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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Forty-fifth Meeting
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# PROJECT PROPOSALS: INDIA

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

Phase-out

- CTC phase-out plan for the consumption and production sectors: 2005 annual programme — France, Germany Japan, World Bank

Production

- CFC production sector gradual phase-out: 2005 annual implementation programme — World Bank

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# CTC PHASE-OUT FOR THE CONSUMPTION AND PRODUCTION SECTORS: 2005 ANNUAL PROGRAMME

## Project Description

Background

1. At its 40th Meeting in July 2003, the Executive Committee decided to approve 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), and disbursed the first tranche of US $5 million at the meeting to start implementation of the project. Further, at its 41st Meeting the Committee approved the Agreement for the Phase-Out in the Consumption and Production of CTC in India and disbursed the balance of US $3,520,843 for the funding of the 2003 annual work programme. Subsequently the Executive Committee approved the 2004 annual programme at the 42nd Meeting in 2004 and disbursed another US $13,380,112.

2. The World Bank is submitting the 2005 annual work programme to the 45th Meeting and requesting the release of another US $8,099,046 to implement it. The submission includes an update on the implementation of the 2004 annual work programme and the specifics of the 2005 annual programme, which is attached. A summary of the sector plan and the 2005 annual work programme is presented in the following table.

| | |
|---|---|
| Country | India |
| Project title: | Phase-out in consumption and production of CTC in India |
| Year of plan | 2005 |
| # of years completed | 2 |
| # of years remaining under the plan | 5 |
| Consumption in 2004 (the Baseline) | 11,505 ODP tonnes |
| Consumption in 2005 | 1,726 ODP tonnes |
| Production in 2004 (the Baseline) | 11,553 ODP tonnes |
| Production in 2005 | 1,726 ODP tonnes |
| Total funding approved in principle for the CTC phase-out plan | US $52,000,000 |
| Total funding released as of Dec. 2004 | US $21,900,955 |
| Level of funding requested for 2005 Annual Plan | US $8,099,046 |

3. There were 3 CTC producers in the country. CTC was used in India both as a process agent and a solvent. For process agents, CTC was used in such sectors as chlorinated rubber,

chlorinated paraffin, pharmaceutical, and agro-industries. As a solvent CTC was used in the textile and garment industries, metal-cleaning industry and as a chemical solvent.

4. A number of implementing agencies were involved in the Indian programme and were assigned to different sectors of the programme. The World Bank was the lead agency and was responsible for the CTC production phase-out and the phase-out in the consumption of CTC in the process agent and chemical solvent sectors. Japan contracted UNDP to assist it in phasing out CTC consumption in 4 enterprises in metal cleaning. France and Germany would assist the small users to stop using CTC in the textile and garment industries.

The 2004 Work Programme

5. In 2004, the Government of India implemented a number of policy related activities in connection with the CTC sector plan. It started to register the CTC producers, importers and exporters and completed the registration in December. It was considering to restrict CTC imports for non-controlled uses although it would continue to allow CTC imports for feedstock use. The Government of India decided to impose quotas on CTC produced and sold for non-feedstock uses and would start implementing the policy in the 1st quarter of 2005. It would also prohibit the use of CTC in the production of chlorinated rubber and chlorinated paraffin in 2005.

6. There were no targets set for 2004 in the agreement. The report on the 2004 work programme provided the specific preparatory work that had been done to start the phase-out programme moving in each agency.

7. The World Bank signed the grant agreement with the financial intermediary and the project agreement with the Government of India, establishing the legal basis for undertaking the project in the country. Meetings were held with the 3 CTC producers on the distribution of quotas and grant among them. The NOU informed the producers of the need to stockpile CTC to meet the demand in 2005 and 2006, and of the Government's plan to verify their inventory at the end of the year.

8. Japan and UNDP had two missions to visit the 4 plants to assist them in eliminating CTC in metal cleaning. Administrative and technical matters were discussed with the plant management and specifications for new metal cleaning degreasers were agreed upon and international bidding was carried out for procurement of the equipment.

9. GTZ was the implementing agency for France and Germany to assist the small industries in the textile and garment industry sector. To reach the users, GTZ conducted awareness activities and distributed pamphlets in English and local language in 18 major locations of the textile and garment industries. GTZ also entered into collaboration with the Textile Committee of the Ministry of Textiles to assist it in implementing the programme.

10. At the same time, the project management unit (PMU) was being established and a management information system was being implemented. The management information system (MIS) was intended to include all the relevant data about the CTC producers and consumers and

would enable the monitoring of the implementation of the sector plan on a continuous basis. To collect data on the end-users of CTC, the Government conducted a CTC user registration drive.

11. The report on the work programme contained a tabular presentation of the technical assistance activities in 2004, which included data on the name of the activity, the objective, the target group, the impact and status of implementation. The report on expenditure in 2004 showed a total obligation of US $2 million against a total approval from the Fund of US $21 million.

The 2005 work programme

12. In accordance with the control schedule of the Montreal Protocol and the targets set in the sector phase-out agreement, India should reduce its CTC production from its baseline of 11,553 ODP tonnes to 1,726 ODP tonnes, and consumption from the baseline of 11,505 ODP tonnes to 1,726 ODP tonnes in 2005.

13. The Government planned to use a number of actions to facilitate the implementation of the 2005 annual work programme. It would use the production quota for non-feedstock uses to control CTC production. It would also use a combination of the registration of CTC users, administrative orders to restrict the use, resale and transfer of CTC, and registration of CTC imports for non-feedstock uses to control the consumption.

14. With regard to the industry action to reduce CTC consumption, the focus would be on the phase-out of CTC in the 4 large-scale users for metal cleaning to achieve the reduction needed, while continuing the outreach programme by GTZ to the smaller users. However the phase-out from the small-users would not be realized until later years. The reductions in the consumption of CTC in 2005 from the actual consumption in 2001 are shown in the following table.

| **Sector** | **Consumption in 2001 (1)** | **Consumption in 2005 (2)** | **Reduction (1)-(2)** | **Number of projects completed** |
|---|---|---|---|---|
| Process agents | 1,916 | 860 | 1,056 | |
| Solvent | 4,745 | 866 | 3,879 | 4 |
| Total | 6,661 | 1,726 | 4,935 | 4 |

15. It was expected that the PMU would be fully in operation in 2005 and would use a consulting firm to process requests from those CTC users that had come forward for funding to eliminate their use of CTC. In the meantime GTZ would continue its campaign to reach out to the small users and had planned a number of activities, including holding project preparation workshops, searching for and testing new replacement alternatives, conducting training in using new alternatives and other activities.

16. To strengthen the coordination of the multiple agencies, the PMU would convene interagency meetings and would conduct a trial exercise of the verification of CTC production and consumption using the verification framework the World Bank had developed with the Government. The first official verification would be undertaken by the World Bank in early 2006.

17. For the 2005 work programme, the World Bank is requesting a total of US $8,099,045 and US $714,928 as support cost. The distribution between the World Bank and the bilateral agencies would be US $3,899,046 plus US $292,427 as support cost for the World Bank; US $1,000,000 plus US $85,000 as support cost for France; US $700,000 plus US $57,500 as support cost for Germany; and US $2,500,000 plus US $280,000 as support cost for Japan. The 2005 budget would be allocated among industrial phase-out activities in metal cleaning, textile industries and CTC production, and support for the project management unit.

**Comments of the Secretariat**

18. The Government of India, the World Bank and the other co-operating agencies implemented a number of activities in 2004 to move ahead with the CTC sector phase-out programme. From the progress report it appears that all the preparatory work had been done and the legal framework established. It is hoped that all this preparatory work would enable the agencies to start full implementation in 2005, because the 2005 annual work programme is crucial to the ability of the Government of India to reduce the production and consumption of CTC by 85 per cent in accordance with the control schedule of the Montreal Protocol for CTC production and consumption, and to achieve the targets in the Agreement. The challenge will be significant because India should reduce its CTC consumption from the baseline of 11,505 ODP tonnes to 1,726 ODP tonnes, and production from the baseline of 11,553 ODP tonnes to 1,726 ODP tonnes.

19. The facilitating policies being proposed by the Government and the planned monitoring system of the sector plan have been noted. The first results of the programme are expected in early 2006 when the World Bank is to submit the first verification report on the implementation of the 2005 work programme, using the verification framework the Bank had developed.

**Recommendations**

20. The Executive Committee may wish to approve the 2005 annual work programme for the Indian CTC sector plan at a total level of US $8,099,045 and US $714,928 as support cost. The distribution between the World Bank and the bilateral agencies is US $3,899,046 plus US $292,428 as support cost for the World Bank, US $1,000,000 plus US $85,000 as support cost for France, US $700,000 plus US $57,500 as support cost for Germany, and US $2,500,000 plus US $280,000 as support cost for Japan.

