**

13. The implementation of NCCoPP for India has progressed according to plan. The implementation activities under the plan have achieved or, in several cases, significantly surpassed their targets. The annual implementation plan for April 2008 until March 2009 shows demanding but realistic targets for implementation activities and is in line with the implementation plan until 2010.

14. The verifications provided demonstrated that India had for 2006 a significant consumption level beyond the maximum allowable consumption under the Agreement. The difference is 2,048.053 ODP tonnes. A clause under the Agreement between the Government of India and the Executive Committee foresees that the amount of funding provided may be reduced by US \$14,960 per ODP tonne of reduction in consumption not achieved in the year.

15. The preliminary data for 2007 suggests again a consumption higher than the agreed maximum allowable consumption. An amount of 1,375.591 ODP tonnes was added to the verified stockpiles during the year 2006. According to the information verified by the production sector verification report, the stockpiles decreased during the year 2007 by 322 ODP tonnes.

16. Two other CFC related submissions for India are in front of the Committee at this 54<sup>th</sup> Meeting. The World Bank has submitted its tranche request for the CFC production sector phase-out, based on the completion and verification of India's 2007 annual work programme. The tranche request is for an amount of US \$6 million and is described in this document. UNDP has informed the Committee in their business plan of the intention to submit an MDI investment project for India in 2008, and has allocated for this purpose US \$3.2 million for 2008 and US \$15 million for 2009. The UNDP business plan is described in document UNEP/OzL.Pro/ExCom/54/8.

**RECOMMENDATION**

17. The Executive Committee might consider the project based on the information provided in this document and any further information which might be provided before or during the 54<sup>th</sup> Meeting.

## CFC PRODUCTION SECTOR GRADUAL PHASE-OUT: 2008 ANNUAL IMPLEMENTATION PROGRAMME

### Background

18. The World Bank, on behalf of the Government of India, has submitted for approval by the Executive Committee at its 54<sup>th</sup> Meeting, the 2008 annual programme for the implementation of the India CFC production sector gradual phase-out programme at the amount of US \$6.00 million plus support costs of US \$0.45 million, together with the verification report on the implementation of the 2007 annual work programme. The submission is in fulfilment of the Agreement between the Government of India and the Executive Committee, which was approved at the 29<sup>th</sup> Meeting. The 2008 annual work programme and the verification report of 2007 CFC production in India are not attached, however these could be made available to Members of the Executive Committee upon request.

Table 1

Country	India
Project title:	CFC Production Sector Gradual Phase-out
Year of plan	2008
# of years completed	9
# of years remaining under the plan	2
Ceiling for 2007 CFC production (in metric tonnes), 2007 annual plan	3,389 mt
Ceiling for 2008 CFC production (in metric tonnes), 2008 annual plan	2,259 mt
Total funding approved in principle for the CFC phase-out plan	\$82 million
Total funding released as of Dec. 2007	\$70 million
Level of funding requested for 2008 Annual Plan	\$6 million

### 2008 Work Programme

19. The proposed 2008 annual work programme starts with a review of the implementation of the 2007 work programme. The review reports on the achievement of the 2007 CFC reduction target that had been set at 3,389 mt in the Agreement, and the verified gross production of 2,368 mt, or 69.9 per cent of the allowable CFC production level. On a policy level, a number of initiatives were undertaken in 2007, among which was the successful effort to amend and promulgate the ODS Rule, that is the basic legal instrument of the country to regulate ODS production and consumption. The aim of the amendment was to render it more effective in

controlling the consumption, feedstock use and the stockpiling of ODS, in particular with respect to its continued impact beyond 2010. Under the CFC import and export management, it is reported that a total of four bulk export licenses were issued for 3,389 mt in 2007, the actual export was only 1,303 mt. There is also a reported increased cost differential between the CFC prices and the prices of the alternatives, which is in favour of the latter and could provide greater incentives to the consumers to move away from CFCs.

20. Under the technical assistance programme, a number of activities were reported in Table 3 of the submission including awareness, training, monitoring, the operation of the PMU, data exchange and others. There has been a reported increase in the level of coordination between the national CFC phase out and the CFC production phase-out plan under the leadership of the NOU and with the participation of the implementing agencies involved. Of the US \$6 million disbursed from the Fund for the 2007 work programme, US \$5.265 million had been paid to the four enterprises in tranches according to progress in achieving the reduction target set for each of them, and the remaining balance was planned to be disbursed after final verification of the 2007 production. There was no allocation from the 2007 tranche to the technical assistance programme since there was still an unspent balance from the previous annual work programmes.

21. The second part of the submission describes the target and activities of the 2008 work programme. The CFC production limit set in the Agreement for 2008 is 2,259 mt. As of February 2008, the NOU has not allocated the quota to the four producers and is waiting for a solution to the CFC consumption issue raised at the 53<sup>rd</sup> Meeting of the Executive Committee. Import and export will continue to be controlled by a licensing regime.

