



TROPMET 2024

Recent Advances and Challenges in Understanding and Predicting High-impact Weather and Climate Extremes over Indian Subcontinent in the Climate Change Context



Schedule

Day-1: 10 December 2024 (Tuesday)

INAUGURAL SESSION (09:30– 11:20 Hrs)

High Tea: 11:20-11:30 Hrs

PLENARY SESSION 1

Time: 11:30-13:00 Hrs

Venue: BBA Auditorium

**Plenary Talk 1 by Dr. M. Mohapatra,
DGM, India Meteorological Department**

Topic: Meteorological Services in India- Past, Present and Future

**Plenary Talk 2 by Prof. Dev Niyogi,
Jackson School of Geosciences, University of Texas at Austin
Topic: High Impact Urban Weather and City Digital Twins**

Session Chaired by

Dr. R. K. Datta, Former Head, NCMRWF

&

Dr. P.C. Joshi, Retired Scientist, SAC, Ahmedabad

Lunch: 13:00-14:00 Hrs



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Recent Advances and Challenges in Understanding and Predicting High-impact Weather and Climate Extremes over Indian Subcontinent in the Climate Change Context

TECHNICAL SESSION: ORAL PRESENTATIONS

10 December 2024 (Tuesday)		Time: 14:00 -15:30 Hrs	
Venue: CDC Auditorium			
TS: OSI Special Session: Roles of oceanic and atmospheric processes in the development of weather and climate extremes			
SN	Abstract ID	Author	Title of the paper
1.	TROPMET2024-317	Prof. Sourav Sil	Multiscale Ocean Processes and Cyclone Intensification in The Bay of Bengal
2.	TROPMET2024-249	Salauddin Mohammad	Mechanisms influencing Stratosphere Troposphere Exchange (STE) of ozone over Costa Rica during 2016
3.	TROPMET2024-258	Ruchith R D	Exploring the role of western Indian Ocean on seasonal extremes of rainfall over Indian region
4.	TROPMET2024-162	Dr. Ishita Sarkar	Potential usefulness of a few non-conventional derived NWP products as guidance to operational forecasters for high impact weather phenomena
5.	TROPMET2024-389	Jismy Poullose	Impact of Western Disturbances on Thunderstorms and Hailstorms in Maharashtra
6.	TROPMET2024-090	Rajaveni S P	Atmospheric Moisture Residence Time Variation in Indian Summer Monsoon: How Faithful is Isotope Based Estimates?
7.	TROPMET2024-329	Maheswar Pradhan	Modulation of Tropical Diurnal Convection in response to Diurnal Ocean Warming
8.	TROPMET2024-246	Prabodha Kumar Pradhan	Dynamics of Shifting of Offshore Troughs and Monsoon Wet Spell in June 2024
9.	TROPMET2024-365	Subhadeep Halder	Can The 'Internal' Variability Due to Land-Atmosphere Feedbacks Affect Monsoon Droughts?



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10 December 2024 (Tuesday)

Time: 14:00 -15:30 Hrs

Venue: BBA Auditorium

TS: Climate data analysis, assessments and projections

SN	Abstract ID	Author	Title of the paper
1.	TROPMET2024-P001	Dr. R. K. Yadav	The recent trends in the Indian summer monsoon rainfall
2.	TROPMET2024-P017	P. Parth Sarthi	Sub Seasonal Variability of Summer Monsoon Rainfall in Coupled Climate Models (CCMs) Simulation
3.	TROPMET2024-189	Dhanya Joseph	CMIP6-based projections of sea surface height (SSH) for the west coast of India
4.	TROPMET2024-019	Sreekumar Haridas	Predicting Climatological Drought for the West Coast of India Using Scpdsi Derived from CMIP6 Data
5.	TROPMET2024-303	Dr. Arti Choudhary	Assessment of Long Term Climatological Data: Sunshine Hour, Trends and Anomaly in Southern India
6.	TROPMET2024-163	Vidya S	Temperature extremities under current and future SSPs scenarios for Indian States
7.	TROPMET2024-309	Tammineni Sreelatha	IoT-Based Human Discomfort Index Calculator using DHT11 Sensors
8.	TROPMET2024-232	Dr. Sudeep Kumar B L	Understanding the long-term trends in solar radiation using ground based in-situ observations in India
9.	TROPMET2024-P031	Biyo Thomas	Rossby Wave Breaking events exacerbate the heatwave conditions over the Indian region
10.	TROPMET2024-343	Jharna Borah	Evaluation of Oceansat-3-Scatterometer-Derived Ocean Surface Winds over the Indian Ocean Using Observations from Buoys and ASCAT



