

## 20 November 2025 (Day 3)

Plenary Talks: **Meghdoot Auditorium:** Chairs:

10:00 to 10:30 IST	<b>Plenary talk</b>	<b>Prof. Antonio Navarra</b> , CMCC, Italy “Opportunities and Challenges in Predicting weather and Climate using AI/ML”
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10:30 to 11:00 IST Tea Break

### [Parallel Sessions Begin]

11:00 to 13:30 IST	<b>Parallel Sessions</b>	<b>Slot E</b> <b>Monsoon Mission Hall:</b> Weather & Climate Science for Sustainable Agriculture (1 <sup>st</sup> Session - 2 <sup>nd</sup> @ Slot F) <b>Varahamihira Hall:</b> Climate Change & Extreme Weather Events (3 <sup>rd</sup> Session - Cont. from Slot C&D) <b>Meghdoot Auditorium:</b> Monsoon Dynamics & Prediction (1 <sup>st</sup> Session - 2 <sup>nd</sup> @ Slot F) <b>HPC Lecture Hall:</b> Paleoclimate Observations & Modeling <b>Aryabhatta Hall:</b> Physical, Chemical and Biological Oceanography <b>Meghdoot Lecture Hall 1:</b> Biosphere–Atmosphere Interactions (1 <sup>st</sup> Session - 2 <sup>nd</sup> @ Slot F) <b>Meghdoot Lecture Hall 2:</b> Air Quality & Health Impact (1 <sup>st</sup> Session - 2 <sup>nd</sup> @ Slot F)
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### Slot E | Monsoon Mission Hall

**Day 3 – 20 Nov 2025 (Morning): 11:00 – 13:00 hrs (1<sup>st</sup> Session – 2<sup>nd</sup> @ Slot F)**

**Weather & Climate Science for Sustainable Agriculture**

Session Chair : Dr. S. I. Laskar, IMD New Delhi,

Time	Speaker & Affiliation	Title
11:00 – 11:20	<b>Dr. Kripan Ghosh</b> , IMD Pune (Invited)	<i>Science to Services: Agromet Advisory Services for Climate-Resilient Agriculture</i>
11:20 – 11:40	<b>V. Rakesh</b> , CSIR-4PI (Invited)	<i>Remote Sensing and AI/ML Applications in Precision Agriculture and Water Resource Management</i>
11:40 – 11:55	<b>Dharani C</b> , CAST-CC, RPCAU	<i>Climate Resilient Crop Planning in the Periyar Vaigai Basin: Integrating Weather and Irrigation Insights</i>
11:55 – 12:10	<b>Leena Bhashkar Ambade</b> , MPKV Rahuri	<i>Study of Crop–Weather Relationship of Finger Millet under Different Climatic Conditions for Pune</i>
12:10 – 12:25	<b>Dr. K. Thirumala Lakshmi</b> , Paavai Engineering College	<i>Prediction of Crop Disease through Ensemble Machine Learning of Agro-Meteorology Data</i>
12:25 – 12:40	<b>Saimy Davis</b> , Tomorrow.io	<i>Tomorrow.io Weather Intelligence for Agricultural Decision-Making in Sub-Saharan Africa: Insights from OSIRIS</i>
12:40 – 12:55	<b>Gyanendranath Mohapatra</b> , CSIR-4PI	<i>Impact of Weather Pattern on Inter-Annual Crop Yield Variability over Different Agri-Regions of India</i>
12:55 – 13:10	<b>Dr. Ravindra Akre</b> , IMD	<i>To understand the relationship of weather parameters with crop yields in Nagpur district- Recent days</i>