22. Under the technical assistance programme, a number of activities would continue from the previous year to integrate the various phase-out programmes in other areas, such as the national CFC consumption phase-out plan and the CTC sector phase-out plan and initiatives to maintain monitoring beyond 2010.

23. A total of US \$6 million is being requested, which would be allocated to the four enterprises, as previously, for reducing their CFC production and financing the technical assistance activities planned for 2008. The World Bank is requesting US \$450,000 as the associated support cost at 7.5 per cent of the 2008 tranche.

### **2007 Production Verification Report**

24. The verification was carried out in January 2007 by Det Norske Veritas AS (DNV) India, which started to conduct verifications of the CFC production phase-out in India for the World Bank in 2004. The verification report starts with an Executive Summary in tabular form on the overall results of the verification, with information on the 2007 CFC production quota for each enterprise, the transfer of quotas between the enterprises, opening CFC stock, gross production, net saleable production, losses, sales, closing stock and percentage of quota produced by each of the four producers, and the national totals. As per decision 43/5, which allowed the use of net saleable CFC production to measure the achievement of the target in the Agreement for India in years other than 2005 and 2007, the verification used the gross production level by applying the industry accepted norm of 0.92 per cent to the net saleable production reported by the producers to calculate the gross figures and concluded that the total CFC production in the country in 2007



was 2,368 mt, which was about 69 per cent of the 3,389 mt target in the Agreement. A summary of the CFC production by the four producers is shown in the following table.

**CFC PRODUCTION SUMMARY (CY 2007):**

Enterprises	CSL	GFL	NFI	SRF	Total
	CFC11/12	CFC11/12	CFC 11/12, CFC 113 crude, CFC-113 a and CFC-113 pure.	CFC11/12	
<b>Quota</b>	<b>289.080</b>	<b>1210.210</b>	<b>893.000</b>	<b>996.710</b>	<b>3389.000</b>
<b>Quota Transferred by GFL</b>		<b>0</b>	<b>200.000</b>		
<b>Quota Transferred by CSL</b>		<b>0</b>	<b>289.080</b>		
Opening Stock	51.672	955.157	102.021	573.609	1682.459
<b>Gross Production (Production Quota utilised)*****</b>	<b>288.712***</b>	<b>196.500****</b>	<b>888.606 *</b>	<b>993.796**</b>	<b>2367.614</b>
Losses	2.632	1.800	7.4*	9.143	20.975
Net Saleable Production CFC/11/12	286.080	194.700	881.168*	984.736	2346.684
Sales return (Domestic)	0	2.997	0.065	2.840	5.902
Sales	300.865	394.56	802.395	1093.813	2591.633
Closing Stock	36.889	733.199	125.656	467.347	1363.091
<b>Percentage of Quota (on gross)</b>	<b>99.87</b>	<b>16.23</b>	<b>99.51</b>	<b>99.71**</b>	<b>69.86</b>

(All quantities are in mt)

- \*-Includes the quantities of 808.547 mt of CFC 11/12, 5.621 mt of CFC-113 crude production, 5.3 mt of CFC-113 pure, 53.415 mt of CFC-113 crude (excess consumption over the norm of CFC 113 crude/ CFC 113 a production) and 13.906 mt of CFC 113 a (excess consumption over the norm of CFC 113a/ TFA). Loss of 7.4 is considering CFC 11/12 production of 815.986 mt only.

\*\*--Calculated figure considering an industry accepted norms of 0.92% for losses during filling and handling on the net production figure of 984.736 mt. The percentage of quota is based on the gross calculated figure.

\*\*\*Calculated figure considering an industry accepted norm of 0.92% for losses over the net saleable production figure of 286.082 which is subcontracted and manufactured at NFIL during 2007. The percentage of quota is based on the gross calculated figure.

\*\*\*\* Calculated figure considering an industry accepted norm of 0.92% for losses over the net saleable production figure of 196.5 mt received at the site after handling losses. (200 mt-3.305 mt) from the 200 mt which was subcontracted and manufactured at NFIL during 2007.

\*\*\*\*\* Production Quota utilised is the computed Gross production based on the net production and losses.

For the calendar year 2007, the gross production was considered for comparison with the target set by the Ozone Cell.

25. The report contained a brief background on the CFC production closure Agreement between India and the Executive Committee, the production technologies used by the four producers, and the capability to swing to HCFC-22 production by all of the four producers. One of the four producers, Navin Fluorine International Limited (NFI) also produces CFC-113 from HF and perchloroethylene. CFC-113 crude is further purified to CFC-113 pure as a product to be sold on the market, or is processed into CFC-113a to be used as feedstock in the manufacture of Trifluoro Acetic Acid (TFA), a non-ODS product. The report describes the methodology of the verification which includes site visits and a random check of pertinent records for consistency in reported results. The production log books and laboratory and analytical records were correlated for the sample days to assess whether the records were appropriately maintained for the products produced. Samples from existing stocks were taken for gas chromatograph analysis for product identification as CFC and HCFC. The verification team also held discussions with the plant personnel.