## CFC PRODUCTION SECTOR GRADUAL PHASE-OUT: 2005 ANNUAL IMPLEMENTATION PROGRAMME

### Background

21. The World Bank has submitted for approval by the 45th Meeting the 2005 annual programme for the implementation of the India CFC production sector gradual phase-out programme, together with the verification report on the implementation of the 2004 annual work programme (both documents are attached). The submission is in fulfilment of the Agreement between the Government of India and the Executive Committee, which was approved at the 29th Meeting.

| | |
|---|---|
| Country | India |
| Project title: | CFC Production Sector Gradual Phase-out |
| Year of plan | 2005 |
| # of years completed | 6 |
| # of years remaining under the plan | 6 |
| Ceiling for 2004 ODS production (in metric tonnes), 2004 Annual Plan | 13,176 mt |
| Ceiling for 2005 ODS production (in metric tonnes), 2005 Annual Plan | 11,294 mt |
| Total funding approved in principle for the CFC phase-out plan | $82 million |
| Total funding released as of Dec. 2004 | $52 million |
| Level of funding requested for 2005 Annual Plan | $5.85 million |

### The 2005 Work Programme

22. The 2005 annual work programme starts with a review of the implementation of the 2004 work programme. The review reports on achieving the 2004 CFC reduction target: the allowable CFC production in the country for 2004 was set at 13,176 mt in the Agreement (a reduction of 1,883 mt from the production level of 15,058 mt in 2003), the reported gross production was 13,155 mt and the net saleable production for the year was 13,069 mt, which were both below the target. Of the US $6 million disbursed from the Fund to the 2004 work programme, US $5.265 million had been paid to the 4 enterprises in tranches according to progress in achieving the reduction target set for each of them and the remaining balance of US $0.585 million would be disbursed after final verification of the 2004 production. US $0.27 million which presumably included US $0.15 million from the 2004 work programme, plus the balance from the previous work programmes, was reported to have been allocated to UNEP for technical assistance. The were a number of activities implemented under the technical assistance and the operation of the management information system (MIS) programmes, notably the co-operative efforts at a regional level between India and the neighbouring countries to control illegal trafficking of CFCs. Discussions were held between these countries on conducting

joint training of customs at the border, and India was provided the lists of authorized importers from the neighbouring countries to checking on unauthorized imports into these countries.

23. The second part of the submission describes the target and activities of the 2005 work programme. The CFC production limit set in the Agreement for 2005 is 11,294 mt, which requires a further production reduction of 1,882 mt from the level of 13,176 mt in 2004. The target is to be achieved through continuing with the CFC production quota system. A total of 11,293.97 mt has been distributed to the 4 CFC producers as quotas and the Government is aware that by decision 43/5 of the Executive Committee, CFC production in 2005 will be verified on the basis of gross production, rather than net saleable production.

24. There will also be continued efforts to monitor import and export of CFCs through licences, to assist industry and government to control illegal trade, and co-operate in the regional programme to control cross-border trafficking of CFCs. In addition, the work programme lists the technical assistance activities to be carried out in 2005, which include training, operating a management information system, and public awareness activities. Of the US $6 million allocation for 2005, the World Bank is requesting the release of US $5.85 million for compensating the 4 enterprises for further reducing their CFC production. The balance US $0.15 million which is to be allocated for technical assistance is to be requested in 2006 since there is still a sizeable build-up reserve for the technical assistance activities to be funded in 2005. The World Bank is requesting US $438,750 as the associated support cost at 7.5 per cent of the 2005 work programme.

**The 2004 Production Verification Report**

25. The verification was done in January 2005 by Det Norske Veritas AS (DNV) India which is a risk management consulting firm whose main area of expertise is auditing and verification in the field of climate change and is reportedly the first accredited body for verification and validation services as per the Kyoto Protocol requirements. The verification report starts with an Executive Summary on the overall results of the verification, with information on the 2004 quota, opening CFC stock, gross production, losses, net saleable production, acquired stock, sales, closing stock and percentage of quota produced by each of the 4 producers, and the national totals. The gross CFC production in India for 2004 is verified at 13,155 mt and net saleable production at 13,069 mt, with 86 mt reported as losses. Therefore, the verification concludes that India complied with the 2004 CFC production target at 13,174 mt set in the Agreement.

26. The report contains a brief background of the CFC production closure Agreement between India and the Executive Committee, the production technologies used by the 4 producers, and the capability to swing to HCFC-22 production by all of the 4 producers. It also covers the methodology of the verification which includes site visits, and a random check of at least 5 days of pertinent records for consistency in reported results. The production logbooks and laboratory and analytical records were correlated for the sample days to assess whether the records are appropriately maintained for the products produced. Samples from existing stocks were taken for gas chromatograph analysis. The verification team also held discussion with the plant personnel.

27. The report then provides the observations and results of the visit to each plant. For each plant, it includes an overview on the history and technology of the plant; audit methodology; production details for 2003 and 2004 data on production quota allocated; operating dates for CFC and in some cases HCFC-22 production, production of CFC-11 and CFC-12 and percentage of quota fulfilled; raw material consumption and the input/output ratio between the consumption of feedstock and CFC production; reported losses; and conclusions on the status of compliance with the allocated quota.

28. Finally, the report provides the results of the verification using the format for verification of ODS production phase out, which includes data broken down by month on the number of operating days, raw material consumption and CFC production tonnage.

## SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

### COMMENTS

#### The 2005 Annual Programme

29. The submission provides a clear CFC production target which is consistent with the target set in the Agreement, and policy instruments to assist its achievement. There are continuing efforts to monitor the import and export of CFCs through licences. It is worth noting that for the 2005 work programme covers the co-operative effort between India as a CFC-producing country with the neighbouring countries to control the unauthorized trafficking of CFCs in the region.

30. The 2005 annual work programme is very important since its results will provide the basis to assess the compliance of India with the 50% reduction of CFC production in 2005 as per the Montreal Protocol control schedule. We have noticed that the Government of India will manage and also verify the CFC production in 2005 on the basis of gross production, as per the Executive Committee decision 43/5.

#### The 2004 Production Verification Report

31. The 2004 production verification from the World Bank shows noticeable improvement in the level of details provided and thus a higher level of transparency. This is especially evident in the data provided in 3 of 4 the enterprises, namely Gujarat, Navin, and Chemplast. For instance, for the number of operating days in each month the verification provided not only the number of days the plant concerned produced CFCs or HCFCs but also the duration from the start-off date to the ending date of production in each month.

32. The Secretariat, in accordance with the usual practice of furnishing information to the Executive Committee on the ODS production verification, has not included the data part of the verification report. The data could, however, be made available to any member of the Committee upon request.

**RECOMMENDATIONS**

33. The Secretariat recommends that, in light of the satisfactory verification, India has met the CFC production target for 2004 as set in the Agreement. The Executive Committee may therefore wish to approve the 2005 annual programme of the Indian CFC production closure programme at the requested funding level of US $5.85 million and the associated support cost of US $438,750 for the World Bank, and leave US $0.15 million from the 2005 tranche, and the associated support cost, to be disbursed in 2006.

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# INDIA - PHASE-OUT IN CONSUMPTION AND PRODUCTION OF CTC

DRAFT

# **2005 ANNUAL IMPLEMENTATION PLAN**

OZONE CELL
MINISTRY OF ENVIRONMENT AND FORESTS
STATE GOVERNMENT OF INDIA

AND

THE WORLD BANK

27 January 2005

**India CTC Phase-out in Consumption and Production**
**2005 Annual Implementation Plan**
**Submitted to the 45th Executive Committee Meeting**

## DATA SHEET

| | |
|---|---|
| **COUNTRY**: | **INDIA** |
| **PROJECT TITLE**: | Phase-out in Consumption and Production of CTC |
| **YEAR OF PLAN**: | 2005 |
| **NO. OF YEARS COMPLETED**: | 1 (2004) |
| **NO. OF YEARS REMAINIG UNDER THE PLAN**: | 5 (2005 – 2009) |
| **TARGET CTC CONSUMPTION IN 2004**: | N.A. |
| **TARGET CTC PRODUCTION IN 2004**: | N.A. |
| **TARGET CTC CONSUMPTION IN 2005**: | 1,726 ODP tons |
| **TARGET CTC PRODUCTION IN 2005**: | 1,726 ODP tons |
| **TOTAL FUNDING APPROVED IN PRINCIPLE FOR THE CTC PHASEOUT PLAN** | US$ 52,000,000 |
| **TOTAL FUNDING RELEASED AS OF DEC.2004** | US$ 21,900,955 |
| **LEVEL OF FUNDING REQUESTED FOR 2005 ANNUAL PLAN;** | US$ 8,813,973 (US$ 4,191,473 for World Bank; US$ 1,085,000 for France; US$ 757,500 for Germany; and US$ 2,780,000 for Japan) |
| **NATIONAL IMPLEMENTING AGENCY**: | Ozone Cell Ministry of Environment and Forests |
| **LEAD IMPLEMENTING AGENCY**: | The World Bank |
| **CO-IMPLEMENTING AGENCIES**: | France, Germany and Japan |

### PROJECT SUMMARY

The CTC Sector Plan will completely phase out CTC consumption and production as defined by the Montreal Protocol, starting from the baseline levels of 11,505 and 11,553 ODP tons respectively, during the period 2004 – 2010. To achieve these targets, a series of investment, non-investment, technical assistance, and capacity building activities will be implemented by the World Bank and bilateral donors: France, Germany, and Japan.

**IMPACT OF PROJECT ON COUNTRY'S MONTREAL PROTOCOL OBLIGATIONS** The project will enable the Government of India to meet its Montreal Protocol obligations.

# Part I

# 2004 Annual Program Accomplishments

## A. Targets Met

There were no targets or limits for CTC consumption and production for 2003 and 2004. .

