



## MESSAGE

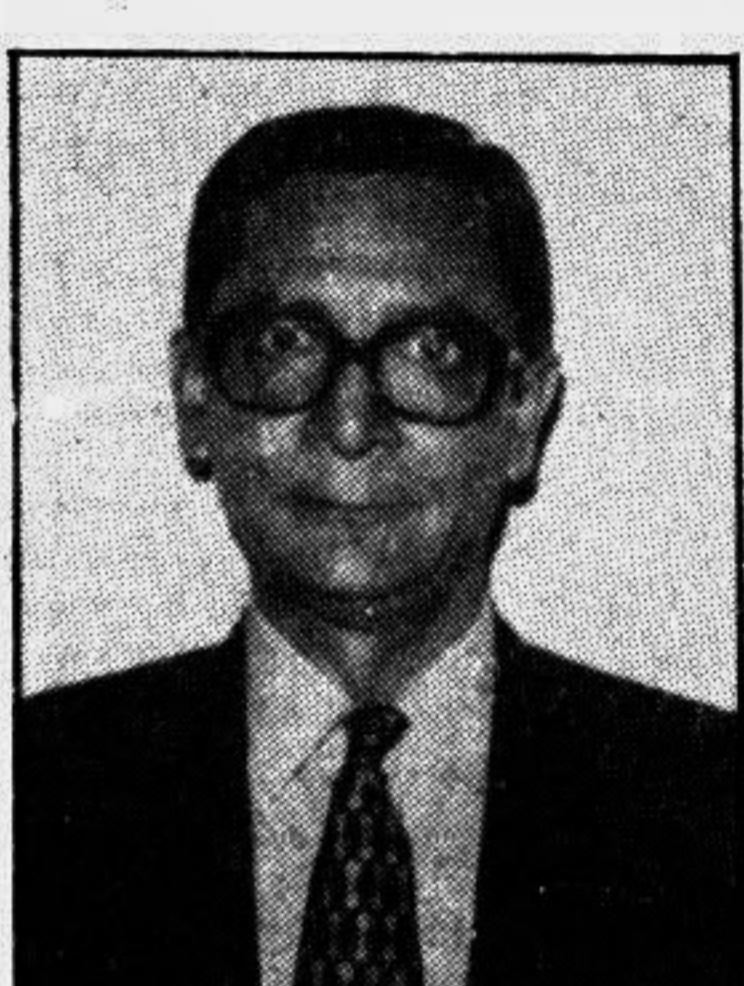
I am glad to know that the International Ozone Day is going to be observed in Bangladesh as elsewhere in the World on the 16th of September. The significance of the day has further been enhanced this year in consonance with the observance of the 10th anniversary of signing the Montreal Protocol on conservation of the environment. I welcome the Department of Environment for taking a number of programmes to observe the day.

It is the warrant of time that we should think on the innovation of easily affordable alternatives to prohibit the use of substances depleting the ozone layer. It is time for our scientists to prove their worth in this regard.

Along with the global efforts, let the initiatives of Bangladesh to protect the ozone layer be succeeded. I wish all success of the programmes of the day.

Joi Bangla, Joi Bangabandhu  
May Bangladesh live forever

**Sheikh Hasina**  
Prime Minister  
Government of the People's  
Republic of Bangladesh



## বাণী

পরিবেশের অবক্ষয় ও ব্যাপক দূষণের কলে বিশ্ব আজ ভীষণভাবে বিপর্যস্ত। গ্রীন হাউজ প্রভাব, আবহাওয়া, পরিবর্তন, ভ্রমণীয় অপরাধ, সমুদ্র পৃষ্ঠার উচ্চতা বৃক্ষ, ওজোনস্তর ক্ষয়, মরময়তা ইত্যাদি কারণে পৃথিবীর পরিবেশ ও প্রতিবেশে ভারসম্য বিনষ্ট হতে চলেছে। আশীর কথা, পরিবেশের সাথে আমদানির দেশেও এখন পরিবেশ বিষয়ে ব্যাপক সচেতনতা সৃষ্টি হয়েছে। পরিবেশ রক্ষার বাংলাদেশ সরকার মন্ত্রিসভাকে কর্তৃত কর্মসূচির কন্ডেশন, বীজবৈচিত্র কর্মসূচি ও মরময়তা প্রতিবেদ করেছে।

