



**United Nations
Environment
Programme**



Distr.
GENERAL

UNEP/OzL.Pro/ExCom/49/37
9 June 2006

ORIGINAL: ENGLISH

EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Forty-ninth Meeting
Montreal, 10-14 July 2006

COUNTRY PROGRAMME UPDATE: INDIA

This document consists of:

- Comments and Recommendation of the Multilateral Fund Secretariat
- Letter from the Government of India
- Country Programme Update (Executive Summary submitted by the Government of India)

Pre-session documents of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol are without prejudice to any decision that the Executive Committee might take following issue of the document.

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DESCRIPTION

1. On behalf of the Government of India UNDP submitted to the 49th Meeting of the Executive Committee India's country programme update. Funds of US \$150,000 were approved for the preparation of the country programme update for India in March 2002 at the 36th Meeting of the Executive Committee.

India country programme

2. The country programme for India was approved at the 11th Meeting of the Executive Committee in November 1993, as a first step in the development of a comprehensive phase-out strategy and subject to submission of a revised document to a subsequent meeting of the Executive Committee. In 1991, India's consumption of ODS was 10,370 MT (equivalent to 13,111 ODP tonnes), of which about 85% was produced domestically and the rest imported.

3. The original country programme did not set quantitative targets for ODS phase-out, but presented unconstrained demand scenarios. The unconstrained ODS demand was forecasted to reach about 184,000 MT by 2010, based on an estimated average growth of 15-20% annually in the various ODS consuming sectors.

Country Programme Update

4. The aims of the country programme update are: to review the implementation of the original country programme and provide an overall assessment of its implementation, including experiences and lessons learnt; to update ODS phase-out and consumption trends; to review non-ODS technology conversions in the industrial sectors and their relationship to policy and regulatory measures; and to update government initiatives and actions to control and monitor ODS use. The country programme update also provides a review of the ongoing strategies and performance-based agreements for addressing the phase-out of remaining ODS production and consumption, milestones for annual ODS phase-out and planned government actions for monitoring and controlling ODS use. In addition, the document identifies challenges ahead especially in terms of vulnerability of India to HCFC phase-out, service tail impact and feedstock use of ODS.

ODS Consumption and Production

5. India has made significant progress in controlling the production and consumption of ODS. The actual use of these substances by the end of 2004 was about 9,000 MT annually, with a complete phase-out of halons (Annex A Group I) and methyl chloroform (Annex-B Group-III) achieved. Methyl bromide is not widely used in India. In 2004, the consumption reported was 382 MT for quarantine and pre-shipment uses.

6. In December 1999, a project for gradual phase-out of production of CFCs leading to closure of CFC production in India was approved at a total funding level of US \$82 million with the cumulative phase-out of 22,588 ODP tonnes. The project limits the annual non-feedstock production levels of CFCs at the four major CFC producers in India, leading to a complete closure of facilities by 2010.

7. In December 2003, a multi-year performance-based plan for phase-out of non-feedstock use of CTC by 2010 was approved at a total funding level of US \$52 million covering both production and consumption of CTC. The allocations related to the production sector amount to US \$28,500,000. The implementation of this project is underway.

8. By the end of 2004, the Executive Committee had approved total funding of over US \$134 million to phase out 23,393 ODP tonnes of ODSs in the consumption sector and US \$84.6 million to phase-out 22,988 ODP tonnes in the production sector (including halon). Over 70% of the ODS phase-out has been completed, including almost all of the individually approved projects.

Future Priorities and Challenges

9. The Government of India has identified the following areas of activity under the Montreal Protocol as priorities for the future:

- (a) Completion of the National CFC Consumption Phase-out Plan by 2010. The key challenges identified are: an adequate availability of CFCs for servicing needs beyond 2010, through stockpiling, recovery/recycling and reclamation; accelerating retrofitting/replacement of CFC-based equipment to reduce dependence on CFCs for servicing; and adequate capacity building and awareness at field-level service establishments and by technicians to minimize CFC emissions and losses;
- (b) Completion of the CTC Phase-out Plan by 2010. The key challenges identified are: adequate assistance to small scale CTC users in the textile and metal cleaning industry, including availability of cost-effective substitutes; and ensuring timely phase-out of CTC by large users in the process agent and solvents sectors;
- (c) Completion of the Production Sector Gradual Phase-out Plan by 2010;
- (d) Combating Illegal Trade in ODS and continuing enforcement and fine-tuning of ODS Regulations. India has implemented regulatory and capacity building activities to complement technology conversions, leading to significant reduction in the availability of ODS. India will enforce compliance and prevent the proliferation of illegal ODS trade. Border enforcement agencies will be provided with equipment to identify ODS, and training and capacity building programs for officials of the Customs and other enforcement agencies are being implemented.
- (e) Long-term management of HCFCs. In 2004, India's production of HCFCs for non-feedstock use was 24,671 MT. The national consumption of HCFCs was 6,803 MT and India exported 19,285 MT of HCFCs mostly to other Article 5 countries in 2005. Production and consumption of HCFCs is experiencing significant growth. Urgent steps are needed to ensure that sectors dependent on HCFCs are properly equipped to deal with the restrictions that commence in 2016. The Government of India has identified the long-term management of HCFCs as a crucial activity to be undertaken as early as possible, with the expectation of adequate technical and financial assistance from the Multilateral Fund to support the same.

- (f) Monitoring use of CTC for feedstock uses is considered critical since the Government of India is committed to the production of chemicals needing CTC as a feedstock.
- (g) Monitoring ODS use in medical aerosols. India has allocated its total remaining CFC consumption eligible for funding to the refrigeration sector and had reached an understanding with the Multilateral Fund that it would not submit any request for funding for investment projects for CFCs used in metered dose inhalers (MDIs). In December 2003, funding of US \$30,000 was approved to prepare a transitional strategy for conversion of CFC MDIs. The Government of India has prioritized the preparation and finalization of this strategy by 2006.
- (h) The Government of India will carefully monitor the halon management and banking system, in order to ensure adequate availability of reclaimed halons for critical uses in the defence, energy and aviation sectors.
- (i) Disposal of unwanted CFCs post-2010 might be an issue in the future. After meeting the legitimate domestic demand for CFCs post-2010 through stockpiling, recovery/recycling and reclamation, any additional quantities of unused or unwanted CFCs would need to be disposed of. The Government of India will formulate an appropriate strategy to address the disposal of CFCs.

Action Plan

10. The action plan to achieve compliance with the Montreal Protocol is presented, including Government policy measures, institutional arrangements, establishing and maintenance of comprehensive monitoring and verification systems, technology information and awareness.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

11. The country programme update provides a comprehensive overview of the implementation of the original country programme, industry structure and substitute technologies used in different industrial sectors, and policy and regulatory measures.

12. The phase-out of the remaining ODSs in the consumption and production sectors in India is covered by the national CFC consumption phase-out plan, CTC phase-out plan (production and consumption) and CFC production sector phase-out plan. The country programme update provides a general overview of the objectives, milestones and status of implementation of these plans. The Executive Committee has an opportunity to monitor the implementation of these plans in detail annually while considering relevant annual progress reports together with requests for funding tranches.

13. The country programme update contains a section outlining future priorities of the Government. One of these priorities is the long-term management of HCFCs. The sectors using HCFCs are expected to grow by at least 20% annually for the next decade. Based on this, by 2015 India's consumption of HCFCs may exceed 50,000 MT. Increased production of HCFC-22

will require increased production of chloroform, which is used as a raw material for producing HCFC-22. Production of chloroform will result in additional production of CTC. As demand for HCFC-22 as a feedstock for the production of fluoropolymers is increasing in both developed and developing countries, proper management systems must be put in place to address the unwanted production of CTC. The Secretariat notes that any quantity of CTC produced for non-feedstock applications after 2009 will need to be destroyed to ensure that consumption as defined under the Montreal Protocol remains at zero.

14. The country programme update specifies the manufacture of CFCs and cypermethric acid chloride (also called DV acid chloride) as the only major feedstock uses for CTC. The Secretariat notes from the review of the 2005 verification report for phase-out of the consumption and production of CTC in India, also submitted to the 49th Meeting of the Executive Committee, that apart from these two major feedstock application CTC is reported to be used in the production of two other chemicals, namely vinyl chloride monomer and di-fluoro benzophenone. It is not, so far, clear as to whether these uses have been accepted as feedstock by the Government of India and reported as such to the Ozone Secretariat. The Secretariat has requested clarification from the World Bank in the context of its review of the India CTC phase-out plan.