### Slot E | Varahamihir Hall

**20/11/2025 (DAY 3) 11:00 – 12:30 (3<sup>rd</sup> Session – Cont. from Slot C&D)**

**Session: Climate Change and Extreme Weather Events**

**Session Chairs: Roxy Mathew Koll**

Time	Speaker & Affiliation	Title of the Talk
11:00 – 11:20	Sarosh Alam Ghausi, IIT Kanpur (Invited)	<i>Thermodynamic constraints on extreme weather events</i>
11:20 – 11:30	Ashish Routray, NCMRWF Delhi (Invited)	<i>Towards Improved Forecasting of High-Impact Weather: Performance of NCMRWF Regional Models with Advanced Data Assimilation</i>
11:30 – 11:40	Ipsita P, CSIR,- 4PI	Impact of Decadal Land-Use and Vegetation Data on WRF Model Initial Condition in Short-Range Rainfall Forecast in India
11:40 – 11:50	Debojit Sarkar, NARL Tirupati	<i>Tornado genesis and driving factors causing the recent occurrence of tornado over Mainaguri, West Bengal</i>
11:50 – 12:00	Pranaba K. Nayak, TIFR Mumbai	<i>Thunderstorm-induced muon events from a severe convective system: Ooty muon telescope observations with electric field, lightning, geosatellite, and ERA5 reanalysis</i>
12:00 – 12:10	Pavan Ramesh Vaidya, IIT Delhi	<i>Evaluation of Biases in Historical Lightning Representation and Underlined Parameters Driving Lightning in CMIP6 Models</i>
12:10 – 12:20	Suneet Dwivedi, University of Allahabad	<i>Waiting Time and Clustering of Extreme Rainfall Events over India in a Warming Climate</i>
12:20 – 12:30	Amrita Prasanth, IMD	<i>Monitoring Extreme Rainfall Events Using Satellite &amp; Radar Data: A Case Study of the Wayanad Landslide</i>

**Slot E | Meghdoot Auditorium**

**20 November 2025 (DAY 3)**

**Monsoon Dynamics & Prediction (1st Session -2<sup>nd</sup> @ Slot F)**

**Time: 11:00 – 13:30 hrs**

**Session Chair: Dr Sivsai Dixit**

Time	Speaker & Affiliation	Title
11:00 – 11:20	Prof. Boualem khouider, University of Victoria (Invited)	Improving the fidelity of climate models via stochastic parameterization of convection
11:20 – 11:35	M. G. Manoj, Cochin University of Science & Technology	A wind profiling radar-based dynamical index for tracking Indian monsoon onset over Kerala
11:40 – 11:55	Uma K. N., SPL, VSSC	Morphology and Dynamics over the Monsoon Gateway and Rain Shadow Regions: Insights from long-term Radar Observations and Reanalysis
11:55 – 12:10	Yogenraj Patil, IIT Madras	Phase transitions in climate network define the large-scale onset and progression of Indian monsoon
12:10 – 12:25	Siddharth Kumar, IITM Pune	Rethinking Indian Summer Monsoon Teleconnections Using Information Entropy
12:25 – 12:40	Dr. Oindrila Nath, SPL, VSSC, ISRO	Quasi-Biennial Oscillations and Indian Summer Monsoon Coupling Mechanisms: A New Perspective
12:40 – 12:55	Mohan T. S., NCMRWF	Process-oriented evaluation of parameterized convection in the NCUM Global Modelling System over the Indian Subcontinent
12:55 – 13:10	Ravi Dhishana, IIT Delhi	Dynamics of scale interactions between synoptic scale and mean flow during Indian summer monsoon

**Slot E | HPC Lecture Hall**  
**20/11/2025 (DAY 3) 11:00 to 13:30**  
**Session: Paleoclimate Observations and Modelling**  
**Time: 11:00 – 13:30 hrs**  
**Session Chair: Dr. Naveen Gandhi**

Time	Speaker & Affiliation	Title
11:00 – 11:20	Prof. Yair Rosenthal, Rutgers University, USA	<i>Upwelling that lasted millions of years (Invited)</i>
11:20 – 11:40	Prof. K. Ashok, University of Hyderabad	<i>Multi-centennial Variability of the Indian Summer Monsoon and its Drivers: Insights from CMIP5/PMIP3 Last Millennium Simulations (Invited)</i>
11:40-12:00	Sabin T P, IITM Pune (invited)	<i>Role of Orbital Forcing, Oceanic Feedbacks, and the Green Sahara: What Truly Shaped the Mid-Holocene Indian Monsoon?</i>
11:50 – 12:05	Pushpendra Pandey, BSIP Lucknow	<i>Four Centuries of Spring Drought in the Western Himalayas: Tree-Ring Evidence, Atmospheric Drivers, and Future Risks</i>
12:05 – 12:20	Upasana Swaroop Banerji, NCESS	<i>Unveiling the signals of climatic events of the Meghalayan Stage from the mudflats of southern Saurashtra coast, western India</i>
12:20 – 12:35	Nagaraju Chilukoti, NIT Rourkela	<i>Investigating the Indian Summer Monsoon Variability during the Mid-Pliocene using CMIP6 Model Simulations</i>
12:35 – 12:50	Charan Teja Tejavath, NCESS	<i>Multi-centennial Variability of the Indian Summer Monsoon and its Drivers: Insights from CMIP5/PMIP3 Last Millennium Simulations</i>
12:50 – 13:05	Ayantika D. C., IITM Pune	<i>Unraveling the Mechanisms Linking Volcanic Eruptions to the Indian Summer Monsoon</i>
13:05 – 13:20	B. Preethi, IITM Pune	<i>Status and Updates on Dendroclimatological Research at IITM: Tree-ring Chronology of Tectona grandis from Central India</i>
13:20 – 13:30	M D Kaif	<i>Interplay of Oceanic Variability and Orbital Forcing in Modulating Indian Summer Monsoon During the Younger Dryas and Holocene</i>