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10 December 2024 (Tuesday)

Time: 14:00 -15:30 Hrs

Venue: TIIR Room no. 1

TS: In-situ and space-based observational and monitoring aspects of extreme weather and climate events

SN	Abstract ID	Author	Title of the paper
1.	TROPMET2024-111	Dr. Swagata Payra	A detail study to understand the different physical causes of lightning through satellite, ground-based observations and NWP model
2.	TROPMET2024-153	Sandhya Jose	Assessment of the IMD+ GPM-IMERG Merged Dataset and Analysis of Extreme Precipitation events in South Asia for the period 2001–2020
3.	TROPMET2024-290	Dr. Shashi Kant	Assessment of wet spell over Northwest India during first week of March 2024
4.	TROPMET2024-415	Deewan Singh Bisht	Spatial heterogeneity in sources of ionic species in rainwater during the summer monsoon period over the Indo-Gangetic Plain
5.	TROPMET2024-094	Amit Kumar	Climatological Analysis of Winter Storms in the National Capital Region of India Using Doppler Weather Radar
6.	TROPMET2024-108	Dr. Adarsh Dube	A study of upper ocean characteristics in response to the three intense re-curling tropical cyclones from the Arabian Sea using satellite and in-situ measurements
7.	TROPMET2024-238	Dr. Manish R. Ranalkar	Microphysical features of widespread Deep Convective Cores with profuse lightning activity over Uttar Pradesh during 8-11 September 2023
8.	TROPMET2024-401	Dr. Sreejith K S	Role of Arabian Sea High Salinity Water Mass on Post-Monsoon Hypoxia in The Bay of Bengal
9.	TROPMET2024-015	Abhishek Jayant	Validation of temperature predictions from IMD-GFS model across India for the year 2023



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10 December 2024 (Tuesday)

Time: 14:00 -15:30 Hrs

Venue: TIIR Room no. 2

TS: Impact of weather extremes on Agriculture, livestock, fisheries including climate change and climate variability

SN	Abstract ID	Author	Title of the paper
1.	TROPMET2024-P025	Prof. M. D. Behera	Vegetation-Climate Feedbacks and Modulation
2.	TROPMET2024-129	Dr. D. M. Lal	Relationship between relative humidity and Lightning over Andhra Pradesh, India
3.	TROPMET2024-271	Dr. Pradeep Kumar	Air Pollution Monitoring and Its Role in Wheat Crop Yield Reduction
4.	TROPMET2024-020	Dr. Ajay Kumar Srivastava	Impact of extreme weather event on black gram production in Central India
5.	TROPMET2024-408	Bharati S. Sabade	Impact of Climate change on Tourism -A case study of Visakhapatnam
6.	TROPMET2024-299	Dr. Amitlal Bhattacharya	Quantifying changes in rainfall patterns for sustainable agricultural planning: An assessment over West Bengal
7.	TROPMET2024-146	Sumana Balo	Effect Of Climate Change and Climate Resilience on Plantation Crops
8.	TROPMET2024-010	Dr. Somaru Ram	Runoff reconstruction for western Himalaya in India during the last two centuries inferred from tree ring-width records
9.	TROPMET2024-134	Dr. Sudip Kumar Kundu	Investigation of the Degree of Uncomfortability Analysing Various Weather Parameters Through Climograph and Heat Index in Guwahati, Assam