15. The Secretariat also notes the confirmation in the Country Programme Update that India would not submit any request for funding for investment projects for CFCs used in metered dose inhalers.

RECOMMENDATION

16. The Fund Secretariat recommends approval of the India country programme update noting that approval of the country programme does not denote approval of the projects identified therein nor their funding levels.



भारत सरकार
 पर्यावरण एवं वन मंत्रालय
 ओझीस गेज
 Government of India
 Ministry of Environment and Forests
 Ozone Cell

**DR. A. DURAISAMY
 DIRECTOR (O)**

D.O.No. 35/1/2005/SPPU/OC

Dated: 11 May, 2006

Dear Mr. Kwan,

I am authorized to convey the endorsement to the Country Programme Update of India (document enclosed) for onward transmission to the Multilateral Fund Secretariat for consideration at the 49th Meeting of the Executive Committee scheduled to be held from 10-14 July 2006 in Montreal, Canada.

With kind regards,

Yours sincerely

(A. DURAISAMY)

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आपका ध्यान देने योग्य बातें: कृपया कृपया ध्यान दें, कि
 यह दस्तावेज़ केवल सूचना के लिए है।
 यदि आपको इस दस्तावेज़ में कोई त्रुटि या
 अनिष्टता का पता चले, तो कृपया हमें सूचित करें।



हमारे अंतर्राष्ट्रीय पर्यावरण संरक्षण
 कार्यक्रमों में आपका सहयोग
 हमें प्रेरित करता है।
 कृपया हमें सूचित करें।

EXECUTIVE SUMMARY

The Country Programme Update for India's Montreal Protocol Programme reviews the implementation of the original Country Programme, provides an overall assessment of its implementation including experiences and lessons learnt, update on phase-out of Ozone Depleting Substances (ODS) and consumption trends, non-ODS technology conversions in the industrial sectors and policy and regulatory measures. It also provides updates on government initiatives and actions to control and monitor ODS use and to maintain sustainability of ODS phase-out.

The Country Programme Update also provides a schedule and action plan for implementing measures to achieve compliance and leading to complete ODS phase-out. This necessitates review of the ongoing strategies and performance-based agreements for addressing phase-out of remaining ODS production and consumption, milestones for annual ODS phase-out and planned government actions for monitoring and controlling ODS use. The Country Programme Update is intended as a dynamic document, primarily to assist Government of India in monitoring implementation of Montreal Protocol compliance measures. The document is expected to evolve as deemed necessary by Government of India, in context of the strategic needs of the country.

Over the past twelve years since the approval of the original Country Programme for Phase-out of Ozone Depleting Substances in 1993, India has made significant progress in controlling the production and consumption of ODS. The original Country Programme had not set quantitative targets for ODS phase-out, but presented unconstrained ODS demand scenarios along with an indication of challenges of meeting the Montreal Protocol phase-out targets. From a 1991 level of 10,370 MT of ODS (Annex-A, Group I, II & Annex-B Group II & III), the unconstrained demand was forecasted at about 96,000 MT by 2005. The actual use of these substances by end-2004 was only about 9,000 MT annually, with a complete phase-out of Halons (Annex-A Group-II) and Methyl Chloroform (Annex-B Group-III) achieved. The key Montreal Protocol control targets achieved by India are summarized as below:

- Compliance with the freeze (Annex-A Group-I substances) as of 1 July 1999 and 50% reduction targets of CFC production and consumption set at the baseline levels (average annual consumption between 1995 and 1997) by 01 July 1999
- Compliance with the freeze in Halon (Annex-A Group-II substances) production and consumption set at baseline levels by 01 January 2002
- Compliance with the freeze in Methyl Chloroform (Annex-B Group-III substances) production and consumption set at the baseline levels (average annual consumption during 1998 to 2000) by 01 January 2003 (India achieved 100% reduction)
- Compliance with the reduction in CFC (Annex-A Group-I substances) production and consumption set at 50% of baseline levels by 01 January 2005
- Compliance with the reduction in Halon (Annex-A Group-II substances) production and consumption set at 50% of baseline levels by 01 January 2005 (India achieved 100% reduction)
- Compliance with the reduction in Methyl Chloroform (Annex-B Group-III substances) production and consumption set at 30% of baseline levels by 01 January 2005 (India achieved 100% reduction)

