

ANNUAL REPORT
LIGHTS
LIST OF ACTIVITIES
DURING
2015-2016

LIGHTS during the financial year 2015-16 organised a host of programmes with support from the ministries and other organizations. The chief among them are Earth Day Celebration 2015 on 22nd April and International Conference on Science & Geopolitics of Arctic and Antarctic on 29-30 September 2015.

1. EARTH DAY CELEBRATIONS 2015

On 22 April one of the largest celebrations on earth took place - to celebrate the unique place of the earth in our solar system. The earth is the only planet with an incredible biodiversity, learning about and protecting this gift of nature was what earth day was all about.

LIGHTS organized the earth day celebrations in Sikkim and Andhra Pradesh in 10 schools supported by Vignan School in Andhra Pradesh and Sun Pharma in Sikkim.

2. INTERNATIONAL CONFERENCE ON SCIENCE & GEOPOLITICS OF ARCTIC AND ANTARCTIC

International Conference on SCIENCE & GEOPOLITICS OF ARCTIC – ANTARCTIC – HIMALAYA (29 to 30 SEPTEMBER, 2015) at India International Centre, New Delhi.

Organising Committee

Dr. D P S Seth, Former Secretary, BSNL, Member TRAI

Dr. Rasik Ravindra, Panikkar Professor to ESSO, MoES

Prof. Sanjay Chaturvedi, Punjab University, Chandigarh

Dr. M Sudhakar, Advisor, MoES and Director CMLRE

Ms. Sulagna Chattopadhyay, Editor and Co-Founder, Geography and You

Advisory Committee

Dr. P S Goel, Former Secretary, MoES

Dr. M. Ravichandran, Director, NCAOR

Dr Wakdikar, Advisor, MoES

Dr K J Ramesh, Advisor, MoES
Dr Swati Basu, Advisor, MoES

Programme: Inaugural Session

- **Welcome Address:** Dr. Rasik Ravindra, Panikkar Professor to ESSO, MoES
- **Special Address Note:** Dr. W Selvamurthy, Former Chief Controller R&D for Life Sciences (LS) and International Cooperation (IC), Defence Research and Development Organisation (DRDO) and currently President, Amity Science, Technology and Innovation Foundation (ASTIF)
- **Guest of Honour Address:** Dr. P S Goel, Former Secretary, MoES
- **Chief Guest Address:** Dr. Shailesh Nayak, Former Secretary to the government of India, Ministry of Earth Sciences
- **Keynote Address:** Dr. M N Rajeevan, Secretary to the government of India, Ministry of Earth Sciences
- **Vote of Thanks:** Ms. Sulagna Chattopadhyay, President, LIGHTS, Research Foundation, Convener SaGAA III 2015

Session 1: Geopolitics of the Polar Region

- The Arctic Experience and the Third Pole: A Perspective from Iceland - H.E. Thórir Ibsen, Ambassador of Iceland
- India's Polar Challenge: Geopolitics and Challenging 21st Century Science Diplomacy - Dr. Sanjay Chaturvedi, Professor, Department of Political Science, Panjab University
- Laws of the Seas and UNCLOS - Dr. M Sudhakar, Director, CMLRE

- India and Annex VI to the Madrid Protocol: Some Preliminary Thoughts - Dr. Luther M Rangreji, Associate Professor, Faculty of Legal Studies (FLS), South Asian University.
- Arctic: A Paradox and Antithesis - Dr. Uttam Sinha, Research Fellow, Institute for Defence Studies and Analysis (IDSA).

Session 2: Global Climate Change and the Polar Region

- Thoughts on Priority Research in the Context of the Indian Antarctic Programme - Dr. P. C. Pandey, Professor Earth, Ocean & Climate Sciences, IIT Bhubneshwar
- Abrupt Climate Shifts Over the Past 10,000+ years: An Arctic Antarctic-Asian imbroglio? - Dr S. Rajan, Fmr Director, National Centre for Antarctic and Ocean Research, Goa
- The IITM Earth System Model for Investigating Long-term Climate Variability and Change - Dr. R Krishnan Scientist G, Indian Institute of Tropical Meteorology, Pune
- Remote Sensing of Glacier Changes at the Three Poles—how much ice are we losing and why? - Dr. Geir Moholdt Norwegian Polar Institute, Tromsø, Norway
- Short Term Climate Prediction of Polar Sea-Ice with a Coupled Model - Dr. A K Mitra, Scientist-F, NCMRWF, Noida
- Effects of Global Climate Change on Polar Glaciers - Dr. Ashit Kumar Swain, Geologist, Geological survey of India