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10 December 2024 (Tuesday)

Time: 14:00 -15:30 Hrs

Venue: TIIR Room no. 3

TS: Early warning systems, mitigation, preparedness and response actions for weather and climate extremes in disaster risk reduction

SN	Abstract ID	Author	Title of the paper
1.	TROPMET2024-P033	Dr Rajasekhar Meka	Multi-weather hazard resilience and early warnings with satellite-powered insights and impact monitoring for changing climate
2.	TROPMET2024-205	Dr. Abhishek Kumar Mishra	Analog-Ensemble-based Fog Early Warning System in Bihar, India
3.	TROPMET2024-071	Dr. Somnath Mahato	Satarkabarta: Detect Alert Message Services Using NavIC Signals
4.	TROPMET2024-018	Gyanendranath Mohapatra	Modeling and simulation of Hailstorm events over Karnataka during pre-monsoon season using high resolution Mesoscale model
5.	TROPMET2024-383	Dr. Ila Agnihotri	Water hyacinth in Rivers and Mosquito Menace in a Changing Climate Scenario: Spatio-temporal analysis using Remote Sensing and Geospatial Technology
6.	TROPMET2024-022	Kanwar Ajay Singh	Cloud Seeding, a Technique to Mitigate the effects of Extreme Weather
7.	TROPMET2024-325	Atul Kumar Singh	Recent Advances in Impact Based Forecast & Risk Based Warning approach for Uttar Pradesh
8.	TROPMET2024-124	Arpita Rastogi	Spatio-temporal changes in the pre-monsoon thunderstorm activities of northeast India over the past four decades
9.	TROPMET2024-192	Pradip Sarkar	Adaptation strategies to southwest monsoon rainfall in the eastern coast of India based on 72 years of data

High Tea: 15:30-15:50 Hrs



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10 December 2024 (Tuesday)

Time: 15:50 -17:50 Hrs

Venue: CDC Auditorium

TS: OSI Special Session: Roles of oceanic and atmospheric processes in the development of weather and climate extremes

SN	Abstract ID	Author	Title of the paper
1.	TROPMET2024-382	Dr. Surisetty V. V. Arun Kumar	Enhancing Beach Safety with an Innovative AI-Based Approach for Rip Current and Person Detection
2.	TROPMET2024-353	Pooja Purushotham	Characteristics of high frequency gravity waves and its impact on tropopause variability: A direct observations and simulations
3.	TROPMET2024-296	Nekkali Yerni Srinivas	Comprehensive analysis of the size-intensity relationship of TCs over the NIO
4.	TROPMET2024-220	Gowri Nair A S	Analysis of winter precipitation variability in Svalbard: role of local and remote moisture supply
5.	TROPMET2024-275	Payoshni Samantray	Projection of Extreme Rainfall in Indian Himalayan Region using CMIP6 simulations
6.	TROPMET2024-187	Samar Kumar Ghose	Tropical Cyclone Dynamics and the Role of Heat Fluxes in the Bay of Bengal
7.	TROPMET2024-070	Sankar Prasad Lahiri	Balancing Role of the Arabian Sea Mini Warm Pool in the ENSO-Monsoon Onset Relationship
8.	TROPMET2024-119	Bhushan Shirwadkar	Characteristics of Marine Heatwaves Along Java Coast in the Southeastern Indian Ocean
9.	TROPMET2024-392	Ayush Nayan	Ocean Heat Content Analysis in the Arabian Sea
10.	TROPMET2024-118	Arun Kumar	On Assessing Influence of Aerosols on Tropical Cyclone-Induced Precipitation in Bay of Bengal: A Case Study of Vardah
11.	TROPMET2024-101	Vaishnavi Wadhai	Role of Hadley Cell on Delaying Indian Summer Monsoon Onset
12.	TROPMET2024-394	Shreyash Nagendra Lahane	Sea Surface Height Anomaly (SSHA) and Extreme Weather Events in the Arabian Sea
13.	TROPMET2024-345	Kesireddy Lakshman	Severe Heat Wave Characteristics and associated Thermal Discomfort conditions over India