## B. Industry Action

The CTC Phase-out Plan consists of investment and non-investment activities in both the consumption and production sectors. Activities in the consumption sector entail CTC phase-out in the process agents sector, and the solvent sector. The process agents sector consists of chlorinated rubber, chlorinated paraffin, pharmaceutical, and agro-industry sub-sectors. The solvent sector covers the textile and garment industry, metal cleaning industry, and chemical solvents sub-sectors.

In addition to the CTC phase-out in the production sector, activities under the process agents sector and chemical solvents will be implemented through the World Bank. Japan, through UNDP, is assigned to assist India to phase out CTC consumption at four enterprises in the metal cleaning sub-sector. France and Germany are assigned to assist India phasing out CTC consumption at small enterprises in the textile and metal cleaning sub-sectors.

The Project Agreement between India and the Bank and the Grant Agreement with the financial intermediary, Industrial Development Bank of India Limited (IDBI) were signed in New Delhi on December 10, 2004. The project launch mission was carried out from September 27 – October 1, 2004. For other co-implementing agencies, implementation arrangements are already in place as well.

A 'quick-start' project implementation strategy was adopted by the Ozone Cell during project preparation. The objective of this strategy is to enable actual project implementation to proceed immediately after the signing of the Grant Agreement. Based on this strategy, two consumption sector workshops were held in 2004. Enterprises were informed of the eligibility criteria, procedures, and other requirements for accessing grant resources provided by the Multilateral Fund. In addition, the enterprises were informed of activities being undertaken by other co-implementing agencies. Enterprises are allowed to participate in this project through different agencies.

Two separate missions were undertaken jointly by UNDP staff, solvent sector experts and a Japanese technical expert nominated by Japan's Ministry of Economic, Trade and Industry (METI) in April and October 2004 to visit plant sites of the four large CTC-consuming enterprises (Steel Authority of India Limited, Western Engineering, Nissan Copper, and Hindustan Metal and Tube) in the metal cleaning sub-sector. Ten plants owned by these four enterprises were visited by the missions. These included six of the nine plants (Bhilai Steel Plant, Bokaro Steel Limited, Durgapur Steel Plant, Indian Iron & Steel Company, Rourkela Steel Plant, and Salem Steel Plant) of the Steel Authority of India Limited (SAIL), two plants (New Delhi and Srinagar) of Western Engineering Co., one plant each of Nissan Copper Pvt. Ltd, and Hindustan Metal and Tube. The remaining three plants (Alloy Steels Plant,

Maharashtra Elektrosmelt Limited, and Visvesvaraya Iron and Steel Limited) of SAIL had no longer consumed CTC as a solvent and were, therefore, not visited.

During the two missions, administrative, management and technical issues were discussed between mission members and the technical and managerial personnel of these plants on the implementation of replacement activities to eliminate the consumption of CTC in their cleaning applications with non-ODS solvents. Data on CTC consumption was verified, information on current production and cleaning applications was gathered and the requirements for cleanliness standards and equipment specifications were discussed. Draft equipment specifications were prepared, discussed and verified in October 2004. Based on comments and clarifications of the four enterprises, equipment specifications were revised for the bidding process.

International competitive bidding for 4 packages of different equipment, ancillary equipment, accessories and consumables required by the enterprises were sent out to short-listed bidders on 22 November 2004. Bid evaluation is currently underway for the vapor/spray degreasers and it is expected that the necessary internal procurement procedures will be completed by end of January 2005 to enable the issuance of purchase orders for the degreasers.

Due to the non-response to some bids for ancillary equipment, accessories and consumables, a re-bidding, with the addition of new potential bidders to be identified, will be re-issued in mid-January 2005 for the three packages.

As of the end of 2004, a total of $34,216 was disbursed for technical assistance provided to the project. Since procurement of the cleaning equipment, which accounts for the bulk of project expenditures, will take place in 2005.

GTZ was assigned to undertake activities on behalf of Germany and France for CTC phase-out in small-scale enterprises in the textile and garment, and metal cleaning sub-sectors,. In 2004, awareness activities were conducted to inform the concerned industries of the availability of funds provided by the Multilateral Fund to support the introduction of CTC alternative in these sectors. The focus of GTZ's efforts in 2004 was in the textile and garment sub-sector. As part of the awareness activities, an awareness pamphlet to inform the concerned industries of the CTC Phase-out Plan and relevant information on CTC was produced in Tamil and English languages. These pamphlets were distributed through the Textiles Committee in 18 major textile industry locations throughout India.

For the production sector, two meetings with the three active CTC producers were held in 2004. The three producers informed that they had informally reached an agreement regarding the production quota and the sharing of the grant funds from the Multilateral Fund. This agreement could be formalized as soon as the funding level to be allocated to the CTC production sector is determined by the Government of India.
The Ozone Cell informed the CTC producers of the need to stockpile some CTC in 2004 in order to meet the residual demand in 2005 and 2006 before conversion processes in the manufacturing sectors are completed. In addition, the Ozone Cell officially informed the CTC producers and CTC feedstock users of the Government's plan to undertake verification of end of year inventories.

**C. <u>Technical Assistance</u>**

**Project Management Unit (PMU)**

Terms of reference for the PMU and its organization and management framework have been finalized. However, due to the delay in the signing of the Grant Agreement and the replacement of the Director of the Ozone Cell, establishment and appointment of PMU staff was not completed in 2004 as planned.

To facilitate implementation of the quick-start strategy and other preparation work, the Director of the Ozone Cell with the assistance of the PMU Coordinator of the CFC Production Phase-out Project, undertook the role of the CTC PMU Coordinator on an interim basis. A number of workshops and policy related activities were carried out in 2004. The draft project implementation manual describing detailed operation procedures for the CTC Phase-out Plan was prepared. The procedures related to activities in the consumption sector have been completed. The procedures related to the production sector will be completed in 2005 when the verification system is finalized.

The appointment of a consulting firm to assist the PMU to verify CTC consumption of beneficiaries in the consumption sector was completed in 2004. This consulting firm will undertake technical verification of sub-project proposals submitted by participating enterprises in early 2005.

In addition, a new project manager responsible for the implementation of the German bilateral ozone protection activities in India was appointed. He will take up his responsibility in January 2005. A PMU Coordinator for the GTZ-Proklima implemented project components was also selected in 2004. The PMU Coordinator will take up his assignment in January 2005. The PMU Coordinator will report directly to the GTZ Project Manager.

**Development and Implementation of a Public Outreach Program**

A CTC Users Registration Drive was conducted in 2004. The period of registration of ODS users as required by the Ozone Rules (2000) was reopened in 2004. This registration drive ended on 31 December 2004. The objectives of this public outreach activity were to identify CTC users in India, to inform CTC users of the phase-out requirements as per the Montreal Protocol and as per the phase-out targets stipulated in the agreement of this project, to inform CTC users and producers of the availability of grant funds from the Multilateral Fund to support CTC phase-out activities.

As part of this campaign, a series of announcements were made in the local newspapers throughout India from October until 20 December 2004. The local government offices were responsible for issuing registration certificates to CTC users during this period. While the Ozone Rules require all CTC users to register their consumption with the Government, this registration drive, however, aimed at larger users.

For smaller CTC users, the outreach program was done through awareness pamphlets prepared by GTZ. The awareness pamphlets were prepared in Tamil and English languages and were distributed through the Textiles Committee in 18 major textile industry locations throughout India as mentioned previously.

An in-depth industry survey was also conducted in 2004. This survey focused on the textile industry in the Southern India. Activities covered under this survey included:

1. Exploration of textile and garment industry in selected sectors and understanding of industry needs as regards CTC usage.
2. Dissemination of information on awareness of the problems resulting from the use of CTC.
3. Dissemination of information on implications of CTC-related regulations
4. Industry survey to gather information on CTC usage in the garment industry
5. Identification of suitable alternatives to CTC already used by industry or available on the market
6. Laboratory testing of potential alternatives to CTC as stain removers
7. Conducting industry seminars to assist the industry in managing the change-over
8. Capacity building through training and process improvements on de-staining processes using CTC alternatives
9. Development of more cost effective de-staining stations
10. Promoting good industrial practices.

To accomplish these tasks at the level of the small and medium industries (SMIs), GTZ has entered into collaboration with the Textiles Committee of the Ministry of Textiles – an autonomous body working closely with the textile industry for both quality compliance certification and up-gradation. This collaboration has enabled the project to establish technical and logistic support to achieve the tasks listed as 1, 2 and 4.

In close collaboration with the Textiles Committee tasks 5, 6 and 7 are in progress. The first series of testing of about 30 alternatives has been completed. The first seminar to announce the results and gather additional information took place on 28 December 2004. At least two more seminars will be held in that segment. The experience shall then be adapted and replicated for other sub-sectors of textile industry across the country. Preliminary information gathered through the cluster development agents of Textiles Committee shall be use to define further steps.

Objectives 8, 9 and 10 are in the planning phase. The experience gathered till the end of 2004 will pave the way for its formalization.

**Development of a Management Information System**

Given the importance of monitoring and verification in the context of the performance-based nature of the project, the development and deployment of a management information system (MIS) based on both periodic and event-triggered data input from project beneficiaries, as well as from the Ozone Cell/PMU, IDBI, the Bank and other relevant parties, is critical to the successful implementation of the project. The MIS would support regular implementation progress reporting and ad-hoc analysis, as and when required. A more detailed Technical Note on data management aspects of the project was developed in 2004.

