

Press Release: IITM Celebrated World Ozone Day to mark the success of Ozone hole recovery path

Pune, 16 September 2014: Indian Institute of Tropical Meteorology (IITM), Pune celebrated the World Ozone Day on 16th September 2014 by organizing various events with the involvement of different schools. A total 46 students from eight different schools viz., DAV-Aundh, Bhartiya Vidyapeeth-Balewari, Loyola School, Renuka Swaroop Memorial Girls High School, HHCP High School, Rosary School, Sahyadri International School, Rosary School participated in the Event. Competitions on Best out of Waste, Elocution and Drawing were organized on various themes related to Environment Awareness.

The Program started with the brief introduction on World Ozone Day and ENVIS activities at IITM provided by Ms Neha Parkhi, Senior Program Officer, ENVIS Centre, IITM. She emphasized on IITM's holding one of the largest data repositories on the thematic area of "Acid rain and Atmospheric Pollution". This data is available to common man who can download from ENVIS website (<http://envis.tropmet.res.in/>). Two Public Talks were organized jointly by Hindi Week. The First one was on the discovery of Ozone hole and its recovery delivered by Dr G. Beig and the second one on the latest status of "Monsoon 2014" in India by Dr R.R. Kelkar, Ex DGM from India Meteorological Department (IMD).

Dr Gufran Beig, SAFAR Program Director and Coordinator ENVIS Centre, Member, Review Panel of UNEP-WMO [United Nations Environment Program (UNEP) and World Meteorological Organization] - "*Scientific Assessment of Ozone Depletion 2014*", only Scientist from India in Review Panel, delivered public lecture on "Ozone Hole: Discovery to Recovery and Recovery to worry". He has mentioned the good news that for the first time after the discovery of ozone hole, UNEP- WMO reported the Ozone layer is on the path of recovery. However he expressed concern on the future of ozone which is likely to be again going in a depleting mode by the end of 21st century if climate change (led by CO₂, CH₄, N₂O growth) goes unabated. He concluded his talk with a statement that Ozone Scientists have done their part successfully which is yielding fruits but now it is the turn of climate scientists to put a full stop on the growth of green house gases. The excerpts from his talk is attached as Annexure I.

Cartoon Documentary telling about Ozone and its harmful effects and IITM's SAFAR documentary prepared during Common Wealth Games-2010 were screened during the Event. Dr R. Krishnan, Director of IITM distributed the Certificates and Prizes to the Winners of various Competitions.

Results of various competitions held during the Event are as follows:

1] Drawing competition - Category : 10-14 yrs

1st: Rachana Shankar Parbe -DAV School

2nd: Bhakti Sanjay Bhomaj - HHCP high school

3rd: Gauri Mahendra Savant - Renuka Swaroop Memorial Girls High school

Consolation prize : Shrutika Raju Wagh - Sahyadri International School

2] Drawing competition - Category : 14-18 yrs

1st: Soham Pawar -Rosary School

2nd: Shreyas Shetty - Sahyadri International School

3rd: Pallavi Kale - Renuka Swaroop Memorial Girls High school

3] Best out of waste competition

1st: Anushka Mankumbare - Renuka Swaroop Memorial Girls High school

2nd: Moosa Kazi -Rosary School

3rd: Jainil Shah - Loyola School

Consolation prize : Raut Monika Kailas- Sahyadri International School

4] Elocution Competition

1st: Umne Salma - Sardar Dastur Noshar Girls High School

2nd: Naheed Khan - Rosary School

3rd: Chirag More - Loyola School

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Annexure I

EXTRACT from the PUBLIC LECTURE delivered on the Occasion of World Ozone Day at IITM, Pune on 16th September 2014

By-

-Gufran Beig, Project Director, SAFAR

Indian Institute of Tropical Meteorology, Pune

Member, Review Panel of UNEP-WMO [United Nations Environment Program (UNEP) and World Meteorological Organization]

-“*Scientific Assessment of Ozone Depletion 2014*”

(Only Scientist from India in Review Panel)

Ozone Layer: Discovery to Recovery & Recovery to Worry

Ozone Layer on the Path of Recovery but with a pinch of salt for Tropics

The Earth's protective ozone layer is well on track to recovery in the next few decades thanks to concerted international action against ozone depleting substances, according to a new assessment by 300 scientists.

The Assessment for Decision-Makers, a summary document of the *Scientific Assessment of Ozone Depletion 2014*, is being published by the United Nations Environment Program (UNEP) and the World Meteorological Organization (WMO), on 10th Sep 2014 and is the first comprehensive update in four years.

The stratospheric ozone layer, a fragile shield of gas, protects the Earth from harmful ultraviolet rays of the sun. Without the Montreal Protocol and associated agreements, atmospheric levels of ozone depleting substances could have increased tenfold by 2050. According to global models, the Protocol will have prevented 2 million cases of skin cancer annually by 2030, averted damage to human eyes and immune systems, and protected wildlife and agriculture, according to UNEP. The day the Montreal Protocol was agreed upon, 16th September, is celebrated as the International Day for the Preservation of the Ozone Layer which is celebrated today at IITM, Pune.

The phase-out of ozone depleting substances has had a positive spin-off for the global climate because many of these substances are also potent greenhouse gases. However, the assessment report cautions that the rapid increase in certain substitutes, which themselves are potent greenhouse gases, has the potential to undermine these gains. The assessment also notes that there are possible approaches to avoiding the harmful climate effects of these substitutes.