**Slot E | Aryabhata Hall**  
**20/11/2025 (DAY 3) Time: 11:00 – 13:00**  
**Ocean Society of India – OSI- Session | Physical, Chemical and Biological Oceanography**  
**Session Chairs: Dr. C. Gnanaseelan**

Time	Speaker & Affiliation	Title
11:00 – 11:20	Avijit Gangopadhyay, University of Massachusetts, USA (Invited)	Wind stress curl, the Gulf Stream and the springtime western boundary current in the Bay of Bengal
11:20 – 11:40	Dr. Vinu Valsala, IITM Pune (Invited)	Importance of Biogeochemistry of the Indian Ocean and Way Forward
11:40 – 12:00	Dr. Anant B. Parekh, IITM Pune (Invited)	Shallow Meridional Overturning Circulation
12:00 – 12:15	Arnab Mukherjee, NCPOR Goa	Evaluation of an Ocean General Circulation Model Simulation of the Observed East India Coastal Current
12:15 – 12:30	Ankit Sinha, CSIR–NIO	Variability of Thermocline Currents on the Continental Slope in the Eastern Arabian Sea
12:30 – 12:45	J. S. Deepa, IITM Pune	Influence of Southern Annular Mode (SAM) on the Indian Ocean Sea Level Variability
12:45 – 13:00	Amit Kumar Sharma, IITM Pune / AcSIR	Decadal Variability of Tropical Indian Ocean Heat Content from Century-Long Reanalysis Data and Its Mechanism

**Slot E | Meghdoot Lecture Hall 1**  
**20/11/2025 (DAY 3) Duration: 11:00 – 13:30 IST**  
**Biosphere–Atmosphere Interactions – (1<sup>st</sup> Session -2<sup>nd</sup> @ Slot F)**

**Chair: Dr. Pramit Deb Burman**

**Co-Chair: Dr. Yogesh K. Tiwari**

Time (IST)	Speaker & Affiliation	Title of the Talk
11:00 – 11:20	Dr. Semeena Shamsudheen, Centre for Ecology & Hydrology, UK ( <i>Invited</i> )	Land–Atmosphere Coupling and Convective Predictability over West Africa: Insights from Convection-Permitting Ensemble Forecasts
11:20 – 11:40	Prof. Somnath Baidya Roy, IIT Delhi ( <i>Invited</i> )	Terrestrial fluxes over Indian Agro-ecosystems
11:40 – 11:50	Yuji Shigefuji, IISc Bangalore	Assessing India’s carbon dynamics with a light-use-efficiency model calibrated using distributed eddy-covariance observations
11:50 – 12:00	Ms. Arunima J., IITM Pune	What controls the water-use efficiency of a subtropical forest in India?
12:00 – 12:10	Mr. S. Akshay, SPL–VSSC, Trivandrum	Sensitivity of vegetation-specific parameters in VPRM for estimating net-ecosystem exchange over India
12:10 – 12:20	Dr. Rahul Kashyap, IITM Pune	Moisture-controlled terrestrial carbon cycle in India
12:20 – 12:30	Mr. Joswin P. Joy, IIT Delhi	Quantifying age-dependent carbon removal rates of global tree functional types
12:30 – 12:40	Ms. Anagha K. S., IIT Kharagpur	Surface ozone pollution under CMIP6 scenarios: Implications for the yield of major food crops in India
12:40 – 12:50	Ms. Mohini Ahirwar, NRSC Hyderabad	Response of CO <sub>2</sub> fluxes from two contrasting ecosystems: Kavaratti and Kolkata
12:50 – 13:00	Pramit Kumar Deb Burman, IITM Pune	Terrestrial Carbon & Water Cycle in India: Review of Eddy-Covariance Measurements
13:00 – 13:10	Mr. Ajoy Karmakar, GBPNIHE Almora	Carbon and water-use efficiencies of an alpine grassland of Central Himalaya during the growing season
13:10 – 13:20	Mr. Rabi Shankar Maiti, Vidyasagar University	Statistical link between atmospheric methane concentration and pre-monsoon precipitation in the Indo-Gangetic Plain

