IMPLEMENTATION OF MONTREAL PROTOCOL IN INDIA

From:
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INDIA'S COMMITMENT TO THE MONTREAL PROTOCOL

- 17th September 1992 : India became a Party to the Montreal Protocol and ratified the London Amendment.
- 3rd March 2003 : India ratified Copenhagen Amendment (1992), Montreal Amendment (1997) and Beijing Amendment (1999).
- November 1993 : India's Country Programme was prepared.
- January 2006 : India's Country Programme was updated.

FINANCIAL RESOURCES FOR IMPLEMENTATION OF THE PROTOCOL

- As per the London Amendment (1990), the Multilateral Fund (MLF) was set up and a financial mechanism was established to assist the Article 5 Countries for phase-out of Ozone Depleting Substances (ODS).

- India has been receiving financial and technical assistance to phase out production and consumption of ODS since 1993.

INSTITUTIONAL FRAMEWORK IN INDIA

- **Ozone Cell** is established under the MOEF for undertaking activities relating to implementation of Montreal Protocol.
- **Empowered Steering Committee** (ESC) has been constituted in the MOEF with the approval of Cabinet. It is the apex body Chaired by Secretary (E&F) to take policy decisions and to oversee the overall implementation of the Montreal Protocol in India.
- **Following two Standing Committees** have also been constituted set up to provide assistance on specific implementation issues to the Empowered Steering Committee (ESC) :

  1. Technology and Finance Standing Committee.
  2. Monitoring and Evaluation Committee.

LIST OF ODSs

As per Article 2 of the Montreal Protocol, the total number of controlled substances are 96.

The following controlled substances are historically produced and consumed in India.

Substances	Production	Consumption
CFC-11	Yes**	Yes**
CFC-12	Yes**	Yes**
CFC-113	Yes**	Yes**
Halon-1211	No**	Yes**
Halon-1301	No	Yes**
Methyl Chloroform	No	Yes
Carbontetrachloride	Yes**	Yes**
Methyl bromide	No	Yes*
HCFC-22	Yes	Yes
HCFC-141b	No	Yes
HCFC-142b	No	Yes

**Quarantine & Pre-shipment.*
*** Phase-out of non-exempted production and consumption from 1.1.2010.*

OZONE DEPLETING SUBSTANCES (Regulation and Control) Rules 2000

- Production and Consumption Control.
- Trade of ODS is regulated.
- Ban on creation of new capacity/expansion of ODS based industry.
- Mandatory registration for production, sale and use of ODs.
- Mandatory registration of manufacturers, importrs and exporters of compressors.
- Registration for recycling, recovery and destruction of ODS.

OZONE DEPLETING SUBSTANCES (Regulation and Control) Rules 2000 Contd.

- Use of CFCs in manufacturing various products was phased out w.e.f. 1.1.2003, except in Metered Dose Inhalers (MDIs) and for other medical purposes.
- Use of halons was phased out in manufacturing of fire extinguishers w.e.f. 1.1.2001.
- Import and Export of ODS are subject to License issued by the Directorate General of Foreign Trade (DGFT) with the consent of MoEF.
- Import of CFCs are banned from 18.09.2007.

FISCAL INCENTIVES AND MEASURES

- Customs and Excise duty exemptions on capital goods in case of ODS phase out Projects (from 1995).

- Customs and Excise duty exemptions on capital goods for establishment of industry with non-ODS technology (from 1997).

ODS PHASE OUT-INDIA'S ACHIEVEMENTS

- As of January 1, 2010, the production and consumption of CFCs, CTC and Halons were phased out completely as per the Montreal Protocol time schedule, except the use of CFCs in Metered Dose Inhalers (MDIs) under the Essential Use Nominations (EUN).

CFC Phase out

- Freeze of CFC Production and Consumption in July 1999 at 22588 ODP tonnes and 6681 ODP tonnes respectively
- Accelerated Phase out of CFCs from 1.8.2008, 17 months prior to the Montreal Protocol Schedule, except use of pharma grade CFCs for manufacture of MDIs in 2008 and 2009.

ODS PHASE OUT-INDIA'S ACHIEVEMENTS (Contd.)