Discussions with CTC consumers, producers and Ozone Cell/PMU held in 2004, covered a wide range of issues pertaining to project implementation, including issues specific to the design and implementation of the MIS. Project participants that met in Mumbai at a meeting

arranged by the Indian Chemical Manufacturers Association (ICMA) expressed a strong desire for a web-enabled MIS, both to facilitate data entry and forms submission, and to facilitate timely feedback from the center, on the status of their subproject, specifically with respect to approvals, allocations, and the status of disbursement requests. Accordingly, it is proposed to design the MIS and its supporting database for web-based data entry and reporting, supplemented as necessary with paper forms.

The initial analysis suggests that the database can be implemented using a conventional relational database management system (RDBMS). Such an approach requires a more specialist skill set for design and implementation, but has the advantage of easier maintenance, and is by design better oriented toward the making of ad-hoc relational queries, and to sorting the data in interesting ways. RDBMS solutions are also well oriented to web-based implementation and access. Therefore, as the fundamental system design decision, it is proposed to use an RDBMS.

Regarding the hardware/software platform, initial analysis suggests that, for a small database such as is contemplated, MySQL, a free open source RDBMS, appears to be the one of choice. For web-based access, there is a range of choices for the middle-ware software scripting languages for generating the web forms and web reports, but the emerging software of choice for this purpose appears to be PHP, a general-purpose scripting language suitable for web development that allows for server-side access to a database such as MySQL. To use the current term of art, the solution proposed is LAMP, for Linux operating system, Apache web server, MySQL database, and PHP web scripting middle-ware.

The draft version of this database system will be ready in the first quarter of 2004. The final version of this database system will be launched by the Ozone Cell/PMU by April 30, 2005.A dry run verification of CTC consumption and production for 2004 will be carried out by third quarter of 2005.

In parallel, GTZ also developed an MIS system focusing on the small scale users of CTC. The effort is being made to ensure that the MIS being developed by the Ozone Cell/PMU, with the assistance from the Bank, would be able to link to the system developed by GTZ.

Status of technical assistance activities initiated and carried out by GTZ in 2004 is summarized below.

## Summary of Technical Assistance Activities Carried Out in CY04

| No. | Accomplished Activity | Objective | Target Group | Impact | Status |
|---|---|---|---|---|---|
| 1 | Preliminary survey in Tirupur / Coimbatore | | | | |
| 2 | Identification of industry / association partner | Direct access and action at grass root level and support testing of alternatives Awareness creation Facilitate information exchange with concerned industry | Garment and Textile industries and finishing houses across the country if possible All textiles industry in the south and across the country All textile industries | Direct access to the industries Preliminary sensitization to problems with CTC Accessibility to information | The Textiles Committee was identified as the most suitable partner having the needed technical expertise and enjoying the trust and confidence of the textile industry as a reliable partner. |
| 3 | **Information dissemination** | | | | 5000 handouts in Tamil and 5000 handouts in English disseminated through the offices of Textiles Committee in Tamil Nadu and across the country, respectively. |
| 4 | **Setting up of information centre through communication link and website** | | | | Telephone, e-mail and website address disseminated through the awareness handout. |
| 5 | Setting up of web-site | For information dissemination on current status and the progress | All interested parties | Easy access to information | The web site was established and is being updated periodically |

| | | | | | |
|---|---|---|---|---|---|
| 6 | Survey on use of alternatives | | | | |
| 7 | Testing of alternatives | Identifying most suitable alternatives Consolidate survey data | All industries surveyed | Identification of suitable CTC alternative for industry Awareness of availability of CTC alternatives | 29 alternatives have been tested in collaboration with the Textiles Committee. Two types of tests have been carried out :<br>1. Assessment of chemical contents to ensure that the solvent is free of any ODS,<br>2. Assessment of stain removing efficacy and determination of cost effectiveness.<br>The concluding results were presented to the industry during the first consultative seminar and published on the web-site. |
| 8 | **Development of MIS** | | | | MIS was set up and an initial survey of more than 50 industries is being consolidated. Additional data collection expected during the forthcoming seminars will also be included.<br>MIS was also designed to consolidate results of the CTC alternatives efficacy testing. |
| 9 | Gathering preliminary information on textile segments across the country | | | | |
| 10 | Consultative workshop | Share information about test results and gather further data on usage of CTC or alternatives. | All textiles industries | Awareness of availability of CTC alternatives | First workshop was held on 28 December 2004. Presentation of test results for CTC alternatives along with demonstration of the use of selected alternatives by the industry were part of the agenda. Additional data were collected from the participants.<br><br>At least two additional workshops are planned for the beginning of 2005. |

| | | | | | |
|---|---|---|---|---|---|
| 11 | Preparation of seminar package | | | | |
| 12 | Preparation of training package to conduct de-staining without CTC through good industrial practices | Disseminate know-how on the use of CTC alternatives Increase cost effectiveness of de-staining process **Objective** | All concerned industries All concerned industries **Target Group** | Phase out of CTC through adoption of suitable alternatives Phase out of CTC through adoption of suitable technologies **Impact** | Currently at planning stage: Determination of suitable routes to disseminate information and know-how to concerned industries, e.g. through training programs, various media, etc. |
| 13 | **Further development and adaptation of currently used de-staining equipment** | | | | Currently at planning stage: simple equipments have been identified and will be further developed that enable industries to conduct their de-staining activities in a more rational and economical way. |
| **No.** | Accomplished Activity | | | | **Status** |
| 3 | **Information dissemination** | | | | 5000 handouts in Tamil and 5000 handouts in English disseminated through the offices of Textiles Committee in Tamil Nadu and across the country, respectively. |
| 4 | Setting up of information centre through communication link and website | | | | |
| 5 | Setting up of web-site | For information dissemination on current status and the progress | All interested parties | Easy access to information | The web site was established and is being updated periodically |

**D. Summary of Government Actions Taken in 2004**

Agreements between the Government of India and Bilateral Agencies – Arrangements between the Government of India and bilateral agencies were finalized in 2004. The final draft tripartite agreement for the Government of India, AFD and GTZ is awaiting for the signature of the Government of India. Implementation by bilateral agencies (in case of Japan implementation is carried out by UNDP) started in 2004.

Grant Agreement between the Government of India and the World Bank – The Project Agreement for the CTC Phase-out Plan was signed on December 10, 2004. The grant agreement was signed between Industrial Development Bank of India (IDBI) and the World Bank on the same day. In addition, an associated project agreement between Ministry of Environment and Forests and the Bank was also signed on the same date.

Verification Framework – The framework prepared by India and the World Bank was submitted for the consideration of the Executive Committee in 2004. The Executive Committee took note of the verification framework as submitted by India and the World Bank and requested that the final verification framework be submitted to the Executive Committee when it is completed.

Registration of CTC Producers, Importers, and Exporters – Registration of ODS users was reopened until December 31, 2004. Only registered users and producers of CTC will be eligible for assistance under the project and for issuance of production and/or consumption quotas. This registration drive aimed at large and medium scale enterprises consuming or producing CTC. The registration drive completed in 2004. The Ozone Cell/PMU is in the process of compiling registration information coming from local government authorities.

Import Quota System for CTC – In 2004, the current import control system for CTC was reviewed. While import of CTC for feedstock applications will continue, any imports for applications controlled by the Montreal Protocol will be prohibited. As an import control system has direct linkage to the monitoring and verification system, the measures for restricting imports of CTC for non-feedstock applications would have to fit in with the monitoring and verification system, which is under development. This activity will be completed in 2005.

CTC Production Quota System – The Ozone Cell/PMU worked with CTC producers and the Association of Chloromethane Manufacturers (ACM) in 2004 to develop a production quota system for CTC production for non-feedstock applications. The production quotas for 2005 will be given to CTC producers during the first quarter of 2005. In 2004, the Ozone Cell/PMU also worked closely with CTC producers in order to build up a stockpile of CTC for non-feedstock applications in 2005 and 2006. The Ozone Cell/PMU informed CTC producers and enterprises consuming CTC in feedstock applications of the Government's plan to verify end of year inventories of CTC. Instructions were provided to relevant parties to prepare for the proposed verification.