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10 December 2024 (Tuesday)

Time: 15:50 -17:50 Hrs

Venue: BBA Auditorium

TS: Impact of weather extremes on Agriculture, livestock, fisheries including climate change and climate variability

SN	Abstract ID	Author	Title of the paper
1.	TROPMET2024-P030	Dr. N. Subhash	Impact of climate change and climate variability on Indian Agriculture
2.	TROPMET2024-172	Faseela Hamza	Climate Impact on Fishery variability of commercial fish species in the Indian Exclusive Economic Zone (EEZ)
3.	TROPMET2024-087	Dr. Bushra Yasin Shaikh	Satellite-Derived Groundwater Variability and its Link to Hydrological Processes in India during Extreme Monsoon Years
4.	TROPMET2024-037	Pujyasmita Nayak	Evaluation of trend analysis of drought over Odisha
5.	TROPMET2024-315	Dr. Shalini Saxena	Monitoring Agricultural Vulnerability in Delhi Using the Standardized Precipitation Index (SPI)
6.	TROPMET2024-135	Dr. Kheyali Ghosh	Effect of climate change and climate resilient practices on spices.
7.	TROPMET2024-193	Progya Mukherjee	Impact of Climate Change on the Potato Production in West Bengal: Developing an Adaptation Strategy
8.	TROPMET2024-194	Shiv Mangal Singh	Potato Yields in India Under Warming Scenarios – A Simulation study
9.	TROPMET2024-412	Yatendra Kumar Singh	A broad analysis to understand the climatic impacts due to vegetation using LAI, EVI and PAR as a key variable
10.	TROPMET2024-168	Anand Shankar	Forecasting Dengue Incidence in Bihar, India, Using an Attention LSTM Model Based on Meteorological Data
11.	TROPMET2024-201	Madhurima Paul	Differential effects of Extreme Climatic Modes on the Biogeochemical Parameters in the Arabian Sea
12.	TROPMET2024-147	IVG Bhavani	Impact Of Climate Variability in the Prediction of Small Pelagic Fishery of Indian Westcoast Using Dynamic Modelling of Fishery Population
13.	TROPMET2024-294	Imamah Ali	Spatiotemporal Dynamics of Extreme Precipitation in Monsoon Depressions and Their Relationship with NDVI
14.	TROPMET2024-342	Ankush Bharat Chougule	Effect of microbial inoculants on soybean (Glycine max. L) root growth and development
15.	TROPMET2024-349	Satwik Panda	Remote Sensing Insights into NDVI and Rainfall in Semi-Arid Maharashtra



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Time: 15:50 -17:50 Hrs

Venue: TIIR Room no. 1

TS: Air Pollution Interactions with weather extremes

SN	Abstract ID	Author	Title of the paper
1.	TROPMET2024-P002	Dr. Saroj Kumar Sahu	National Inventory of Air Pollutants, Heavy Metals & GHGs for Optimizing Climate/Chemistry Modelling
2.	TROPMET2024-P009	Dr. Atul Kumar Srivastava	Trends in aerosol characteristics over India: Implication to climate forcing
3.	TROPMET2024-347	Dr. N V K Ramesh	Implementation of CO ₂ Conversion to Oxygen in Automotive Systems for Cleaner Emissions
4.	TROPMET2024-381	Arkadeb Banerjee	Aerosols over Chennai Metropolitan Area
5.	TROPMET2024-248	Subrata Mukherjee	Aerosol volatility over a High-Altitude site in India: Effect of semi-volatile organics
6.	TROPMET2024-385	Jeni Victor N	Characteristics of Size-Resolved Aerosols and New Particle Formation in a Rural Region of Central India
7.	TROPMET2024-319	Mamatha Bandaru	Cost Effective and High-Performance Air Quality Monitoring System
8.	TROPMET2024-278	Kumari Aditi	Meteorological Influences on Aerosol Accumulation in the Central and Lower Gangetic Plain
9.	TROPMET2024-082	Ankan Sarkar	Regional Modeling of Aerosol-Radiation Interactions during an Unusual Dust Scenario
10.	TROPMET2024-340	Dola Tharun	Analysing the diurnal and seasonal variation of particulate matter and its impact on the precipitation process
11.	TROPMET2024-229	Sanatan Binisia	Driver of the Dipolar Aerosol Loading Pattern over the Indian Region
12.	TROPMET2024-054	Ashirbad Mishra	Mercury Emissions from Industrial Processes and Other Unattended Sectors in India: A Quantitative Study