আহবাব আহমেদ  
সচিব  
পরিবেশ ও বন মন্ত্রণালয়

পৃথিবীর অপরাপর দেশের মত

## OZONE LAYER DEPLETION : BANGLADESH PERSPECTIVE

Saiyid Musharraf Husain  
Director General, DOE  
and Additional Secretary Govt. of Bangladesh

Life on Earth depends on the existence of a thin shield of a poisonous gas-ozone-high in the atmosphere called ozone layer. This "Ozone Layer" absorbs the harmful ultraviolet radiation (UV-B) emanating from the sun. It, therefore, shields plant and animal life from UV-B, which can be damaging to human health, ecosystem and among the causes of global climate change.

### Scientific Concern about Ozone Layer Depletion

Any damage to the ozone layer allows more UV-B radiation to reach the surface of the Earth. The first major statement of scientific concern over ozone depletion was prompted by James Lovelock's discovery of the presence of CFCs in the atmosphere all around the world. Sherwood Rowland and Mario Molina's research paved the way to the understanding of the processes by which CFCs diffuse up into the stratosphere and are broken apart to destroy ozone molecules. Extensive works have been conducted in the meantime to confirm the possibility of the ozone depletion by CFCs and assess the future environmental impact. In fact, such ozone loss was observed later in global trends of total ozone as well as dramatic depletion of the stratospheric ozone thereby creation of the "Ozone Hole" over Antarctica.

### Promotion of Ozone Layer Protection in Bangladesh

Bangladesh accessed to the Montreal Protocol on Substance that Deplete Ozone Layer on 2nd August, 1990 and ratified its London amendment on 18th March 1994. In order to implement the Montreal Protocol and

consequent commitment to phase-out the use of ODS by the stipulated period, the Government of Bangladesh under-took a reconnaissance study on the use of ODS in the country in early 1993 and based on the study, a detailed country programme was prepared in 1994. In accordance with the country programme four project proposals were submitted to the Montreal Protocol Multilateral Fund (MLF) for financial assistances. These are:

1. Institutional Strengthening for the Phase-out of Ozone Depleting Substances (ODSs).
2. Aerosol Sector Phase-out
3. ODS Phase-out in Large Refrigeration Units (LRUs)
4. Training for Refrigeration and Air-conditioning Service Sector

Out of these four foreseen projects only the first two were approved by MLF.

In pursuance of commitment of Bangladesh to Phase-out ODSs within the stipulated period, Ozone Cell was constituted within the Department of Environment (DOE) on 9.10.1995. Moreover, an Inter-ministerial National Technical Committee on Ozone Depleting Substances (NTCOS) was constituted under the chairmanship of the Secretary, Ministry of Environment and Forest. The major activities of Ozone Cell are:

1. to coordinate and facilitate activities related to ODS phase-out;
2. to grant permits during transition Period and Monitor activities related to ODS use in Bangladesh;
3. to facilitate exchange of information and access to information on ODS phase-out activities, technology alternatives, technical reports, etc.;

The industrialized nations are largely responsible for the problem of the ozone depletion. It has, hence, been agreed that these countries should be the first to reduce their production and consumption of these substances. In accordance with these decisions, the bulk of ODS including all the substances specified in the original Protocol were phased out completely in industrialized countries by the end of 1995. The remaining categories are scheduled for total phase-out.

4. to disseminate information and create awareness about ODS phase-out;
5. to organize Seminars/Workshops on ODS substitutes, alternative technologies recycling and recovery, etc.
6. to report to the ozone Secretariat, on yearly basis, about Progress being made in the implementation of the country Programme;

To assess the current import and consumption scenarios of ozone depleting substances in Bangladesh for the year 1994 and 1995, a country wide survey was undertaken by ozone cell. Data update survey for the year 1996 is underway.