Key activities for the Government actions in 2004 are summarized in table below.

| NO. | POLICY/ACTIVITY PLANNED | SCHEDULE OF IMPLEMENTATION | STATUS |
|---|---|---|---|
| 1. | Agreements between the Government of India and bilateral agencies | August 2003 – March 2004 | Pending signature from the Government of India. |
| 2. | Grant Agreement between India and the World Bank | August 2003 – March 2004 | Completed in December 2004 |
| 3. | Registration of CTC producers, Importers, and Exporters | January – December 2004 | Registration closed on 31 December 2004. Compilation of registration information is underway. |
| 4. | Promotion of non-ODS alternatives | January – December 2004 | Over 30 alternatives are currently in use, many of detergent types were identified. Testing was done on 29 alternatives. Results were presented at the industry workshop on 28 December 2004. At least two additional workshops are planned for 2005. |
| 5. | Import Quota System for CTC | January – December 2004 | Investigations were initiated in 2004. While imports of CTC will continue for feedstock applications, a system to restrict imports of CTC for non-feedstock applications is being considered. The system is being designed in close coordination with development of monitoring and verification system. This activity will be completed in 2005. |
| 6. | CTC Production Quota System | June – December 2004 | It was decided that the quota will be imposed on CTC produced and sold for non-feedstock applications. Production quota as described will be allocated to CTC producers in first quarter of 2005. |
| 7. | Announcement of the CTC Consumption Phase-out Requirement in the Chlorinated Rubber and Chlorinated Paraffin Sub-Sectors | January-June 2004 | Prohibition of the use of CTC in these applications will be administered to CTC user registration certificates. No renewal of registration certificates will be approved after 2006. |

**E. 2004 Budget and Financial Performance**

| | Description | Funding Approved by ExCom ($US) | | | Funding Disbursed ($US) | | | Obligated Expenditure in CY 2004($US) |
|---|---|---|---|---|---|---|---|---|
| | | Cumulative Funding Approved as of December 2003 | Funding Approved in CY 2004 | Total Funding Approved as of December 2004 | Cumulative Actual Expenditure Disbursed as of December 2003 | Actual Expenditure Disbursed in CY 2004 | Total Actual Expenditure Disbursed as of December 2004 | |
| 1 | CTC Phase-out in the Chlorinated Rubber Industry | 4,330,000 | | 4,330,000 | 0 | 0 | 0 | 0 |
| 2 | CTC Phase-out in the Chlorinated Paraffin Industry | 1,140,843 | | 1,140,843 | 0 | 0 | 0 | 0 |
| 3 | CTC Phase-out in the Process Agents Applications in the Pharmaceutical Sub-sector | 2,000,000 | 2,763,002 | 4,763002 | 0 | 0 | 0 | 0 |
| 4 | CTC Phase-out in the Agro-Chemical Industry | | 393,082 | 393,082 | 0 | 0 | 0 | 0 |
| 5 | CTC Phase-out in the Chemical Solvent | 1,000,000 | 2,158,215 | 3,158,215 | 0 | 0 | 0 | 0 |
| 6 | CTC Phase-out in the metal cleaning | | 4,778,000 | 4,778,000 | 0 | 34,216 | 34,216 | 0 |
| 7 | CTC Phase-out in the Textile Industry | | 609,063 | 609,063 | 0 | 92,000 | 92,000 | 34,000 |
| 8 | CTC Phase-out in the Production Sector | | 2,000,000 | 2,000,000 | 0 | 0 | 0 | 2,000,000 |
| 9 | PMU | 50,000 | 678,750 | 728,750 | 0 | 0 | 0 | 0 |
| | **TOTAL** | **8,520,843** | **13,380,112** | **21,900,955** | **0** | **126,216** | **126,216** | **2,034,000** |

Remark: Funding allocation for each category is subject to change when the final agreement on the sharing of the grant funds between the consumption and production sectors is reached by the Government of India and the industry.

# Part II

# 2005 Annual Program

## F. Target consumption in 2005

| Indicators | | Preceding Year (2004) | Year of Plan (2005)[1] | Reduction[2] |
|---|---|---|---|---|
| Supply of CTC | Import | N.A. | - | |
| | Production | N.A. | 1,726 | 9,827 |
| | **Total** | N.A. | 1,726 | 9,827 |
| Demand of CTC | Process Agents | N.A. | 860 | |
| | Solvent | N.A. | 866 | |
| | **Total** | N.A. | 1,726 | 9,779 |

(1) Targets for both production and consumption are in ODP tons. The targets for production and consumption are based on the definitions of production and consumption as defined by the Montreal Protocol (excluding production for feedstock and excluding consumption of CTC produced in the previous years).
(2) Reduction for both consumption and production is the difference between the baseline levels and the targets for 2005. These figures are in ODP tons.

## G. Industry Action

The Ozone Cell/PMU will continue its outreach program to create awareness of the available financial assistance for eligible enterprises, and more importantly, the Government's policy to restrict the production and supply of CTC for non-feedstock applications. PMU will increase its effort to ensure that remaining enterprises, if any, will come forward in 2005 to participate in the CTC Phase-out Plan in the consumption sector in particular.

Technical audit of the sub-project proposals already submitted to the Ozone Cell/PMU in 2004 will be undertaken by the independent consulting firm that has already been appointed by the Ozone Cell/PMU.

Conversions of metal cleaning processes at four major CTC users (SAIL, Western Engineering, Nissan Copper, and Hindustan Metal and Tube) will be completed in 2005. This will result in a permanent phase-out of 533 ODP tons.

GTZ, on behalf of Germany and France, will intensify its outreach program among small scale users of CTC in the textile and metal cleaning industry, to create awareness of available CTC alternatives that have already been tested successfully in 2004. More importantly, GTZ will provide direct assistance to the industry to replace the use of CTC to non-CTC alternatives.

| Sector | Consumption in 2001 (1) | Consumption Year of Plan (2) | Reduction within Year of Plan (1)-(2) | Number of Projects Completed | Number of Servicing Related Activities | ODS Phase-out (ODP tons) |
|---|---|---|---|---|---|---|
| Process Agents | 1,916 | 860 | 1,056 | | | 1,056[4] |
| Solvent | 4,745 | 866 | 3,879 | 4[3] | | 3,879 |
| **Total** | 6,661 | 1,726 | 4,935 | 4[3] | | 4,935 |

(1) Consumption in 2001 as reported in the project document.
(2) Targeted consumption in 2005 is defined in accordance with the definition of consumption as defined by the Montreal Protocol (excluding the use of CTC in the inventories at the end of 2004).
(3) The number of projects completed in 2005 does not include phase-out in small CTC users.
(4) Actual reduction of CTC consumption in the process agent sub-sector is expected from partial phase-out from a number of enterprises that have already started or will start in 2005 their conversion processes, and by using CTC from the existing inventories at the end of 2004.

## H. Technical Assistance

### Project Management Unit (PMU)

A Project Management Unit will be fully staffed in the first quarter of 2005. The PMU will oversee the technical verification to be carried out by the independent consulting firm that has been appointed at the end of 2004. Technical verification will be conducted at those enterprises that have already expressed interest in 2004. The objective of this verification is to verify eligibility of the enterprises, the level of CTC consumption, and viability of the proposed alternate technologies. In addition, the consulting team will evaluate the proposals of the enterprises to determine whether necessary measures to preempt adverse impact on environment and workers' safety are incorporated in the design of the conversion process.

A series of small project preparation workshops will be organized in 2005 to inform the industry of the CTC phase-out plan of the Government, and to assist interested parties to prepare and submit their proposal for funding consideration of MoEF. The focus will be on enterprises in the process agent and chemical solvent sectors. For small scale users of CTC in the textile and metal cleaning sectors, GTZ have already held similar workshops to assist this target group in 2004. An information brochure highlighting availability of funds for phase-out of CTC including key steps to access funds from this project will be prepared and distributed to potential beneficiaries in 2005.

PMU will assist the Ozone Cell to strengthen the licensing system to cover CTC solvent and process agent users, feedstock users, and CTC producers. In this regard, PMU will work in close cooperation with the PMU of the CFC Production Phase-out Project and GTZ to identify CTC users and have them register their consumption with the Government.

### Technical Assistance for CTC Consuming Enterprises

In addition to PMU's assistance to prepare project proposals that meets minimum information requirements by the project as mentioned above, technical assistance to assist CTC

consuming enterprises to identify non-CTC alternative technology will be rendered by national experts to be contracted by PMU whenever needs arise.

For small scale CTC users in the textile and metal cleaning industry, technical assistance will be provided to enterprises by GTZ. The first consultative workshop was organized on 28 December 2004 in Tirupur. The workshop was attended by representatives from the Government of India and concerned industries. The workshop included demonstrations of CTC alternatives currently used by some industries as well as good industrial practices for de-staining technology. Two more consultative workshops will be organized in 2005 to complete the process of collecting direct feedback concerning acceptability of CTC alternatives to the textile and garment industries.

To enable the textile and garment industries to implement good industrial practices including the use of fume hoods for worker safety, the project will provide eligible enterprises with basic tools for stain removing. Specifications of the required equipment items are being developed. Procurement of materials, equipment, and training materials, will be done in 2005.

| No. | Planned Activity | Objective | Target Group | Impact |
|---|---|---|---|---|
| 1 | Awareness activities including publication of articles in local languages | Create an understanding for the imminent change in CTC and alternatives availability | CTC users in all sectors; and state government officials | Increasing participation of CTC users in the CTC Sector Plan |
| 2 | Information dissemination, e.g. via printed media, videos, etc. | Inform industry about available alternatives and how to access the know-how and financial support | PMU will be responsible for large and medium scale enterprises while GTZ will take the lead in the textile industry | Reduction of CTC consumption |
| 3 | Project preparation workshops | Assist enterprises to formulate project proposals that contain relevant information regarding eligibility and level of consumption and meet the requirements of the project | All CTC users in the country | Pipeline of eligible projects to be financed by the Plan |
| 4 | Technical services to be provided by national experts | Assist enterprises to determine alternatives that are safe and | Process agents and chemical solvent sectors | Increasing participation from the industry and |

| No. | Planned Activity | Objective | Target Group | Impact |
|---|---|---|---|---|
| | | environmentally sound | | timely phase-out of CTC in these sectors. |
| 5 | Continue search for available alternatives for the textile industry | Identification of potential alternatives | Selected enterprises | Conversion processes that are safe and environmentally friendly and sustainable phase-out of CTC |
| 6 | Testing of new alternatives for the textile industry | Identifying most suitable alternatives | | Identification of additional CTC alternatives |
| 7 | Conduct 2 more consultative workshops | Share information about test results and gather feedback on acceptability of CTC alternatives | Selected textile industries | Ensure availability of suitable CTC alternatives |
| 8 | Conduct technology transfer seminars including distribution of samples of CTC alternatives to participants | Assure spread of technology to industries | All textiles industries | Spread of CTC alternatives and reduction of CTC use |
| 9 | Conduct on-location training on de-staining without CTC through good industrial practices, including improvements to the work place | Disseminate know-how on the use of CTC alternatives | All concerned industries | Phase out of CTC through adoption of suitable alternatives |
| 10 | Further development and adaptation of currently used de-staining equipment | Increased cost effectiveness of de-staining process | All concerned industries | Availability of an economic incentive to phase out CTC |
| 11 | Establish and operate PMUs | Coordination between project and State Governments, other agencies, etc. | Federal States of India, cooperation partners | Effective enforcement of Ozone Rules to ensure sustainable phase-out of CTC |

## I. Planned Government Actions in 2005

### Inter-agency Coordination Meeting

To ensure effective coordination of CTC phase-out activities being undertaken by the lead and co-implementing agencies, PMU will assist the Ozone Cell to organize an inter-agency coordination meeting. It is proposed that this meeting be organized as part of the ODS summit to be held in the first quarter of 2005. This ODS summit will be organized by the Ozone Cell to ensure full coordination of activities carried out under various sector plans in India.