**Slot E | Meghdoot Lecture Hall 2**  
**20 November 2025 (DAY 3) – Time: 11:00 – 13:30**  
**Air Quality & Health Impact (1<sup>st</sup> Session – 2<sup>nd</sup> @ Slot F)**  
**Chair Sachin Ghude, IITM and Gaurav Govardhan, IITM**

Time	Speaker & Affiliation	Title
11:00 – 11:20	Dr. Rajesh Kumar, NCAR ( <i>Invited</i> )	<i>Deterministic and probabilistic short-term air-quality forecasts to support air-quality decision-making activities</i>
11:20 – 11:40	Prof. Chandra Venkataratnam, IIT Bombay ( <i>Invited</i> )	<i>Air-quality forecasting: Advances and operational perspectives</i>
11:40 – 11:55	Rishikesh P, CEEW	<i>Assessing emissions from crop-residue burning: Comparing global inventories with burnt-area-based methods</i>
11:55 – 12:10	Dr. Molla Nageswar Rao, IITM Pune	<i>Invisible Threats in the Air: Characterization and Health Risk of Microplastics in Delhi NCR</i>
12:10 – 12:25	Dr. Bhishma Tyagi, NIT Rourkela	<i>Discovering the Urban Heat &amp; Pollution Island variability over Kolkata, India</i>

Time	Speaker & Affiliation	Title
12:25 – 12:40	Jayati Das, Shri Shikshayatan College	<i>Hidden in the air: Climate change, air pollution and respiratory risks among children — A case study around Kolkata</i>
12:40 – 12:55	Shatrughan Singh, Amity Univ. Rajasthan	<i>Variability in black carbon concentrations at a rural semi-arid site in NW India</i>
12:55 – 13:10	Ashish Vilas Mane, Fergusson College Pune	<i>HYSPLIT-based seasonal dispersion analysis of industrial pollutants: Mumbai, Korba &amp; Jamshedpur</i>

**13:30 to 14:30 IST Lunch break**

**[Parallel Sessions Continue]**

14:30 to 16:30 IST	<b>Parallel Sessions</b>	<b>Slot F</b> <b>Monsoon Mission Hall:</b> Weather & Climate Science for Sustainable Agriculture (2 <sup>nd</sup> Session – Cont. from Slot E) <b>HPC Lecture Hall:</b> Ground & Space Based Radar Applications (2 <sup>nd</sup> Session – Cont. from Slot A) <b>Meghdoot Auditorium:</b> Monsoon Dynamics & Prediction (2 <sup>nd</sup> Session - Cont. from Slot E) <b>Varahamihira Hall:</b> HPC Technologies, Geoinformatics for Disseminating Weather Information and Startups (Merged: Geoinformatics for Disseminating Weather and Climate Information & Emerging Startups in Weather and Ocean Science) <b>Aryabhatta Hall:</b> Review of Monsoon Forecasts <b>Meghdoot Lecture Hall 1:</b> Biosphere–Atmosphere Interactions (2 <sup>nd</sup> Session - Cont. from Slot E) <b>Meghdoot Lecture Hall 2:</b> Air Quality & Health Impact (2 <sup>nd</sup> Session - Cont. from Slot E)
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**Slot F | Monsoon Mission Hall**