“There are positive indications that the ozone layer is on track to recovery towards the middle of the century (See **Figure-1**). The Montreal Protocol – one of the world’s most successful environmental treaties – has protected the stratospheric ozone layer and avoided enhanced UV radiation reaching the earth’s surface. “However, the challenges that we face are still huge. The success of the Montreal Protocol should encourage further action not only on the protection and recovery of the ozone layer but also on climate.

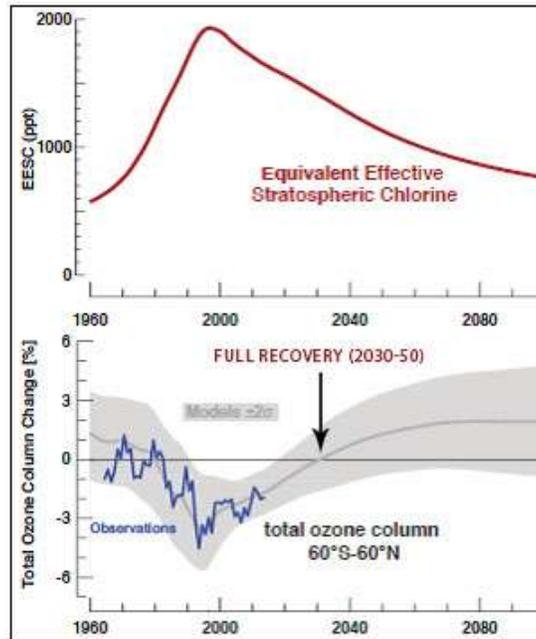


Figure-1

Quote by me “The ozone success story should boost our moral to display the same level of urgency and unity to meet challenge of climate change. Human activities will continue to change the composition of the atmosphere.

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TROPICS or India Specific Conclusions

Total ozone changes in the tropics are smaller than in any other region and amount is also less as compared to mid and high latitude regions of the world. India was not much affected by stratospheric ozone depletion problem until now but when other part of the world is going towards better days due to success of MP, India face 3 major challenges in future-

a) Abetting Climate Change is vital for Tropical (Indian) ozone in future:

(See Figure-2)

Tropical ozone levels are most sensitive to circulation changes driven by greenhouse gases viz. CO₂, N₂O, and CH₄ increases. The N₂O deplete ozone very effectively which will get aggravated in tropics due to Brewer-Dobson circulation phenomenon. As a result of this, significant decreases in column ozone are projected during the 21st Century in the tropics that include India.

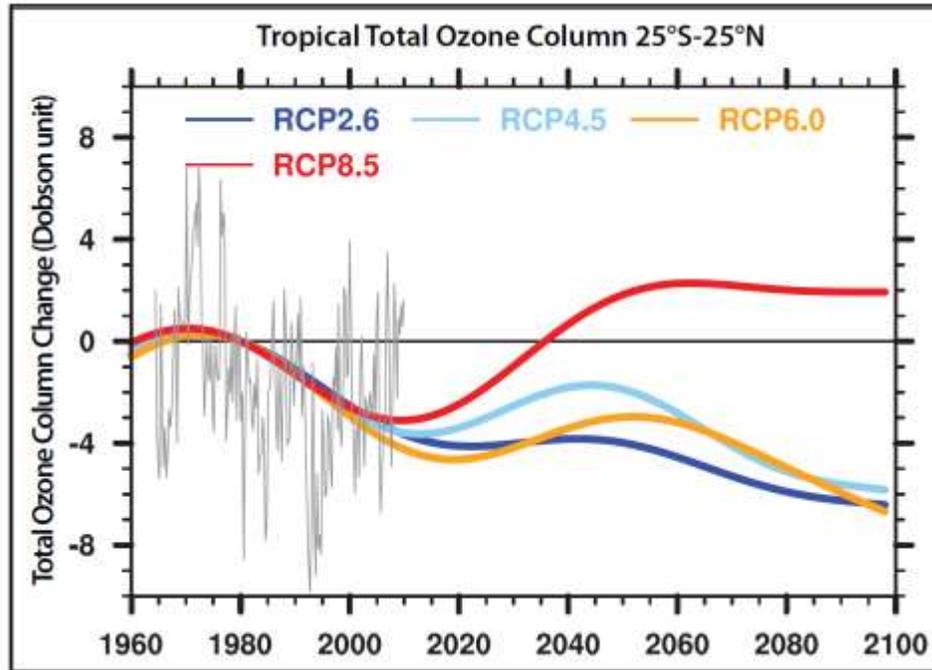


Figure-2

b) Aerosol Increase may pose challenge for Indian ozone:

Aerosol Increase in Increases in stratospheric aerosols are major problem in India that is likely to deplete ozone. The increase in aerosols could also be caused by injection of sulfur by geo-engineering that is proposed by one Noble Lauriat to deal with climate change but contested later.

c) Air pollution may put challenge:

Total ozone may increase due to increase in tropospheric ozone. But it will adversely affect us because here Ozone acts as Greenhouse Gas and contributing to climate change and goes to cycle as mentioned in (a). Due to emissions from fossil fuel, bio-fuel, industries and power sectors, tropospheric ozone is increasing as advocated since long by scientists from IITM.

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