

INAUGURAL ADDRESS

BY

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ON THE OCCASION OF

**AWARENESS WORKSHOP FOR
HCFC PHASE-OUT MANAGEMENT PLAN (HPMP)
(FOAM MANUFACTURING SECTOR)**

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**GRAND BALLROOM 3,
RENAISSANCE MUMBAI CONVENTION CENTRE HOTEL
NEAR CHINMAYANAND ASHRAM
POWAI, MUMBAI**

At the outset, I would like to extend my heartiest warm welcome to all of you for participating in the HPMP Awareness Workshop on Foam Manufacturing Sector. I would also like to thank the Indian Polyurethane Foam Association (IPUA) for inviting me for the inaugural session and taking up the work of preparation of strategy for phasing out HCFCs in Manufacturing of Foam in India as a part of HPMP.

Ladies & Gentlemen, as we are all aware, the Montreal Protocol is the most successful Multilateral Environmental Agreement (MEA). The Montreal Protocol is only MEA which has been universally ratified. The year 2010 is unique in the Montreal Protocol regime, where first day of the year has achieved an important landmark when the production and consumption of non-exempted CFCs, CTC and halons have been phased out globally.

It is heartening to note that the Montreal Protocol has not only protected the stratospheric ozone but it has also immensely benefitted the climate system. The ODSs are potent Green House Gases (GHG) and these gases were not included in Kyoto basket of gases for emission controls. As per expert estimates, by 2010, the Montreal Protocol would reduce GHG emissions by 11 Giga tonnes CO₂ equivalent per year

through its ODS phase-out activities which amounts to 5-6 times reductions targeted by the Kyoto Protocol during first commitment period of 2008-2012.

As you may be aware India became a Party to the Vienna Convention for the protection of Ozone Layer on 19th June 1991 and the Montreal Protocol on Substances that Deplete the Ozone Layer on 17th September 1992. A detailed country program for phase-out of Ozone Depleting Substances (ODSs) was prepared in 1993 to ensure the phase-out of the ODSs according to the National Industry Development Strategy (1991), without undue burden to the consumers and the industry and for accessing the Protocol's financial mechanism in accordance with the requirements stipulated in the Montreal Protocol. The country program was updated in 2006 and is under implementation.

I am pleased to mention that over the past 17 years, since India ratified the Montreal Protocol, the Ozone Cell, Ministry of Environment and Forests (MoEF) has undertaken several policies and measures to facilitate implementation of the Protocol. The actions primarily include policies and regulatory actions including fiscal incentives to accelerate ODS phase-out, creating awareness among the stakeholders, training and capacity building and information exchange on ODS phase-out. These actions have resulted in successful implementation of all the individual projects and multiyear projects in various sectors like aerosol, refrigeration & air-conditioning, foam, halon and solvent. It is worth noticing that our industry participated actively in this challenging endeavor.

India took an unique initiative in consultation with the industry and stopped use of ODSs like CFCs, CTC and halons as earlier as 1st January 2003 in manufacturing of new equipment which resulted not only early phase-out of ODSs but also reduced the inventory of ODS based equipment/appliances in the country. India also took a proactive step to accelerate the phase-out of production of CFCs except use in Metered Dose Inhalers (MDIs) from 1st August 2008, 17 months prior to the agreed phase-out

schedule of the Montreal Protocol. This smoothly followed the phase-out of consumption of CFCs in the country except use in manufacturing of MDIs which are essential drugs for inhaler therapy for the asthma and COPD patients.

Recognizing the significant benefits for protection of the ozone layer and climate systems by early phase-out of HCFCs, the Meeting of the Parties to the Montreal Protocol held in September 2007 adopted a decision to accelerated the phase-out of HCFCs by ten years and defined a HCFC production and consumption reduction schedule.

The transition from HCFCs to environment-friendly alternatives is a challenging task, particularly for a developing country like India, which needs to achieve its development goals in an environmentally sustainable manner. India has therefore taken early initiatives for responding to these challenges and developed a Roadmap for HCFC Phase-out which delineates our long term vision and action plan for phasing out production and consumption of HCFCs. The Roadmap was launched by Hon'ble Minister of State for Environment and Forests, Shri Jairam Ramesh in October 2009.