### Development of a Management Information System

The development of a management information system (MIS) was initiated in 2004. This MIS will be designed and used as a major tool for PMU to monitor CTC phase-out activities undertaken by various enterprises including CTC producers, CTC feedstock users, and beneficiaries of this project. This MIS will also be used as a tracking tool for monitoring the production and sales of CTC to feedstock and non-feedstock users. The structure of the MIS will be designed to meet the needs for CTC production and consumption verification protocols being developed jointly by PMU and the World Bank. Substantial progress was made in 2004 in determining the scope and the structure of the database system. The MIS is expected to be completed and launched by PMU by April 30, 2005.

### CTC Consumption and Production Verification

PMU will facilitate the development of the MIS system for this activity. In addition, PMU will facilitate the dry run verification of 2004 CTC consumption and production including end of year inventories, which is being proposed to be done by the third quarter of 2005. Based on feedback from this dry run verification exercise, PMU will provide recommendations to the Ozone Cell to strengthen its monitoring system.

PMU will take the lead in the preparation of the 2006 Annual Implementation Plan and facilitate the first official verification of 2005 CTC consumption and production in early 2006.

Key activities for the Government actions to be executed in 2005 are summarized in table below.

| NO. | POLICY/ACTIVITY PLANNED | EXPECTED SCHEDULE OF IMPLEMENTATION | Key Actions |
|---|---|---|---|
| 1. | Production and Sales Quota Licenses | January 2005 | Quota for CTC production for non-feedstock applications in 2005 will be issued by the Ozone Cell with assistance from PMU |
| 2. | Administrative Orders to restrict the use of CTC; resale and or transfer of CTC; and, to impose reporting requirements on CTC users. | January – March 2005 | Review the Ozone Rules and other relevant regulations on environment and health |

| | | | |
|---|---|---|---|
| 3. | Registration of CTC Users | January – December 2005 | Follow up on the registration drive undertook in 2004 through cooperation from state governments. |
| 4. | Standard Protocol for Verification of CTC Production and Consumption | July – September 2005 | Dry run verification of CTC production and consumption in 2004 and end of year inventories of CTC will be carried out. |
| 5. | Restriction of CTC Imports for Non-Feedstock Applications | January-December 2005 | Cooperation between MoEF and Customs Office will be formalized. The objective is to strengthen the control of CTC imports. |

**J. 2005 Budget and Planned Disbursement**

| | Description | Funding Approved by ExCom (US$)* | | | Funding Disbursed/Obligated (US$) | |
|---|---|---|---|---|---|---|
| | | Cumulative Funding Approved as of December 2004 | Funding Approved in CY 2005 | Total Funding Approved (including CY 2005) | Cumulative Actual Expenditure Disbursed as of December 2004 | Planned Expenditure in CY 2005 |
| 1 | CTC Phase-out in the Chlorinated Rubber Industry | 4,330,000 | | 4,330,000 | | 866,000 |
| 2 | CTC Phase-out in the Chlorinated Paraffin | 1,140,843 | | 1,140,843 | | 228,169 |
| 3 | CTC Phase-out in the Process Agent Applications in the Pharmaceutical Industry | 4,763,002 | | 4,763,002 | | 952,600 |
| 4 | CTC Phase-out in the Agro-Chemical Industry | 393,082 | | 393,082 | | 78,616 |
| 5 | CTC Phase-out in the Chemical Solvent | 3,158,215 | | 3,158,215 | | 631,643 |
| 6 | CTC Phase-out in the Metal Cleaning Applications | 4,778,000 | 4,000,000 | 8,778,000 | 34,216 | 4,965,784 |
| 7 | CTC Phase-out in the Textile Industry | 609,063 | 609,063 | 1,218,126 | 92,000 | 734,000 |
| 8 | CTC Phase-out in the Production Sector | 2,000,000 | 3,066,223 | 5,066,223 | | 5,066,223 |
| 9 | PMU | 728,750 | 423,750 | 1,152,500 | | 400,000 |
| | TOTAL | 21,900,955 | 8,099,036 | 29,999,991 | 126,216 | 13,923,035 |

*Remark: Funding allocation for each category is subject to change when the final agreement on sharing of the grant funds between the consumption and production sectors is reached by the Government of India and the industry.

## K. Sources of Funds

| | Total | Funds Approved as of December 2004 | Funds To Be Approved in 2005 |
|---|---|---|---|
| **Lead Implementing Agency** | | | |
| **World Bank** | | | |
| Project Cost | 42,000,000 | 18,551,798 | 3,899,046 |
| Support Cost | 3,150,000 | 1,327,571 | 292,427 |
| Sub-Total | 45,150,000 | 19,879,369 | 4,191,473 |
| **Co-Implementing Agencies** | | | |
| **France** | | | |
| Project Cost | 3,000,000 | 1,000,000 | 1,000,000 |
| Support Cost | 340,000 | 85,000 | 85,000 |
| Sub-Total | 3,340,000 | 1,085,000 | 1,085,000 |
| **Germany** | | | |
| Project Cost | 2,000,000 | 700,000 | 700,000 |
| Support Cost | 230,000 | 57,500 | 57,500 |
| Sub-Total | 2,230,000 | 757,500 | 757,500 |
| **Japan** | | | |
| Project Cost | 5,000,000 | 2,500,000 | 2,500,000 |
| Support Cost | 560,000 | 280,000 | 280,000 |
| Sub-Total | 5,560,000 | 2,780,000 | 2,780,000 |
| **TOTAL** | | | |
| Project Cost | 52,000,000 | 22,751,798 | 8,099,046 |
| Support Cost | 4,280,000 | 1,750,071 | 714,927 |

# INDIA

# CFC Production Sector Gradual Phase-out Project (ODS III)

## 2005 Annual Work Program

**January 31, 2005**

**New Delhi Office**
**South Asia Environment and Social Unit**
**World Bank**

**INDIA**

**CFC PRODUCTION SECTOR**
**GRADUAL PHASEOUT PROJECT (ODS III)**

**CY2005 ANNUAL PROGRAM**

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**INDIA**

**CFC PRODUCTION SECTOR**
**GRADUAL PHASEOUT PROJECT (ODS III)**

**CY2005 ANNUAL PROGRAM**

## A. INTRODUCTION

In accordance with Decision 29/65, Annex VI of the Executive Committee of the Multilateral Fund, the World Bank, as the implementing agency, is submitting an Annual Program for the *CFC Production Sector Gradual Phaseout Projec*t for India, for the period "1 January - 31 December 2005", for consideration at the April 2005 meeting of the Executive Committee. This Annual Program has been prepared in cooperation with the Ministry of Environment and Forests (MoEF) and the Project Management Unit (PMU) of the Ozone Cell, Government of India (GOI) and the United Nations Environment Programme (UNEP).

This document verifies the successful implementation of the CY2004 Annual Program by India and details the planned program and activities for 2005. It is being submitted for approval and release of the seventh tranche of funds, amounting to US$ 5.85 million for the implementation of the CY2005 Annual Program.

Through the implementation of the CY2004 Annual Program, India has met its CFC production quota level of 13,176 metric tons (MT), for 2004, in accordance with the schedule approved in the above mentioned Decision. Details of implementation performance and disbursement are provided in Section B of this document.

| | **Agreed Schedule** | | **Actual** | | |
|---|---|---|---|---|---|
| Year | CFC Production not exceeding (MT) | Phaseout Amount (MT) | Verified CFC Production (MT) | Phaseout Amount (MT) | Annual Funding Level (US$ million) |
| 1999 | 22,588 | - | 22,411 | - | 12.0 |
| 2000 | 20,706 | 1,882 | 20,407 | 2,181 | 11.0 |
| 2001 | 18,824 | 1,882 | 18,693 | 2,013 | 11.0 |
| 2002 | 16,941 | 1,883 | 16,890 | 1,934 | 6.0 |
| 2003 | 15,058 | 1,883 | 15,014 | 1,927 | 6.0 |
| **2004** | **13,176** | **1,882** | **13,155** | **1,903** | 6.0 |
| 2005 | 11,294 | 1,882 | | | 6.0 |
| 2006 | 7,342 | 3,952 | | | 6.0 |
| 2007 | 3,389 | 3,953 | | | 6.0 |
| 2008 | 2,259 | 1,130 | | | 6.0 |
| 2009 | 1,130 | 1,129 | | | 6.0 |
| 2010 | 0 | 1,130 | | | 0.0 |
| **Total Funding** | | | | | **82.0** |

## B. CY2004 ANNUAL PROGRAM ACHIEVEMENTS

### *B.1 ODS Phase-out and Disbursement*

**2004**:
The verified CFC production in 2004 amounted to **13,155 MT** against the quota of 13,176 MT, i.e at a level of 99.8% of the allowable production level for the year. Production of CFCs has reduced by 1,859 MT (12.4%) from the previous year.