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10 December 2024 (Tuesday)

Time: 15:50 -17:50 Hrs

Venue: TIIR Room No 2

TS: In-situ and space-based observational and monitoring aspects of extreme weather and climate events

SN	Abstract ID	Author	Title of the paper
1.	TROPMET2024-P026	Prof. A. N. V. Satyanarayana	Land cover changes and Urbanization: Impact on Urban Climate
2.	TROPMET2024-P020	Dr. Kaustav Chakravarty	Unravelling the Microphysical Features Rainfall Over 8 Stations of India as Revealed from the Disdrometer Network
3.	TROPMET2024-056	Krishna Mishra	Climatology of Rapid Intensification of Tropical Cyclones over North Indian Ocean during 1990-2019
4.	TROPMET2024-293	Pradeep Sharma	Squalls associated with Thunderstorms over India
5.	TROPMET2024-044	Dr. Gargi Rakshit	Investigation of Atmospheric Conditions Driving Lightning Disasters: Case Studies Using Space-Borne and Ground-Based Sensors in Land-Sea Boundary Regions of Eastern and Western India
6.	TROPMET2024-024	Shubhendu Karmakar	Decadal Glacier Response to Changing Climate Over Lahaul and Spiti Region, Indian Himalaya
7.	TROPMET2024-001	Dr. Neeti Singh	Advancing Understanding of Space Weather Phenomena and role in weather hazards
8.	TROPMET2024-181	Smrati Gupta	Analyzing Carbon Sink Dynamics in India: Insights from Climate Model Projections
9.	TROPMET2024-174	Jitender Singh	High-resolution greenhouse gas observations in India: understanding its variability at different temporal scales
10.	TROPMET2024-398	Aathira K P	Mixing layer and cloud base height from Lidar Ceilometer and Space based observations over a Western Ghat region
11.	TROPMET2024-368	Meenakshi K J	Satellite-Based Total Column Water Vapour Observation Assimilation and its Importance in the Seamless Prediction of Precipitation over a Monsoon Domain



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10 December 2024 (Tuesday)