The 56th meeting of the Executive Committee (Ex-Com) for the Implementation of the Montreal Protocol has also approved the preparation of HCFC Phase-out Management Plan (HPMP) for achieving the phase-out targets of Stage-I. The Ozone Cell, MoEF encouraged the preparation of HPMP in close cooperation of industry, industry associations and other stakeholders. A Sectoral Working Groups Meeting was organized in September, 2009. A Memorandum of Agreement (MOA) was signed between Ozone Cell and IPUA to carry out the preparation of strategy for phasing out of HCFCs in Foam Manufacturing in India. I understand the data collection and strategy preparation is in advance stage enabling finalization of HPMP and India will be submitting the HPMP to the 62nd Ex-Com.

As we all know that Polyurethane Foams (PUFs) are widely used in various consumer, commercial and industrial applications due to their versatility. I understand

that the use of PUFs is increasing day by day as these are applied in a variety of ways as insulation, as structural components and as wear components. HCFCs, predominantly HCFC-141b and to some extent HCFC-22 and HCFC-142b are used as blowing agents in manufacturing of PUFs.

The Indian polyurethane industry switched over from CFC-11 mainly to either hydrocarbon or HCFC-141b as foam blowing agent for manufacturing of foam very recently in 2003 and in some cases even later. The incremental capital and operating costs were provided to the eligible enterprises by the Multilateral Fund of the Montreal Protocol for conversion from ODS to non-ODS technologies.

The beneficiaries include the large appliance manufacturers especially the domestic refrigerator manufacturers, medium size commercial refrigeration appliance manufacturers, thermo wear manufacturers, insulating panel manufacturers and small and medium appliance foam manufacturers and system houses. The Ozone Cell MoEF also provided fiscal incentives in terms of custom duty exemptions on capital goods for establishing new capacities as well as expansion of existing capacities based on non-ODS / low-ODP technologies to encourage the industry for protection of ozone layer.

We are watching the developments in this industry very closely as this was one of the sectors which switched over to a transitional technology from CFCs to HCFCs. Since the conversion, the HCFC-141b consumption in India has been increasing.

In the recent meeting of Open Ended Working Group (OEWG) held in Geneva, the Foam Technical Options Committee of the Technology and Economic Assessment Panel reported that technically proven, economically viable and environmentally-benign technologies are available for some applications especially for large installations. It was also reported that the low-Global Warming Potential (GWP) technologies for pre-blended polyols are still emerging. I hope, the details of status of technologies will be shared in the technical session today.

I would also like to mention that recently at the 30th OEWG, India raised an issue related to pre-blended polyols which was also raised earlier in 2000 but somehow it was not agreed by the Parties at that time. Once again we have raised this issue in the interest of small and medium foam manufacturers as well as system houses through a Conference Room Paper which was supported by a large number of Article 5 Parties.

As I understand PUFs are the polymers which are formed by a polymerization reaction involving an iso-cyanate with a polyol and a blowing agent. I also understand the blowing agent like HCFC-141b is typically mixed or blended into polyol before the polyol enters in the machinery that manufactures PUFs. Such mixing or blending of HCFCs into polyols is done very often by specialized facilities known as system houses to realize the benefits of economies of scale.

These pre-mixed or pre-blended polyols are mixed in the system houses and are often traded across the countries. A large number of individual enterprises manufacturing foam products usually procure such pre-blended or pre-mixed polyols. Somehow, the Protocol considers the pre-mixed polyols as products rather than controlled ODSs.

This issue was also discussed at the 61st Executive Committee (Ex-Com) Meeting of the MLF held in July, 2010 where the Ex-Com decided to fund the consumption of HCFC-141b in pre-blended polyols. However, the definition will still be discussed at the 22nd Meeting of the Parties (MOP). If we succeed in this proposal then the baseline of consumption of HCFC-141b is likely to increase which will benefit a large number of foam manufacturers as well as system houses in the country.

Ladies & Gentlemen, India is one of the major consumers of HCFC-141b in Article 5 countries. I would like to congratulate the PUF industry for their excellent performance. The consumption data for 2009 and 2010 is utmost important as the average of these two years will form the baseline. I hope the consumption for these two years will still be higher. I encourage the industry to provide all help and support to the

surveyors and the IPUA in developing the in data collection and formulating the strategy.

I wish all the successful deliberations today.

Thank you.