According to the data update survey, ODS used in Bangladesh during 1995 were CFC-11, CFC-12, HCFC-22, Methyl Chloroform and Carbon tetrachloride and, ODSs import and Consumption in various sectors were CFC-11 (88.610 MT, 26.99% of total ODS used in aerosol Sector), CFC-12(192.070 MT, 58.503% of total ODS used in aerosol sector, refrigeration and air-conditioning, A/C car etc), HCFC-22(37.810 MT, 11.516% of total ODS used in refrigeration and air-conditioning Sector), Carbon tetrachloride (7.584 MT, 2.2% of total ODS used in Pharmaceutical and Chemical industries) and methyl chloroform (2.231 MT, 0.0679% Pharmaceutical and Chemical industries).

- 1) Use HCFC-22 instead of CFC-12 and it has less ozone depleting potential (0.05) compared to CFC-12 (1.0).
- 2) Use CFC-free aerosol sprays, refrigerator, air-cooler, air-conditioning.
- 3) Import equipment of CFC-free technologies.
- 4) Introduction of recovery and recycling practices in refrigeration and air-conditioning services shops.
- 5) Use of alternative technologies in different services shops.

At present, according to import report, a calculated level of 3.0 gm of ODSs is consumed in Bangladesh. Bangladesh shall be entitled to use the average of its annual calculated level of consumption for the period of 1995 to 1997 inclusive as the basis for its compliance with the control measures. Control measures have to be

implemented on the import and consumption of ODSs in Bangladesh from 1st July 1997. As a developing country, Bangladesh shall enjoy a ten-year grace period in order to meet its basic domestic needs and schedule of ban of CFCs, halons and carbon tetrachloride in 2010, methyl chloroform in 2015 and of HCFCs in 2040.

During the survey, ODS recycling practices in Bangladesh was observed and it was found that only 4% of the large refrigeration service shops recycled some CFCs, using improvised vacuum pumps and also that only about 65-70% of the CFC gases per equipment could be recovered and used by them.



## বাণী

জাতিসংঘ সাধারণ পরিষদের সিঙ্কেট অনুষ্ঠান প্রতি বছর ১৬ই সেপ্টেম্বর আন্তর্জাতিক ওজোন দিবস পালিত হয়ে আসছে। ওজোনস্তর ক্ষয়রোধ, ১৯৮৭ সালে কানাডার মন্ত্রিসভার মুক্তির প্রটোকল দ্বারা স্বীকৃত হয়। এ বছর মন্ত্রিসভার প্রটোকল দ্বারা বাস্তবিক উন্নয়নিত উন্নতি ওজোনস্তর ক্ষয়রোধসম্বন্ধে পরিবেশ বিপর্যয় রোধ সম্ভব নয়।

To minimize unnecessary emission of ODSs during recovery and recycling of refrigerants in service shops in Bangladesh, a project entitled "Implementation of a National programme for Recovery and Recycling of Refrigerants" is now under consideration by MLF. The main objective of the project is to implement a comprehensive national programme for recovery and recycling of refrigerants in the refrigeration and air-conditioning service sectors.

### Citizen's Responsibilities

As individuals, citizens can contribute considerably to minimize the depletion of stratospheric ozone layer and to save the only one Earth in the following ways:

- 1) Use HCFC-22 instead of CFC-12 and it has less ozone depleting potential (0.05) compared to CFC-12 (1.0).
- 2) Use CFC-free aerosol sprays, refrigerator, air-cooler, air-conditioning.
- 3) Import equipment of CFC-free technologies.
- 4) Introduction of recovery and recycling practices in refrigeration and air-conditioning services shops.
- 5) Use of alternative technologies in different services shops.

জয় বাংলা, জয় বঙ্গবন্ধু  
বাংলাদেশ চিরজীবী হোক।

সৈয়দা সাজেদা চৌধুরী

মহী  
পরিবেশ ও বন মন্ত্রণালয়  
গণপ্রজাতন্ত্রী বাংলাদেশ সরকার



Courtesy :  
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