

# **BANGLADESH**

## **INTRODUCTION**

Bangladesh ratified Vienna Convention for the Protection of Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer on 2 August 1990 and Country Programme was approved in 1994 chalking out a strategy to phase-out consumption of Ozone Depleting Substances (ODS). National Ozone Unit (NOU) was established in 1996.

Since ratification MLF approved about 2.9 million U.S. dollar for reconnaissance Survey, Country programme preparation, Institutional Strengthening, Aerosol Sector Phase-out, RMP, National ODS Phase-out Plan and for related consultancy services. Projects are being implemented by UNDP and UNEP. Activities were limited to Phase-out Aerosol Sector in 2002 (phase-out 50% of total ODS), halons, Methyl Bromide and introduction of alternatives in refrigeration, air-conditioning, solvent sector and providing regulations and licensing system. Total ODS consumption in 2004 was 470.80 MT and per capita consumption was about 3.48 gm. As per Protocol, Bangladesh is now in full compliance.

## **OBSERVATIONAL ACTIVITIES (CURRENT STATUS)**

Bangladesh is yet to undertake observational activities on ozone using methodologies including Column Measurement, Profile measurements of ozone and other gases /variables relevant to ozone loss. Our ozone office is not yet equipped with Narrowband filter instruments or Spectroradiometers and other necessary instruments for measurement of UV through Broadband.

However, we do have the Meteorological Department called, Bangladesh Meteorological Department (BMD) has historical experience meteorological data observation and monitoring. But 1<sup>st</sup> meteorological observatory was established in Jessore (1864) long before IMD established under British Government. Dhaka Meteorological Observatory was established in 1949.

BMD at present has 34 meteorological observatories, 10 pilot balloon observatories, 3 Rawin Sonde (RS) observatories, 12 agro-meteorological observatories, 4 Radar stations and 1 Seismological observatory. 3 More seismological observatories are going to be established soon. All the observations are taken as per WMO standard and equipments are also standardized accordingly.

## **PROJECTS AND COLLABORATION**

Currently, we don't have any project or activities relating to research/monitoring on the status of ozone over Bangladesh as well as to determine the level of ground UV/ozone.

## **FUTURE PLAN**

As BMD is the authorized Department of the Government of Bangladesh for Meteorological and Geophysical observation and is also a member of WMO our ozone office has chalked out a plan to start ozone research activities and enhance observational capacities in terms of column measurements, profile measurements and also for ground UV measurements by utilizing the skill and present infrastructure of BMD, subject to the procurement of necessary instruments for the purpose. NOU of the Department of Environment will coordinate and facilitate the activities.

## **IMMEDIATE NEEDS**

### **For column measurement and profile measurement**

One Dobson Spectrophotometer to be set up and one pilot ozonesondes observatory to be setup in BMD, Dhaka station attached to the Rawin Sonde (RS) observatory, Dhaka.

### **For UV measurements**

At present total radiation is continuously taken by Eppley Pyranograph by BMD at its 12 stations throughout the country. Introduction of UV Sensor to the present Eppley Pyranograph or by procuring additional digital UV measuring instruments to the BMD observatories located in Dhaka and for other field stations.

### **Conclusion**

Necessary funds for procurement of instruments and operational costs along with necessary human resource development are utmost necessary for the said activities.

Upcoming efforts of Bangladesh on Ozone Research if materialized will strengthen NOU to contribute significantly by providing with the ground truth data in WMO format to the World Ozone and Ultraviolet Radiation Data Centre (WO<sub>3</sub>UDC), Canada for real Ozone mapping supplement to the satellite measured global coverage. Also it shall be able to ably contribute to the ongoing research to the various institutes on impact of UV-B radiation on human health and eco-system.

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