(Carbon Tetra Chloride (CTC) Phase out

- Freeze of CTC Production and Consumption at 11553 ODP tonnes and 11505 ODP tonnes respectively in 2005.
- 100% reduction as on 1.1.2010.

Halons

- Freeze of Halon production and consumption on 1.1.2002.
- Total phase out of Production and Consumption of Halons and Methyl Chloroform Production and Consumption w.e.f 1.1.2003.

So far India has successfully met all the obligations of the Montreal Protocol.

PHASE OUT OF CFCs IN MDI MANUFACTURING

- National Strategy for Transition to non-CFC Metered-dose inhalers (MDIs) and Plan for phase out of CFCs in the Manufacture of Pharmaceutical MDIs in India by 2012 was approved in 56th EX-Com in November 2008 with a funding of US$ 10.2 Million.

- Quota order for production of 343.6 MT of Pharma Grade CFC for 2010 was issued by MoEF for manufacture of Metered Dose Inhalers (MDIs) under the Essential Use Nomination (EUN).

- The implementation of the Strategy is progressing well. India is likely to phase out use of CFCs in MDIs by end of 2010. No EUN has been sought by India for the year 2011.

AWARENESS ACTIVITIES

- Comprehensive Public Awareness Campaign by the Ozone Cell, MoEF.
  - Organisation of International Ozone Day and Publication Updates of website.

- Awareness Workshops on phase out of CFCs in MDIs in collaboration with UNEP for the stakeholders in close cooperation with the Ministry of Health and Family Welfare.

FACILITATION TO NEIGHBOURING COUNTRIES

- Facilitation in Implementation of Montreal Protocol in South Asia and South East Asia Pacific Regions.
- Interaction with Nepal, Bhutan, Bangladesh on ODS Trade Related Issues.
- Equipment and Training Support in setting up of Recovery/Recycling Units to Bhutan.

AWARDS AND RECOGNITIONS

- "The Montreal Protocol Implementers Award, 2007" to the Ozone Cell, MoEF for its extraordinary contributions in the effective implementation of the Montreal Protocol

- "Montreal Protocol Exemplary Project Recognition Award" to Ecological Refrigeration (ECOFRIG), Human and Institutional Development for Ecology and Refrigeration (HIDECOR) and National CFC Consumption Phase out Plan (NCCoPP), Kirloskar Copeland Ltd and M/s Satya Deeptha Pharmaceuticals

- "USEPA 2008 Stratospheric Ozone Protection Award" to Ozone Cell for Protection of Stratospheric Ozone Layer.