Disbursements to CFC producers in 2004 amounted to **US$ 5.265 million**, reflecting 90% of the CY2004 allocation of US$ 5.85 million, allocated for enterprise compensation. Additionally **US$ 0.27 million** was disbursed to UNEP in 2004, for the implementation of the TA component.

| Production Phase-out | | Grant Tranches (US$ m) | |
|---|---|---|---|
| **Target (MT)** | **Achieved** | **Allocation (US$ million)** | **Status of Disbursements** |
| 13,176 | Independent Audit Teams appointed by MoEF and WB separately verified CFC production in 2004.<br><br>Total production of CFCs was ascertained by both teams as 13,155 MT. | 5.85 | ▪ 10% of CY2003 allocation (US$ 0.59 million) disbursed in February 2004<br>▪ 60 % of CY2004 allocation disbursed in June 2004 (US$ 3.5 million)<br>▪ 30 % disbursed in September 2004 (US$ 1.75 million)<br>▪ *The last 10% (US$ 0.59 million) is to be disbursed after final verification of CY2004 production is completed .* |

**2000 – 2004:**
Since the start of project implementation in 2000, CFC production volumes have reduced by about 41% over a 5year period.

As of December 2004, $52 million has been disbursed from the Multilateral Fund to the World Bank under this project, of which US$ 51.05 million (98.2%) has been disbursed to the beneficiaries. This comprises $50.125 million disbursed as enterprise compensation to the four CFC producing enterprises and $0.92 million disbursed to UNEP, of which about US$ 0.8 million has been disbursed to the PMU for implementation of TA activities.

### *B.2 Enterprise-Level CFC Production Phaseout targets (MT)*

**2004**:
In 2004, the MoEF cleared the first request for quota trading between two CFC producer enterprises. The table below reflects the original and adjusted quota orders for 2004 and the verified production figures achieved, at the individual enterprises level:

| Name of company | (Metric Tons) | | |
|---|---|---|---|
| | **Initial Quota** | **Revised Quota** | **Achieved (%)** |
| SRF Limited (SRF) | 3875 | 3875 | 3872 (99.9%) |
| Gujarat Fluorochemicals Ltd (GFL) | 4705 | 4705 | 4623 (98.25%) |
| Navin Fluorine International Ltd (NFIL) | 3472 | 4270 | 4250 (99.5%) |
| Chemplast Sanmar Ltd (CSL) | 1124 | 324 | 324 (100%) |
| **TOTAL** | **13,176** | **13174** | **13,069** |

**2000 – 2004:**

Between 2000 and 2004, the quota achievements by the four beneficiary enterprises have ranged around an average of 99.3%, as is detailed in the table in Annex II.

### *B.3 Policy Measures*

A number of policy measures which were identified in the CY2004 Annual Program were implemented during the course of the year as summarized below:

| **Activity** | **Key Actions** | **Target Dates** | **Status** |
|---|---|---|---|
| Production Quota license | Applications for a CY2004 Production Quota license received from all four CFC producers will be examined by MoEF for issuance of licenses. | To be issued by January 31, 2004. | Completed |
| Renewal of registration of producers | Applications for renewal of registration of each CFC producer, as required by the Ozone Rules, will be examined by MoEF and processed. | As and when required | Completed |
| Implementation of other provisions of ODS Rules. | Applications for registrations from sellers, stockists, dealers and buyers of CFC will be examined and submitted to Ozone Cell, MOEF.<br><br>Applications for import and export of CFCs will be examined by PMU after which the Ozone Cell will submit recommendations for issuance of bulk licenses for export by CFC producers and licenses for import to DGFT. | July 2004<br><br>Throughout the year for import and export license, as and when received | Completed<br><br>Export licenses issued to all 4 producers. No import licenses issued. |

### *B.4 Technical Assistance Activities*

Some of the activities identified in the CY2004 Annual Program were not undertaken over the course of the year. This was primarily due to staffing problems, as the PMU did not have a full-time Coordinator until May 2004. However, since the outgoing Coordinator continued to oversee ODS III implementation on an interim basis, some of the operational activities continued. A new Coordinator was recruited by the MoEF on a contractual basis in June, but he resigned after two months, in August 2004. In November 2004, the management at the Ozone Cell also changed, with a new Director of the Ozone Cell and a new PMU Coordinator. The new team is now on board and has had initial training by UNEP and World Bank on Montreal Protocol related issues and obligations.

Given the staffing situation and the loss of momentum due to the changes in the PMU coordinator, the Annual Program was updated in July 2004 to reflect a more realistic work program for the remainder of the year given the low level of implementation during the first half of the year. The table below reflects these changes and the status of activities as undertaken by the Ozone Cell/PMU during the course of the year.

| **Activity** | **Key Actions** | **Target Dates** | **Status** |
|---|---|---|---|
| Awareness of ODS phaseout | Targeted awareness programs at clusters of CTC and CFC consumption on phaseout activities and use of alternatives. | Jan-Dec.2004 | Support for Ozone Day celebrations, VATIS publication and publication and dissemination of the State of the Art Report |
| | Awareness programs on CTC phaseout and implementation modalities for CTC phaseout projects. | Feb – Oct 2004 | Included into UNEP's legal agreement with the national partner for implementing awareness activities under NCCoPP[1]. |
| Assessment of illegal trade | Further to regional workshop organized by UNEP, undertake activities to assess quantum of illegal trade and measures to promote its control | April – May 2004 | i) Close cooperation with REGMA[2] to enhance effectiveness of Policy and customs training project being implemented with UNEP. ii) Discussions with REGMA on illegal trade issues at national and regional levels. iii) Discussions with NOUs of Nepal and Bangladesh for joint training of customs officers at some border check posts. iv) Data on authorized importers quantity of exports provided |

[1] NCCoPP = National CFC Consumption Phase-out Project
[2] Refrigeration and Gas Manufacturers Association

| Activity | Key Actions | Target Dates | Status |
|---|---|---|---|
| | | | by regional NOUs to REGMA, as part of UNEP's regional illegal trade project. |
| | National Action plan will be prepared to monitor and control illegal trade. | | Under preparation. REGMA taking the lead. |
| Training/ Capacity building | Capacity building and training for information dissemination on ODS phaseout and MP implementation in high CFC and CTC consumption pockets. | Feb – June 2004 | Ongoing |
| | Regional training sessions for officials of State Government, Pollution Control Board, local authorities, SISIs and other stakeholders for implementation and enforcement of ODS Rules. | April – November 2004<br><br>May 2004 | Not completed due to delay in approval of Policy and Customs strategy as part of NCCoPP. |
| | DCSSI[3] to organize a national interactive session for all 28 SISIs[4] and SMEs[5] on ODS phaseout. This session will include issues such as registration of small units under ODS Rules and implementation and monitoring of ODS phase out projects | | An interface with SISIs was held in December 2004. There has been slow response from DCSSI. |
| Finalize a concept note on establishment of national networking system at zonal level | Review of draft concept note on zonal network.<br><br>Finalization of the concept note in consultation with UNEP and the World Bank.<br><br>Development of an implementation plan based | June 2004<br><br>July 2004<br><br>August 2004 | A draft concept note prepared in cooperation with UNEP and CEE and discussions were held in December 2004. The design is to be revised and review whether other supporting activities or incentives required to ensure successful |

[3] Development Commissioner of Small Scale Industries
[4] Small Scale Industries Institutes
[5] Small and medium enterprises

| Activity | Key Actions | Target Dates | Status |
|---|---|---|---|
| | on concept note | | implementation. |
| Operations of PMU | Half-yearly technical audits of CFC producing enterprises. | July 2004<br>January 2005 | Completed |
| | An internal assessment of effectiveness of the half yearly technical audit will be carried out. | August 2004 | Completed. Decision to continue with half-yearly audits |
| | Performance Audit of PMU | January – April 2004 | Not completed due to incomplete implementation of CY2004 Annual Program and PMU staffing situation. To be undertaken in 2006 |
| | Meetings with CFC producers to discuss findings from annual audit and other issues. | April 2004 | Completed on 7 June 2004. |
| | Monitoring of CFC production phaseout project and other ODS phase out projects in RAC and solvent sectors. | Feb – Oct 2004 | Completed |
| | Support in implementation of CTC phaseout plan. | Jan – Dec 2004 | Supported preparation of Environmental and Social Report and national media plan for registration of CTC users |
| MIS Operation | Development of MIS vision and roadmap - to support all ODS phaseout activities. | Feb 2004 | Updated inventory of software, hardware and network infrastructure completed. MIS vision document prepared. |
| | MIS review and upgradation to take care of all ODS phaseout projects. | Feb – May 2004 | MIS modules to be developed to support individual phaseout projects, after finalization of MIS vision |
| | Development of e-based outreach technology pilot | November 2004 | Under preparation |

| Activity | Key Actions | Target Dates | Status |
|---|---|---|---|
| | program for information dissemination on illegal trade and ODS phaseout activities. | | |
| | In-house development of database of import-export data on ODS, based on license, exemption certificates etc. | Feb 2004 | Under preparation |
| | Development of technology roadmap for communication infrastructure, processes and organization | November 2004 | |
| | Completion of State-of-Art report from 1999-2002 on ODS phase out program | June 2004 | Completed. Document finalized and released on Ozone day. A dissemination strategy is being planned. |
| Studies | Initiation and Completion of existing studies under progress. | Feb – August 2004 | Not Completed |
| | Based on ODS supply-demand study undertaken in 2003, define roadmap for managing material balances of ODS for CFCs and CTC | April 2004 | Not Completed |
| | Assessment of information awareness activities and their impact | October 2004 | Not Completed |