Time: 15:50 -17:50 Hrs

Venue: TIIR Room no. 3

TS: Climate data analysis, assessments and projections

SN	Abstract ID	Author	Title of the paper
1.	TROPMET2024-P027	Prof. A. Chandrasekhar	A Study on the Possible Brown Ocean Effect: Impacts of an Antecedent Tropical Cyclone on the Rapid Intensification of the 1999 Odisha Supercyclone
2.	TROPMET2024-106	Mamta Yadav	Analysis of Central India Monsoon (1901-2022) for above and below normal rainfall years
3.	TROPMET2024-008	Shahenaz Mulla	Assessment of Observed and Projected Weather Parameters in Dapoli, Maharashtra for Observing Climate Change Scenarios
4.	TROPMET2024-136	Somasree Mondal	A case study of Moinagyri/Jalpaiguri Tornado formation on 31st March 2024 through the transformation of advective energy into convective energy by small hills in the vicinity.
5.	TROPMET2024-083	Amit Kumar	Variability in regional characteristics of extreme rainfall of India
6.	TROPMET2024-076	Dr. Kasturi Singh	Migration of the Tropical Cyclone Rapid Intensification Zones Over the North Indian Ocean During the Current Climate
7.	TROPMET2024-268	Dr. T. Arulalan	Heat Waves in Northwest India: North Atlantic Blocking and Rossby Wave Impacts in +1.5°C and +2°C Warmer Climates
8.	TROPMET2024-017	Harikrishnan R	Unveiling the Response of Chlorophyll in Connection to the Interaction of Marine Heat Wave and Intrinsic Climate Modes over Seychelles Chagos Thermocline Ridge
9.	TROPMET2024-072	Athira K S	Dynamics of SSW-Induced Cold Waves Over India: Insights from the Intense Cold Wave of January 2024
10.	TROPMET2024-128	Agnijita Bandyopadhyay	Role of Tropical Intraseasonal Oscillations on Cyclogenesis Trends over Northern Indian Ocean
11.	TROPMET2024-222	Priyanka Maraskolhe	2022 Indian Summer Monsoon Rainfall
12.	TROPMET2024-267	Priya Kumari	Observed Variation of ITCZ over the Indian monsoon domain during ENSO years
13.	TROPMET2024-334	Gollapalli Sripathi	Interplay between South Asian High and Indian Summer Monsoon Rainfall: An analysis from observations and seasonal models
14.	TROPMET2024-046	Meera M Nair	Assessing the relationship between Climate Indices and Extreme Precipitation during the Indian Summer Monsoon using CMIP6 simulations
15.	TROPMET2024-411	Bhavya Shivhare	BSISO effect on extreme events over Indian region during El Nino and La Nina years



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10 December 2024 (Tuesday)

Time: 18:00 Hrs: Cultural Event

Venue: BBA Auditorium

Time: 19:30: Conference Dinner



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Day-2: 11 December 2024 (Wednesday)

PLENARY SESSION 2

Time: 9:00-11:15 Hrs

Venue: Auditorium

Plenary Talk 1 by Dr. G. Beig,

Sir Ashutosh Mukherjee Chair Professor, NIAS, IISc

Topic: Navigating The Toxic Chill: Weather, Climate or My Footprints?

Plenary Talk 2 by Dr. D. S. Pai, Scientist G, IMD

Topic: Climate Services in India

Session Chaired by

**Prof. D. V. Bhaskar Rao, Honorary Professor, Andhra University
&**

Dr. Kamaljit Ray, Scientist G, MoES

Tea /Coffee Break & Visit to Poster (10:30-10:45 Hrs)

Plenary Talk 3 by Dr. V. S. Prasad, Director, NCMRWF

**Topic: Recent Developments in the NWP modelling systems at
NCMRWF**

Session Chaired by

**Prof. U.C. Mohanty, Distinguished Professor - Siksha 'O'
Anusandhan (Deemed to be University)**



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TECHNICAL SESSION: ORAL PRESENTATIONS

11 December 2024 (Wednesday)

Time: 11:30 -13:00 Hrs

Venue: CDC Auditorium

TS: Climate data analysis, assessments and projections

SN	Abstract ID	Author	Title of the paper
1.	TROPMET2024-009	Prof. Raju Attada	Precipitation Extremes over India's High Mountain Region
2.	TROPMET2024-007	Dr. Kshirod Kumar Bal	Impact of Urbanisation on Climatic Change Over Odisha
3.	TROPMET2024-311	Dr. S. Lakshmi	El Niño Southern Oscillation Influence on Monsoon Patterns in India: A Climate Prediction Modeling (CMIP6)
4.	TROPMET2024-298	Neha Hikare	Skill of Downscaled and Bias-Corrected CMIP6 Model Simulations in representing the Extreme Precipitation Indices Over India
5.	TROPMET2024-199	Nirupam Karmakar	Intraseasonal variability in rainfall over the Indian region in Multi-Physics Multi-Model Ensemble
6.	TROPMET2024-091	Rushikesh Adsul	Tropical Cyclone Tracking Algorithms in the north Indian Ocean
7.	TROPMET2024-052	Biswajit Jena	Projection of tropical cyclone frequency over the Bay of Bengal in the near future
8.	TROPMET2024-260	Ajit Paswan	Possible future changes in Rainfall and Extreme events over Indo Gangetic Plains using CMIP6 models in 21st Century
9.	TROPMET2024-310	Shalini Dubey	Evaluating Snow Water Equivalent and Snowfall Rates in Sikkim Himalayas under Climate Change
10.	TROPMET2024-308	Rama Pandey	An Evaluation of Water Availability and Potential Evapotranspiration trends in Varanasi using CMIP6
11.	TROPMET2024-399	Aathira K P	Characterization and trends in hadley cell expansion using reanalysis