**20 November 2025 (Day 3) Session 2 (Afternoon): 14:30 – 16:30 (2<sup>nd</sup> Session- Cont. from Slot E)**

**Session: Weather & Climate Science for Sustainable Agriculture**

Session Chair : Dr. S. I. Laskar, IMD New Delhi,

Time	Speaker & Affiliation	Title
14:30 – 14:50	Rajib Chattopadhyay, IITM Pune (Invited)	<i>Attribution of Dry and Moist Heat Stress Over Indian Region and Its Intensification</i>
14:50 – 15:05	Archana Sagalgile, WOTR–W-CReS, Pune	<i>From Forecast to Field: Strengthening Farm Decisions Through Localized Weather Intelligence</i>
15:05 – 15:20	Patel Sita Ram, IGKV Raipur	<i>Climate Smart Agriculture – Sustainable Way to Food and Livelihood Security</i>
15:20 – 15:35	Sheshakumar Goroshi, IMD	<i>Linking GRACE-Satellite-Based Groundwater Monitoring with Agromet Advisories to Support Agricultural Decision-Making in India</i>
15:35 – 15:50	Dr. Shirish Khedikar, IMD Pune	<i>Assessing the Impact of Extreme Climate Events on Major Crop Productivity Using Weather Indices in Ratnagiri District, Maharashtra</i>
15:50 – 16:05	Priyanka Singh, IMD	<i>Climate Change and Heat Stress in Major Milk-Producing States of India: Historical Trend and Future Projection</i>

**Slot F | HPC Lecture Hall**

**| 20 November 2025 (Day 3) 14:30 – 16:30 IST**

**Ground & Space Based Radar Applications in Monsoon Meteorology (2<sup>nd</sup> Session – Cont. from Slot A)**

**Session Chairs: Padma Kumari & M. C. R. Kalapureddy**

Time	Speaker & Affiliation	Title
14:30 – 15:00	TNR & KKK (Keynote)	<i>Ground &amp; Space Based Radar Applications in Monsoon Meteorology</i>
15:00 – 15:12	Subrata Kumar Das	<i>Examining microphysics and dynamics of extreme monsoon rainfall over Mumbai using a network of polarimetric X-band radars</i>
15:12 – 15:24	Ambuj K. Jha	<i>Orography–dynamics control on rainfall distribution over the Western Ghats: insights from WRF simulations</i>

Time	Speaker & Affiliation	Title
15:24 – 15:36	Meenu R. Nair	Vertical Wind and Cloud Characteristics of Convection Across Diverse Climatic Regimes in India
15:36 – 15:44	Udaya Kumar Sahoo	Adaptive Fuzzy Logic Framework for Hydrometeor Classification Using Data-Driven Trapezoidal Membership Functions
15:44 – 15:52	Angel Anita Christy	The 205 MHz wind profiling radar: a key to understanding boundary layer dynamics
15:52 – 16:00	Geetanjali Arora	Radar-Derived Rainfall Estimation and Verification Using Ground Truth over Delhi NCR during the Monsoon Season
16:00 – 16:08	Ashruba Ghorapade	Statistical Characteristics of Convective Cell Lifecycle and Cell-to-Cell Interactions in the Monsoon Core Zone using ART CPol Radar Observations
16:16 – 16:24	Manisha Tupsoundare	How dry air shuts down deep monsoon convection: ART CPol radar insights from August 2023
16:26 – 16:30	Vishal Gunjal	Vertical Structure of Precipitating Clouds associated with a Low-pressure System over the Core Monsoon Zone of India
16:30 – 16:36	Harshad Hanmante	Radar-Based Analysis of Convective Organization and Polarimetric Signatures over the Monsoon Core Zone and their Representation in WRF: An Extreme Rain Event Case Study
16:36- 16:46	Meteoexperts	Talk from Meteoexperts