Policy Actions

India has achieved compliance with the Montreal Protocol control measures for ODS as described above, with least impact on industrial sectors dependent on ODS without undue industrial dislocation and obsolescence and minimum cost to the consumers. This has been possible due to the technical and

financial assistance received from the Multilateral Fund of the Montreal Protocol and the support for implementation of ODS phase-out activities from Bilateral and Multilateral Implementing Agencies. The compliance milestones, as described above, were achieved through a combination of technology transfer investment projects and non-investment activities at the sector and enterprise levels for converting to non-ODS technologies. Further, training and capacity building, institutional support, policy and regulatory measures and sustainable public-private partnerships have helped India in maintaining momentum and sustainability of ODS phase-out activities.

Government of India has implemented forward-looking and proactive policy and regulatory actions, the most significant of which was the notification of the Ozone Depleting Substances (Regulation and Control) Rules in July 2000 and its amendments.. This regulation is one of the most comprehensive and transparent of its kind. It establishes controls on production, consumption, trade, use including recovery & recycling and disposal of ODS including related registration and reporting requirements. These regulations have provided Government of India with an effective tool for controlling, monitoring and reporting of ODS in the country.

The remaining consumption and production of ODS in India is planned to be addressed through the following:

Production of Annex-A Group-I substances (CFCs)

In 1999, India and the Executive Committee of the Multilateral Fund, reached an agreement for gradual phase-out of production of CFCs (Annex-A Group-I substances) by 01 January 2010. India has achieved compliance with the terms of this agreement and the agreed annual reductions in production of CFCs are being progressively and consistently achieved so far. The momentum of CFC phase-out would be maintained to meet future phase-out targets.

Consumption of Annex-A Group-I substances (CFCs)

In 2004, India and the Executive Committee of the Multilateral Fund reached an agreement for phase-out of consumption of CFCs (Annex-A Group-I substances) by 01 January 2010, through the National CFC Consumption Phase-out Plan (NCCOPP). India achieved the 2004 targets and is making all efforts to achieve the agreed future targets.

Production and consumption of Annex-B, Group-II substances (CTC)

In 2003, India and the Executive Committee of the Multilateral Fund reached an agreement for phase-out of production of CTC (non-feedstock use) by 01 January 2010. This project is under implementation and will result in meeting the compliance targets specified in the Agreement. Through the same agreement, phase-out of consumption of CTC (non-feedstock use) is to be achieved by 01 January 2010. Under the terms of this agreement and in accordance with the Montreal Protocol control schedule, India is well positioned to achieve the reduction targets for consumption of CTC. The necessary regulatory and monitoring mechanisms are in place and are being periodically fine-tuned to achieve the agreed phase-out targets.

All other ODS

India does not produce or consume other ODS (excluding those mentioned above and also excluding Annex-C Group-I substances or HCFCs) as of 2005.

Government of India has identified the following as significant challenges ahead for Montreal Protocol compliance:

- Managing CFC use in the servicing of equipment containing CFCs especially in the Refrigeration and Air Conditioning Sector until 2010 and after 2010 through stockpiles and reclamation, particularly in small and tiny scale enterprises
- Combating illegal trade in ODS if any
- Maintaining sustainability of ODS phase-out through continuing enforcement and fine-tuning of ODS regulations
- Long-term management of production and consumption of Annex-C Group-I substances (HCFCs), particularly in view of growth projections for consumption in developing countries and accelerated controls on HCFCs in developed countries
- Managing and monitoring CFC/HCFC/CTC use for feedstock applications
- Monitoring and phase-out CFC use in medical aerosols
- Monitoring of the Halon management and banking system
- Disposal of unwanted CFCs and other ODS
- Keeping abreast of developments of and disseminating knowledge on substitute technologies for ODS, including an ongoing assessment of their environmental impact, particularly in relation to cross-cutting environmental conventions such as the Kyoto Protocol and the Stockholm Convention.