Session 3: Global Climate Change and the Himalayan Region

- Himalayan Cryosphere and Climate Change - Dr. Anil V Kulkarni, Divecha Center for Climate Change, Centre for Atmospheric & Oceanic Sciences, Indian Institute of Science, Bangalore

- Combatting Climate Change in Himalaya Perspective- Adaptation and Mitigation Strategies - Dr M. R. Bhutyani, Director, DTRL, DRDO
- Response of Glaciers to Climate Factors in the Himalayan during last 10000 years - Dr. Milap Sharma, CSRD, Jawaharlal Nehru University
- Himalayan Cryosphere and its Role in Defining Indian Weather - Dr. A. P. Dimri, Associate Professor, Jawaharlal Nehru University, New Delhi
- Monitoring the Status of Snow and Glaciers of the Himalaya - Dr. Ajai, Group Director, MWRG, Space Application Centre, ISRO, Ahmedabad
- Changes in Climate and Snow Cover over Western Himalaya - Dr. Harendra Negi, Scientist-'E', Snow & Avalanche Study Establishment, DRDO, Chandigarh
- Himalayan Hydropower: Challenges, Uncertainties, and Threats to Sustainable Development - Dr. David E. Rheinheimer, Fulbright Nehru Postdoctoral Fellow, Indian Institute of Technology, Roorkee
- Shrinkage of Satopanth and Bhagirath Kharak Glaciers in the Recent Past - Dr. H. C. Nainwal, Professor and Head at Department of Geology, HNB Garhwal University, Srinagar Garhwal, Uttarakhand

Session 4: Living & Non-Living Resource Potential, Marine Protected Area and Geopolitics

- New Zealand and Marine Protected Areas in Antarctica - H. E. Mr. Grahame Morton, New Zealand High Commissioner
- Potential and Prospects of Krill Utilisation - Dr. C. N. Ravi Shankar, Director, Central Institute of Fisheries Technology, Cochin

- Fishery Resources of Antarctica - Conservation & Management. A Geopolitical Perspective - Dr. V. N. Sanjeevan, Former Director, The Centre for Marine Living Resources and Ecology (CMLRE), Cochin, Kerala
- Distribution of Deep Sea Trawl Resources from the Exclusive Economic Zone (EEZ) of India and Prospects of Exploring Untapped Deep Sea Resources from Central, Southern Indian Ocean and Antarctica seas - Dr. U. Sreedhar, Principal Scientist, Central Institute of Fisheries (CIFT), Cochin
- Cold Water Fisheries in Himalayan - Dr. Debajit Sarma, Principal Scientist (Fish & Fisheries Science), ICAR-Directorate of Coldwater Fisheries Research, Bhimtal, Nainital, Uttarakhand
- Technologies for Exploration and Harvesting of Ocean Resources - Dr. G. A. Ramadass, Principal Scientist, NIOT, Chennai

Session 5: Tourism Industry and the Poles

- Implications of Tourism in Pursuance of Annex vi - An Environmental Perspective - Dr. Anoop Tiwari, Scientist D, Department of Polar Environment, NCAOR
- A Concept note: Heat Island Transformation and Tourism in the Three Pole - Prof. Manju Mohan, Centre for Atmospheric Sciences, Indian Institute of Technology, New Delhi
- Should India Encourage Tourism in Antarctica? - Dr. Rasik Ravindra, Pannikar Professor at ESSO, MoES
- Anthropogenic activities and Environmental contamination in Antarctic regions - Ms. Tanu Jindal, Director, Amity Institute of Environmental Toxicology, Safety and Management, Amity Centre for Antarctic Research and Studies

Supported by

Ministry of Earth Sciences (MoES), Government of India, New Delhi

National Centre for Antarctic and Ocean Research (NCAOR), Goa

Indian Institute of Tropical Meteorology (IITM), Pune

The Marine Products Export Development Authority (MPEDA), Cochin

Department of Science and Technology (DST), New Delhi

Amity University, Noida

Central Institute of Fisheries Technology (CIFT), Cochin

Royal Norwegian Embassy in India, New Delhi

National Centre for Earth Science Studies (NCESS), Thiruvananthapuram

Indian National Centre for Ocean Information Services (INCOIS), Hyderabad

CN Technologies, New Delhi

Directorate of Cold Water Fisheries, Bhimtal

Wadia Institute of Himalayan Geology (WIHG), Dehradun

National Institute of Ocean Technology (NIOT), Chennai

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