**Slot F | Meghdoot Auditorium**

**20 November 2025 (DAY 3) Time: 14:30 – 16:30**

**Monsoon Dynamics & Prediction (2<sup>nd</sup> Session – Cont. from Slot E)**

**Session Chair: Dr Shivsai Dixit**

Time	Speaker & Affiliation	Title
14:30 – 14:50	<b>Kieran Hunt, University of Reading (Invited)</b>	Unifying convectively driven growth theories for low-pressure systems in sheared environments
14:50 – 15:05	Manjunatha M. H., UAS Bangalore	Rainfall forecasting through machine learning models for Southern Karnataka
15:05 – 15:20	Usha K. Hasyagar, CSIR-4PI	Does Higher Resolution Improve Indian Summer Monsoon Rainfall Predictability in CFSv2?
15:20 – 15:35	Dr. Sahadat Sarkar, IITM Pune	Implementation of improved microphysical parameterization in BharatFS model
15:35 – 15:50	Tanmoy Goswami, IITM Pune	Can a 12-km GFS Model Simulate the Observed Relationship between Cloud Optical Properties and Extreme Rainfall of Indian Summer Monsoon?
15:50 – 16:05	Dr. Abhishek Anand, RMC Kolkata	Dynamic Interactions Between the Somali Jet and Atmospheric Rivers: Implications for the Indian Monsoon
16:05 – 16:20	Nagiraju Chilukoti, NIT Rourkela	Investigating the Indian Summer Monsoon Variability During the Mid-Pliocene using CMIP6 Model Simulations
16:20- 16:30	SAMEER	Society for Applied Microwave Electronics Engineering & Research

**Slot F | Varahamihir Hall**

**20 November 2025 (Day 3) Time: 14:30 – 16:30**

**Session : HPC Technologies & Geoinformatics for Disseminating Weather Information and Startups (Merged: Geoinformatics for Disseminating Weather and Climate Information & Emerging Startups in Weather and Ocean Science)**

**Session Chairs : Dr Sajeevan G, CDAC and Dr Manish Kale**



Time	Speaker & Affiliation	Title
14:30 – 14:50	Manoj Khare, CDAC Pune (lead Invited talk)	HPC and GIS based solutions for disaster management
14:50 – 15:05	Dr. Phani, IITM Pune (Invited)	Need for Advanced HPC Technologies in Weather and Climate Modelling
15:05 – 15:20	Dr. Pallavi, CDAC Pune (Invited)	NSM Integrated Urban Modeling System for Urban Weather and Urban Flood
15:20 – 15:35	Prof. Som Sharma, PRL Ahmedabad (Invited)	PRL's Indian Lidar Network
15:35 – 15:50	A. Asutosh, Aurassure	Aurassure: A Climate-Tech Startup Driving Hyperlocal Environmental Intelligence in the Global South
15:50 – 16:00	Aniket Chakraborty, Dibrugarh University	A Geospatial Approach on Interplay Between Soil Moisture & Hydro-Meteorological Parameters During Heatwaves in Dibrugarh District
16:00 – 16:10	Dr. Dhanusree M, University of Calicut	GIS-Based Analysis of Runoff & Recharge Potential in the Bharathapuzha Sub-Catchment
16:10 – 16:20	Ruchi Modi, SAC–ISRO	Geoinformatics for Dissemination of Weather Information from EOS-06 Satellite Mission

Slot F | Aryabhata Hall  
**20 November 2025 (DAY 3) – 14:30–16:30 IST**  
**Session :Review of Monsoon Forecasts**  
**Session Chair: Dr. Susmitha Joseph, IITM, Pune**

Time	Speaker & Affiliation	Title
14:30 – 14:50	Dr. Thea Turkington, CCRS, Singapore (Lead)	<i>Seasonal Outlooks for Southeast Asia: Review of Northeast and Southwest Monsoon Seasons 2024/2025</i>
14:50 – 15:10	Dr. O. P. Sreejith, IMD Pune (Lead)	<i>Performance of the Long-Range Forecasts for the 2025 Southwest Monsoon</i>
15:10 – 15:25	Dr. Medha Deshpande, IITM	<i>High-Resolution Global Forecast Models at IITM: Forecasting Extreme Weather During the Indian Summer Monsoon 2025</i>
15:25 – 15:40	Dr. Raju Mandal, IITM	<i>Subseasonal Prediction During Indian Summer Monsoon Season 2025</i>
15:40 – 15:55	Dr. Prasanth Pillai, IITM	<i>Performance Analysis of the Upgraded Monsoon Mission Coupled Forecast System (MMCFsv2) for Seasonal Prediction of monsoon 2025</i>
15:55 – 16:10	Dr. Akhilesh Mishra/ Dr Ankur Gupta, NCMRWF	<i>Review of NCMRWF S2S forecasts for 2024-25 winter and summer season</i>
16:10 – 16:20	Dr. Prabodh Kumar Pradhan	<i>Setting of Offshore Trough and Monsoonal Low-Level Jet Associated with Wet Spell Over India During June 2024 Using NCUM Global Model</i>
16:20 – 16:30	Dr. Avijit Dey, IITM	<i>Real-Time Subseasonal Prediction of Indian Monsoon 2022 with Emphasis on East–West Rainfall Asymmetry</i>

