



**Pre-Conference Expert Talks and Group Discussion (Online)**  
on  
**EARTH'S CHANGING CLIMATE**  
**13.10.2020**

**Introduction:** Prof. Rameshwar Bali, Vice-President, SES  
**Moderator:** Dr. K. J. Ramesh, Former Director General, IMD  
**Time: 10:00 AM-01:40 PM**

**Forenoon Session I: *Setting the Stage for the Conference: Global Climate Change: Context for Policy and Action***

**Session Chair:** Prof. A. Singhvi, Physical Research Laboratory  
**Speakers:**

*Time: 10:15-10:35 AM*

**1) Challenges for India in a climate constrained World**

Sri Surya Sethi, Former Principal Adviser (Power & Energy), Plg. Com. & UNFCCC Negotiator

*Time: 10:40-11:00*

**2) New research questions in understanding climate change, policy response and societal change**

Sri Mukul Sanwal, Retd. IAS, Formerly with UNEP & UNFCCC Negotiator

*Time: 11:05-11:25 AM*

**3) Energy policy and mitigation**

Prof. R. Srikanth, NIAS, Bangalore

*Time: 11:30-11:50*

**4) India's national communications and biennial update reports**

Dr. J R Bhat, Adviser, MoEF & CC

**Vote of Thanks:** Dr. Satish C. Tripathi, Secretary, SES

**Time: 11:55 AM**

**Forenoon Session II: Climate Science for Climate Action Strategy**

Introduction:

**Session Chair:** Dr. Akhilesh Gupta, DST

**Speakers:**

*Time: 12:10-12:30*

**1) Understanding the observed and future projected changes in the Indian monsoon**

Dr. R. Krishnan, IITM, Pune

*Time: 12:35-12:55*

**2) Science based tools for regional policy planning**

Dr Ajay Mathur, Director General, TERI

*Time: 01:00- 01:20*

**3) The climate change and biogeochemistry of the oceans**

Dr Satish Shenoy, Former Director, INCOIS, Hyderabad

*Time: 01:25-01:45*

**4) Teleconnection between tropics and poles under changing climate**

Dr. M. Ravichandran, Director, NCPOR, Goa

**Vote of Thanks:** Dr. Satish C. Tripathi, Secretary, SES

**LUNCH BREAK (01:45-02:45)**

**Introduction:** Prof. Venkatesh Dutta, Joint Secretary, SES

**Moderator:** Dr. Rasik Ravindra, Former Director, NCAOR

**Time: 2:50 - 4:15 PM**

**Afternoon Session I: *Impacts of Climate Change***

**Session Chair:** Prof. Ravi Shankar Nanjundiah, Director, IITM, Pune

Speakers:

*Time: 03:00-03:20*

**1) Coastal inundation and shoreline changes**

Dr M V Ramana Murthy, Director, NCCR

*Time: 03:25-03:45*

**2) Himalayan glacial change**

Prof. Anil Kulkarni, IISc, Bangalore

*Time: 03:50-04:10*

**3) From nanometer to global scales: Aerosol influences on temperature, clouds and rainfall over India**

Prof. Chandra Venkataraman, IIT Bombay

**Vote of Thanks:** Dr. Satish C. Tripathi, Secretary, SES

**GROUP DISCUSSION**

**Introduction:** Prof. Mukund Sharma, President, SES

**Moderator:** Dr. Rasik Ravindra, Former Director, NCAOR

**Time: 4:30-6:30 PM (16:30 – 18:30 IST)**

**Panel:**

Prof. Dame Jane Francis, Director, British Antarctic Survey

Prof. Kim Holmén, International Director, Norwegian Polar Institute

Prof. Ashok Singhvi, distinguished Scientist, PRL (Chairman Session-I)

Dr. Akhilesh Gupta, Advisor, DST (Chairman Session-II)

Prof. Ravi S. Nanjundiah, Director, IITM (Chairman Session-III)

Dr. Vandana Prasad, Director, BSIP, Lucknow

Dr. M. Ravichandran, Director, NCPOR, Goa

Dr. K. J. Ramesh, Former Director General, India Meteorology Department

**Preamble:**

The global concern on the climate change crises- rising temperatures, increase in sea level and extreme weather events- and its impact on the land, environment and its habitants is growing manifold. That the changes are real, is now proved by the empirical evidences gathered from across the planet, especially the three Poles-Arctic-Antarctic-Himalaya and the oceans. There are reports of rapid thawing of permafrost, loss of over 30% of Arctic sea ice cover and massive retreat of Greenland ice sheet in the recent years.

Results of mass balance studies of the Antarctic Ice sheet, published in Nature in 2018 by Andrew Shepherd and others has put the loss of Antarctic ice at  $2,720 \pm 1,390$  billion tonnes between 1992 and 2017, which corresponds to an increase in mean sea level of  $7.6 \pm 3.9$  millimetres. The picture from Himalaya is equally grim with some smaller glaciers facing the risk of extinction by the end of century. Our oceans are becoming increasingly acidic and warmer. These changes are global and play a significant part in the coupled ocean-atmosphere-earth system.

In yet another study Winther and his co-workers (Nature, 2020) speak of the unprecedented pressure on the oceans due to rapidly evolving blue economy and climate change requiring implementation of integrated ocean management framework.

The UN FCCC (Framework Convention on Climate Change) in its 2019 Review on damages associated with Climate Change Impacts, has acknowledged that climate change is a common concern of humankind and urged that Parties when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity.

**The three days conference aims to look into all above issues and more.**

It was suggested that the three days virtual Conference should lead to framing up of new programs and to prepare the society in general for impacts and dislocations/migration/pandemics etc.

**Accordingly, a Pre-Conference Meeting** is being organized with domain expert speakers to set the stage for wider discussions on key issues such as impacts and challenges for India in a Climate Constrained World, changes in Biogeochemical processes in the Oceans, impact on coastal regions, linkages between tropics and Poles, monsoons, Cryosphere changes including Himalaya, new research questions in understanding climate change, policy response, societal change and mitigation.

This Group Discussion by a Panel of Distinguished Scientists will discuss various issues of earth's Climate change before the us and will provide future course: The main aspects before us are as below:

1. Quaternary climatic changes and climate cycles (land and ocean records); Anthropogenic interferences
2. Extreme weather events and impact on society
3. Natural variability in the climate system: Natural climate forcing
4. Climate change and impact on water resources
5. Ocean warming/acidification, coastal ecosystem and sea-level rise
6. Teleconnection between Poles and Tropics
7. Priority Challenges to be addressed for SDGs: Climate Change; Healthy Oceans; water Security; Clean Air; Weather and Disaster Resilience; Sustainable Soil Management
8. Disaster management and policy framework; Climate Actions

**Vote of Thanks:** Dr. Satish C. Tripathi, Secretary, SES