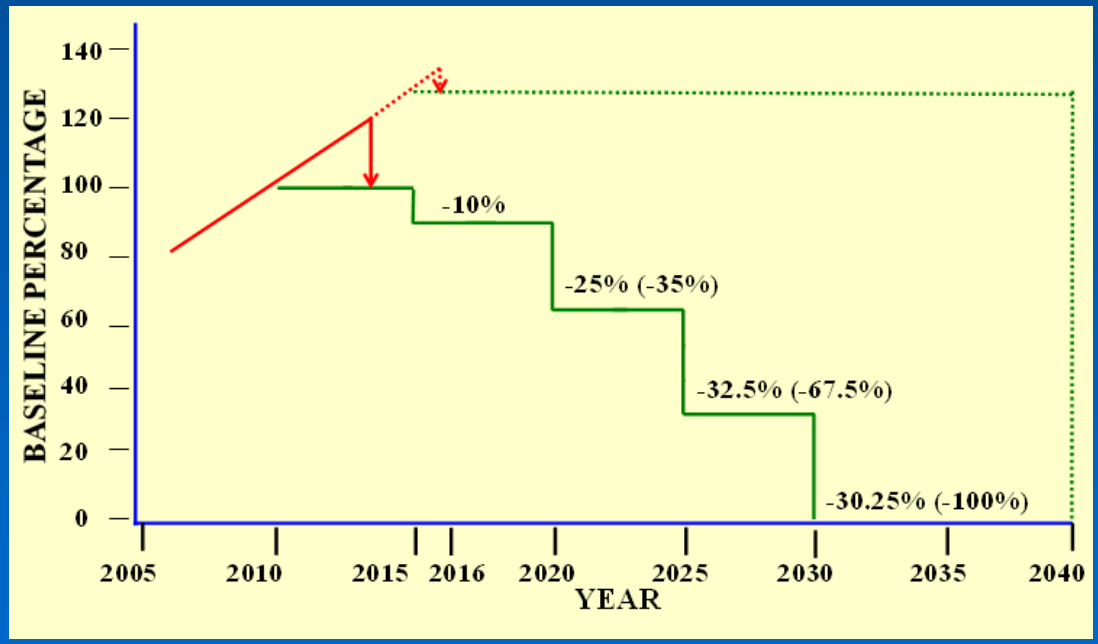
ACCELERATED PHASEOUT OF HCFCs

- Montreal Protocol has entered in another regime with the decision to phase out Production and Consumption of HCFCs by 2030, an advance by 10 years for an early recovery of Ozone Layer.

HCFC PHASE-OUT SCHEDULE – Article 5 Parties

TIMELINE

- Baseline : average of 2009 and 2010 production and consumption
- Freeze : 2013
- 10 % reduction of baseline in 2015
- 35 % reduction of baseline in 2020
- 67.5 % reduction of baseline in 2025
- 100% phase-out in 2030



Allowing for servicing an annual average of 2.5% during the period 2030-2040

KEY CHALLENGES IN PHASING-OUT OF CFCs

- Technical options are still emerging, Industry to look for low GWP long term solutions
- HFCs are the main options to HCFC for most of the applications in refrigeration and air-conditioning
- Low GWP options are also being under investigation
- HFCs are the potent Green House Gases (GHG) and emissions of these gases are controlled under Kyoto Protocol

STRATEGY FOR MEETING CHELLENGES IN PHASING OUT HCFCs

- **Funding for preparation of** HCFC phase-out management plans (HPMPs)
- **has been approved by the Ex-Com at its 56th Meeting held in November, 2008**
- **UNDP as Lead Agency in association with UNEP,UNIDO, World Bank Govt. of Germany (bilateral agency) is responsible for preparation of HPMP**
- **Development of a Road Map with a long term vision, initiatives and action plan**
- **Strengthening of institutional set-up to cater the needs of HCFC phase-out**
- **Policy instruments are being aligned to meet the needs of accelerated phase-out schedule of HCFCs**

Actions and Activities for HPMP

- The ROADMAP was launched in October 2009.
- National Surveys are being carried out.
- Indian Polyurethane Association (IPUA) is responsible for preparation of Foam Sector Strategies, Refrigeration and Air-Conditioning Manufacturing Association (RAMA) for preparation of RAC Manufacturing Sector Strategies and GTZ for Servicing Sector Strategies.
- Six Awareness workshops were organised by both RAMA and IPUA in Chennai, Mumbai and Delhi during the year 2010.
- Sectoral Strategies are being developed in close cooperation with Industry.
- Organisation of a National Consultative Stakeholders Workshop for finalisation of HPMP.

SECTOR WISE APPLICATIONS OF ODS AND THEIR SUBSTITUTES

Sector	ODS Used	Substitutes
Foam	CFC-11	HCFC-141b, Hydrocarbon, HFCs, Methyl Formate
RAC	CFC-11, CFC-12, HCFC-123	HFC-134a, Hydrocarbon, Ammonia, HFC Blends
Aerosol	CFC-11, CFC-12	Hydrocarbon Aerosol Propellants (HAPs)
Solvent	CTC, Methyl Chloroform	Trichloroethylene, Hexane
Fire Ext.	Halon-1211, Halon-1301	ABC Powder, CO2, HFCs

PRODUCTION & CONSUMPTION CONTROL SCHEDULE AS PER MONTREAL PROTOCOL

ODS / Baseline (Prod. & Cons.)	2005	2007	2008	2010	2015	2030
CFC – P(22588 MT) C(6681 MT)	50 %	85 %	100%	NA	NA	NA
Halon – P(95 MT) C(260 MT)	50 %	-	-	100 %	NA	NA
CTC – P(11553 MT) C(11505 MT)	85 %	-	-	100 %	NA	NA
MCF – P(Nil) C(1467 MT)	30 %	-	-	70 %	100 %	NA
MeBr – P(108 MT) C(-)	20 %	-	-	-	100 %	NA
HCFCs**	-	-	-	-	10%	100 %

**Baseline of HCFC : Production and Consumption average of 2009 and 2010