26. The report then provides observations and results of the visit to each plant. It includes an overview on the history and technology of the plant covering: audit methodology and the documentation and records investigated; samplings taken and related results; summary data for 2003 through 2007 on the production quota allocated; operating dates for CFC and in some cases HCFC-22 production, production of CFC-11 and CFC-12 and the percentage of quota fulfilled. The plant-specific report also provides comparative data between 2003-2007 on raw material consumption ratio between feedstock and CFC production and conclusions on the status of compliance with the allocated quota.

27. Due to the fast decrease in CFC production quota under the Agreement, the verification team reports on the increase in quota trading, or contract production among the plants. In 2007, Chemplast Sanmar Limited (CSL) contracted all its quota of 289 mt of CFC-11 and CFC-12 to NFI for production, while Gujarat Fluorochemicals Limited (GFL) sub-contracted 200 mt of its CFC-11/CFC-12 quota to NFI for production. Under these arrangements, CSL and GFL provided NFI with the CTC and HF needed for the production under a fixed ratio between the feedstock and CFC output, and the finished product was placed into the containers of the quota owners. All these transfers were carried out with the permission of the Government.

28. The verification team considers the conversion ratio at NFI of CFC-113 crude to CFC-113a at 1.16 considerably higher than the industry norm at 1.05, and the conversion ratio of CFC-113a to TFA at 3.176 which is also high compared to the industry norm at 2.95. As a result, the team applied the norm to the calculation of the CFC-113 consumption in each case and an over-consumption of about 72 mt was therefore counted and added to the CFC production quota for the plant.

29. The verification team notes that all four CFC plants have either already had an HFC-23 destruction facility in operation on their premises, or are in the process of obtaining one as part of the CDM.

30. Finally, the report provides the results of the verification using the format for verification of ODS production phase-out, which includes a history of the production phase-out programme from the beginning and the results from the latest verification with data broken down by month, on the number of operating days, raw material consumption and CFC production tonnage.

## **SECRETARIAT'S COMMENTS AND RECOMMENDATIONS**

### **COMMENTS**

#### **2008 Annual Programme**

31. The submission provides a clear maximum allowable CFC production target for 2008 which is consistent with the target set in the Agreement. Quota trading among the producers will continue to be the main feature in 2008 although all producers have moved their plants to the HCFC-22 mode for most of the year. In spite of efforts to co-ordinate the implementation of the production phase-out agreement with the national CFC consumption plan, which already started

in 2007, there is evidently a need for more coordination judging from what happened to the CFC consumption in 2006 in India in the context of the CFC national phase out plan.

32. It is noted that efforts are being made to sort out the issues regarding the management of the CFC production and the consumption in India including the management of CFC exports. As part of that effort, it is noted that the CFC production quota has not been allocated to the producers as of February 2008. It is evident from the submission that there was a significant drop in the demand for CFCs in the export market in 2007, and there are also indications that the prices of the alternatives have become more competitive than CFCs in India as well. These are signals that have to be taken into consideration by the Government and the CFC producers in planning their production and consumption in 2008 and beyond and their compliance needs under the Montreal Protocol and the Agreement with the Executive Committee.

33. On the policy side, the Secretariat wishes to note the successful effort to amend the ODS rule to strengthen legal control for compliance beyond 2010 and hopes that it would contribute to resolving the outstanding issues facing the Government.

### **2007 Production Verification Report**

34. The 2007 Production Verification Report was prepared in accordance with the guidelines approved by the Executive Committee and demonstrates good clarity. The World Bank has shown good co-operation by providing clarification to the questions from the Secretariat and removing the doubts that resulted from the review of the initial submission.

35. The conclusion of the verification demonstrates that India complied with the CFC production reduction target in the Agreement for the year 2007. As a matter of fact, it is the first time that the actual production is significantly (more than 30 per cent) lower than the target.

### **RECOMMENDATIONS**

36. The verification indicates that India achieved the CFC production reduction for 2007 and has therefore met the conditions for releasing the funding for 2008. However, management of the CFC production plays an important part in the on-going effort of sorting out the coordinated phase out of CFC production and consumption in India, and the funding to be released for the 2008 annual programme should contribute to whatever solution will emerge from the on-going discussion under the 2008 work programme of the national CFC consumption phase-out plan focusing on the refrigeration service sector. Therefore the Secretariat recommends that the Executive Committee considers the approval of the US \$6 million plus US \$450,000 as support cost to the World Bank for the 2008 annual programme for the India CFC production closure programme in the overall context of the solution for the national CFC phase out plan in India.

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