



**United Nations  
Environment  
Programme**

Distr.  
GENERAL

UNEP/OzL.Pro/ExCom/51/29  
18 February 2007

ORIGINAL: ENGLISH



EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Fifty-first Meeting  
Montreal, 19-23 March 2007

**PROJECT PROPOSAL: INDIA**

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

Production

- CFC production sector gradual phase-out: 2007 annual World Bank implementation programme

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## Background

1. The World Bank, on behalf of the Government of India, has submitted for approval by the Executive Committee at its 51<sup>st</sup> Meeting, the 2007 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 2006 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 2007 annual work programme and the verification report of 2006 CFC production in India are not attached for reasons of economy, 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	2007
# of years completed	8
# of years remaining under the plan	3
Ceiling for 2006 CFC production (in metric tonnes), 2006 annual plan	7,342 MT
Ceiling for 2007 CFC production (in metric tonnes), 2007 annual plan	3,389 MT
Total funding approved in principle for the CFC phase-out plan	\$82 million
Total funding released as of Dec. 2006	\$64 million
Level of funding requested for 2007 Annual Plan	\$6 million

## 2007 Work Programme

2. The proposed 2007 annual work programme starts with a review of the implementation of the 2006 work programme. The review reports on achieving the 2006 CFC reduction target, namely, the allowable CFC production in the country for 2006 was set at 7,342 MT in the Agreement, and the verified net saleable production was 6,963.4 MT, or 95 per cent of the allowable level. On a policy level, a number of initiatives were undertaken in 2006, among which was the effort to amend the ODS Rule, the basic legal instrument of the country to regulate the ODS production and consumption. The aim of the proposed 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.

3. Under the technical assistance programme, a number of activities were reported in Table 3 of the submission which included awareness, training, monitoring, the operation of the PMU, data exchange and others. One of the results from such activities was that all measures had been taken to reduce filling loss by CFC producers from an average of 0.92 per cent to 0.77 per cent and such measures had been cleared with the technical auditors. These measures included reducing the length of the filling hoses, using more of the ISO containers and ton tanks instead of small jugs, changing the design of the filling headers to reduce leakage when disconnecting the hose from the jugs, and raising the awareness of the importance of reducing losses. Of the US \$6 million disbursed from the Fund to the 2006 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 2006 production. There was no allocation from the 2006 tranche to the technical assistance programme since there was still an unspent balance from the previous annual work programmes.

4. The second part of the submission describes the target and activities of the 2007 work programme. The CFC production limit set in the Agreement for 2007 is 3,389 MT, which requires a reduction of 50 per cent from the previous year. The target is to be achieved through continuing with the CFC production quota system. It is expected that quota trading would take place again as in the previous two years since the total allowable level of production is too low for all the four companies to continue producing profitably. Import and export will continue to be controlled by a licensing regime.

5. In 2007 the amended ODS Rule is expected to be promulgated and the control of the production and consumption of ODS further strengthened an effort towards achieving compliance with the Montreal Protocol. There are also proposals in the technical assistance programme 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.

6. 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 2007. The World Bank is requesting US \$450,000 as the associated support cost at 7.5 per cent of the 2007 tranche.

### **2006 Production Verification Report**

7. 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 2006 CFC production quota for each enterprise, the transfer of quotas between the enterprises, opening CFC stock, net saleable production, 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 net saleable production level by netting out the filling loss to conclude that the total CFC production in the country in 2006 was 6,963.4 MT, which was lower than 7,342 MT, that is the target in the Agreement.

8. 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 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 at least 10 days 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.

9. The report then provides observations and results of the visit to each plant. For 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, 2004, 2005 and 2006 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 2003-2006 on raw material consumption ratio between feedstock and CFC production and conclusions on the status of compliance with the allocated quota.

10. 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 2006, Chemplast Sanmar Limited (CSL) contracted all its quota of 626.3 MT of CFC-11 and CFC-12 to NFI for production, while Gujarat Fluorochemicals Limited (GFL) sub-contracted its CFC-11 quota of 866.6 MT 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.

11. 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 3.228 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 49 MT was therefore counted as the CFC production quota for the plant.

12. 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.

13. 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

#### 2007 Annual Programme

14. The submission provides a clear maximum allowable CFC production target for 2007 which is consistent with the target set in the Agreement. The reduction for 2007 would continue to be as challenging as in 2006, where a 50 per cent reduction from the previous year is required. Quota trading among the producers will continue to be the main feature in 2007 although all producers have moved their plants to the HCFC-22 mode for most of the year. It is gratifying to note the improvements by the Government and the industry to reduce the filling losses of CFCs during filling operation. It is also noted that there have been efforts to co-ordinate the implementation of the production phase-out agreement with the national CFC consumption plan and the CTC sector phase-out programme.

15. On the policy side, the effort to amend the ODS rule to strengthen legal control for compliance beyond 2010 is commendable and is expected to be completed in 2007.

#### 2006 Production Verification Report

16. The 2006 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 clarifications to the questions from the Secretariat and removing the doubts that resulted from the review of the initial submission.

17. The conclusion of the verification demonstrates that India has complied with the CFC production reduction by producing about 378 MT (7,342 – 6,964) below the target in the Agreement for the year 2006.

### RECOMMENDATIONS

18. Since the verification indicates that India has achieved the CFC production reduction for 2006 and has therefore met the conditions for releasing the funding for 2007, the Secretariat recommends that the Executive Committee approve the 2007 annual programme for the India CFC production closure programme at US \$6 million and US \$450,000 for the World Bank in support costs.

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