Slot F | Meghdoot Lecture Hall 1  
**20/11/2025 (DAY 3) Duration: 14:30 – 16:30 IST**  
**Session : Biosphere–Atmosphere Interactions – (2<sup>nd</sup> Session – Cont. from Slot E)**  
**Chair: Dr. Pramit Deb Burman**  
**Co-Chair: Dr. Yogesh K. Tiwari**

Time (IST)	Speaker & Affiliation	Title of the Talk
14:30 – 14:50 (Invited)	Dr. Sandipan Mukherjee, GBPNiHE Ladakh	Insights from the biosphere–atmosphere flux measurement initiatives in the Indian Himalayan region



Time (IST)	Speaker & Affiliation	Title of the Talk
14:50 – 15:00	Dr. Dipankar Sarma, IITM Pune	Understanding carbon exchange processes of a semi-deciduous forest in northeast India
15:00 – 15:10	Dr. Rajveer Sharma, IUAC Delhi	Assessing fossil-fuel–derived organic carbon in Delhi rainwater using radiocarbon ( $^{14}\text{C}$ ) measurements
15:10 – 15:20	Mr. Harish Varma, NARL Gadanki	Effects of surface heterogeneity on the atmospheric boundary layer
15:20 – 15:30	Dr. P. P. Musaid, IITM Pune	Quantifying the annual atmospheric $\text{CO}_2$ burden from biomass burning and its transport to monitoring sites
15:30 – 15:40	Ms. Bela Lodh, IIT Bombay	Correlation of low-level wind speed with surface sensible heat flux at Jaisalmer
15:40 – 15:50	Ms. Manali Saha, IIT Bombay	Identifying the precursors of heatwaves in India: Perspective of land–atmosphere interactions
15:50 – 16:00	Ms. Sruthi Surendran, IIT Palakkad	Overestimation of evapotranspiration across India when ignoring the impact of rising atmospheric $\text{CO}_2$
16:00 – 16:10	Dr. Priyanka Lohani, GBPNIHE Almora	Trends in entropy production of a forested Himalayan ecosystem: Understanding stability and resilience
16:10 – 16:20	Mr. Pranjal Aarav, BITS Pilani	Recent advancements in mitigation strategies for $\text{N}_2\text{O}$ emissions from staple agricultural crops in India: A systematic review
16:20 – 16:30	Ms. Ruchira Biswas, IIT Delhi	Untangling process uncertainty and driver effects in CMIP6 land carbon flux over tropical forests

**Slot F | | Meghdoot Lecture Hall 2**  
**20 November 2025 (DAY 3) – Time: 14:30 – 16:30 hrs**  
**Air Quality & Health Impact (2<sup>nd</sup> Session – Cont. from Slot E)**  
**Chair Sachin Ghude, IITM and Gaurav Govardhan, IITM**

Time	Name & Short Affiliation	Title
14:30 – 14:50	Prof. Mukesh Sharma, IIT Kanpur (Invited)	Air quality and air pollution: Emerging science and solutions
14:50 – 15:10	Prof. Sagnik Dey, IIT Delhi (Invited)	Air quality: Current understanding and challenges
15:10 – 15:30	Prof. Dilip Ganguly, IIT Delhi (Invited)	Disentangling meteorological, emission, and cross-border drivers of India's seasonal air pollution: From source attribution to airshed-based mitigation
15:30 – 15:45	Dr. Rajmal Jat, IITM Pune	A dynamic air-quality ensemble for probabilistic AQ predictions
15:45 – 16:00	Kirti Singh, Dayalbagh Univ	BTEX indoors & outdoors: Hidden health risks & ozone-formation potential
16:00 – 16:15	Purvi Patel, NCDC Delhi	Piloting surveillance of environmental risks and cardiovascular events in Delhi & Shimla (2021)
16:15 – 16:30	Sumit Kumar, IITM Pune	Improvements in simulated downwelling surface-reaching short-wave radiation in WRF-Chem: significance for air pollution modelling

**16:30 to 17:30 IST Concluding session**

**Panel Discussion**

**on**

**Conference Main Theme**

*Advances in Tropical Weather, Ocean, and Monsoon Climate Research for a Sustainable Future*

**Best Poster Cash Award and Certificate Distribution**

**Closing Remarks**