### *B.5 Monitoring and Reporting Activities*

The reporting mechanism is detailed below:

| Report | Submitted by | Target Date | Comments |
|---|---|---|---|
| Progress report | UNEP | July 2004<br>January 2005 | Reports received from PMU/UNEP and reviewed during supervision missions in July 2004 and January 2005 |
| Financial Audit | UNEP | June 2005 | UNEP unable to provide audited statements for |

| Report | Submitted by | Target Date | Comments |
|---|---|---|---|
| | | | CY2002 until the biennium 2002-2003 is audited. Audited financial report for CY2003 submitted in January 2005. |
| Disbursement Report | IDBI | July 2004<br>January 2005 | Satisfactory reports received |
| Financial Audit | IDBI | September 2004 | Satisfactory reports received |
| Performance Audit | Auditor/ MoEF | | Not undertaken in 2003. Next performance audit to be initiated in 2006 |
| Technical Audit | Auditor/ MoEF | July 2004<br>January 2005 | Satisfactory reports received in August 2004 and January 2005 |
| Technical Audit | Auditor/ WB | January 2005 | Satisfactory report received in January 2005 |
| Supervision report | WB | January 2004<br>August 2004<br>January 2005 | Supervision undertaken in June 2004. Satisfactory reports prepared and disseminated. Next supervision undertaken in January 2005 |

## C. CY2005 ANNUAL PROGRAM: OBJECTIVES AND ACTIVITIES

### *C.1 ODS Phase-out Objectives and Disbursement Allocation*

- The primary objective of the CY2005 Annual Program is to ensure that CFC production does not exceed **11,294 MT**.
- The Bank, on behalf of the Government of India, is requesting the release of **US$ 5.85 million** to be disbursed to the four beneficiary CFC producing enterprises for reducing production levels in accordance with the annual production quota established for 2005.
- No funds are being requested under the TA component. There are sufficient funds remaining with the World Bank from previous years' allocations which are to be disbursed to UNEP for PMU's TA activities.

### *C.2 Enterprise-Level CFC production phase-out targets (MT)*

In accordance with the Production Quota Order, the four CFC producers have submitted applications for the 2005 quota. Quotas have been issued to each enterprise by January 5, 2005, as follows:

| Name of company | Quota (MT) for CY2005 |
|---|---|
| SRF Limited | 3321.56 |
| Gujarat Fluorochemicals | 4033.08 |
| Navin Fluorine International Ltd | 2975.96 |
| Chemplast Sanmar Limited | 963.37 |
| **Total** | **11293.97** |

In accordance with Decision 43/5 of the Executive Committee, the Government of India needs to verify allowable CFC production as gross production for 2005. The MoEF will advise and guide the four CFC producing enterprises accordingly.

### *C.3 Policy Measures*

| Activity | Key Actions | Target Dates |
|---|---|---|
| Production Quota license | Applications for a CY2005 Production Quota license received from all four CFC producers will be examined by MoEF for issuance of licenses. | To be issued by January 31, 2005. |
| Renewal of registration of producers | Applications for renewal of registration and Quota trading by CFC producers, as required by the Ozone Rules, will be examined by MoEF and processed. | Completed |
| Implementation of other provisions of ODS Rules. | Applications for registrations from sellers, stockists, dealers and buyers of CFC will be examined and submitted to Ozone Cell, MOEF.<br>Applications for import and export of CFCs will be examined by PMU after which the Ozone Cell will submit recommendations for issuance of bulk licenses for export by CFC producers and licenses for import to DGFT. Ozone Cell will take into account information received by importing countries on registered importers (agreed at Ozone-Customs Officers coordination workshop, Agra). | July 2005<br>Throughout the year for import and export license, as and when received |

### *C.4 Technical Assistance Activities*

The MoEF in collaboration with the World Bank and UNEP, has reassessed the TA program and redefined some activities, keeping in mind the overall priorities of the project with regard to CFC production phase out. The activities are to be further refined and elaborated, once the draft 3 year Technical Assistance Strategy is finalized. Proposed generic activities to be undertaken during 2005 are summarized in the following table.

| Activity | Key Actions | Purpose | Target Dates | Budget (US$ '000) |
|---|---|---|---|---|
| **Awareness** | CFC production phase-out message to be disseminated at dealer workshops of NCCoPP and other related events.<br><br>Development of regional networking strategy, including possible regional nodal Agencies | To highlight urgency of declining CFC supply to consumers<br><br>To create regional awareness about impending decline in CFC supply. | Jan-Dec 2005 | 23 |
| **Training/ Capacity building** | Development of training program synchronized with GOI's Policy and custom | As part of overall program for prevention of illegal | Dec 2005 | 20 |

| Activity | Key Actions | Purpose | Target Dates | Budget (US$ '000) |
|---|---|---|---|---|
| | training program.<br><br>Development of e-based outreach technology pilot program for information dissemination on illegal trade and ODS phaseout activities. | trade. | <br><br>Feb-Dec. 2005 | |
| **Operations of PMU** | Technical audits of CFC producing enterprises.<br><br>Discussions with stakeholders (REGMA, UNEP etc) on addressing CFC production issues, impending phase-out scenarios and ExCom and MP related issues, such as reporting on gross CFC production | Monitoring of CFC production phase-out | Jan and July 2005<br><br>Ongoing | 185 |
| **Information Exchange** | Meeting of stakeholders to finalize MIS vision and roadmap<br><br>Widening the scope of web-enabled MIS for cohesive data compilation on CFC production and consumption | To support GOI's overall ODS phase-out activities. | Mar 2005<br><br>Dec. 2005 | 10 |
| **Data Collection** | A desk study on assessment of stock piling requirement of CFC.<br>Completion of existing study on demand – supply assessment of ODS undertaken in 2003.<br><br>Assessment of quantum of illegal trade | To support GOI's ODS phase-out activities and define strategies<br><br>To support GOI's program targeted at illegal trade | Nov.2005<br><br>Sept 2005 | 25 |
| **Policy** | Preparation of National Action Plan for prevention of illegal trade. | To support GOI's program for prevention of illegal trade and facilitate development of effective policies. | April 2005 | 0 |
| **TOTAL** | | | | **263** |

## C.5 Monitoring and Reporting Activities

The monitoring and reporting schedule for CY2005 will be undertaken in accordance with the reporting mechanism specified in Section B.5 above.

**ANNEX I**

**Annual production phaseout targets and annual grant tranches**

| CY | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Production ceiling (ODP MT) | 22,588 | 20,706 | 18,824 | 16,941 | 15,058 | 13,176 | 11,294 | 7,342 | 3,389 | 2,259 | 1,130 | 0 |
| Grant Tranche (US$ million) | 12.0 | 11.0 | 11.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 0 |
| Of which: TA | 0.29 | 0.27 | 0.27 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.12 | 0 |

**ANNEX III:**

**Quota Achievements over the period 2000 - 2004**

| **Name of company** | **2000 (Metric Tons)** | | | **2001 (Metric Tons)** | | **2002 (Metric Tons)** | | **2003 (Metric Tons)** | | **2004 (Metric Tons)** | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Quota | Quota adjusted for trades | Achieved | Quota | Achieved | Quota | Achieved | Quota | Achieved | | |
| SRF Ltd | 6,090 | 6,146 | 6,053 | 5,536 | 5,518 | 4,982 | 4,973 | 4429 | 4422 | 3875 | 3872 |
| Gujarat Fluorochemicals Ltd | 7,395 | 7,482 | 7,352 | 6,722 | 6,615 | 6,050 | 6,037 | 5377 | 5370 | 4705 | 4623 |
| Navin Fluorine International Ltd | 5,455 | 5,249 | 5,179 | 4,960 | 4,959 | 4,464 | 4,440 | 3968 | 3943 | 4270 | 4250 |
| Chemplast Sanmar Ltd | 1,766 | 1,829 | 1,823 | 1,606 | 1,601 | 1,445 | 1,440 | 1284 | 1279 | 324 | 324 |
| **TOTAL** | **20,706** | **20,706** | **20,407** | **18,824** | **18,693** | **16,941** | **16,890** | **15,058** | **15,014** | **13174** | **13,069** |
| | | | **(98.5%)** | | **(99%)** | | **(99.7%)** | | **(99.71%)** | | **(99.2%)** |