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11 December 2024 (Wednesday)

Time: 11:30 -13:00 Hrs

Venue: TIIR Room No 1

TS: In-situ and space-based observational and monitoring aspects of extreme weather and climate events

SN	Abstract ID	Author	Title of the paper
1.	TROPMET2024-P023	Dr. M. Venkat Ratnam	Indian Summer Monsoon Anti-Cyclone Dynamics, Aerosols, and Pollution Pathways: A Climate Perspective
2.	TROPMET2024-352	Dr. Subrata Kumar Das	X-Band Polarimetric Weather Radar Network Over Mumbai: Network Set-Up and Preliminary Results
3.	TROPMET2024-176	Dr. Amita Prabhu	Role of Equatorial Indian Ocean on the Regional Aspects of Total Cloud Amount and Summer Monsoon Rainfall Over India
4.	TROPMET2024-346	Dr. Sachin M. Deshpande	Characterizing Rain-Type Classification and Convective Clustering in Radar Observations and Model Simulations Over the Monsoon Core Zone
5.	TROPMET2024-025	Aniket Chakravorty	Uncertainty Estimation and Reduction of Satellite Rainfall using a Non-Stationary Blending Algorithm over North East Region of India
6.	TROPMET2024-122	Danish Hussain	Calibration of INSAT-3D Imager Visible Channel using Deep Convective Clouds
7.	TROPMET2024-282	L R Krishna	Influence of Lunar Phases on Rainfall Variability Over Tamil Nadu: A Spatio-Temporal Study
8.	TROPMET2024-372	Anup Mahato	Climatological analysis of spatial patterns inter-annual variability and trends of convection from 1980-2020 over West Bengal Region
9.	TROPMET2024-418	Ritikesh Maurya	Are Monsoon Months Thirster? - Analysis Of Evapotranspiration Trends of Current Century Over India and Adjoining Countries
10.	TROPMET2024-207	Suparya Sonalika Raj	Investigating Land-Atmosphere Coupling Dynamics at Daily Time Scale Over Central India



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11 December 2024 (Wednesday)

Time: 11:30 -13:00 Hrs

Venue: TIIR Room No 2

TS: Analysis and prediction of weather and climate extremes using AI/ML/DL techniques

SN	Abstract ID	Author	Title of the paper
1.	TROPMET2024-061	Shanthababu Pandian	Future-Ready Climate Intelligence: Integrating 4d-Var with Artificial Intelligence for Next-Level Forecasting in the Indian Subcontinent
2.	TROPMET2024-166	M. Danish	Prediction of visibility for Lucknow Airport using Deep Learning
3.	TROPMET2024-012	Ajay Kumar Singh	Quantum Computer, the future requirement for Weather Services
4.	TROPMET2024-241	Sumana Chatterjee	Analysis and Prediction of Weather Using Logistic Regression
5.	TROPMET2024-154	Abhishek Singh	K-Means Clustering Technique of Data Mining for the Interpretation of Cloudburst Over Konkan Region
6.	TROPMET2024-273	Dr.Kavita Pabreja	Harnessing Deep Learning for Rainfall Prediction: A Comparison of LSTM and ARIMA Models
7.	TROPMET2024-215	Anirudh K M	Enhancing The Prediction of Monsoon Intraseasonal Oscillations: A Deep Learning Approach
8.	TROPMET2024-200	Biswajit Sahoo	Advancing Weather Forecast Accuracy: A Hyperlocal Ensemble AI/ML Approach to Predicting Extreme Weather Events
9.	TROPMET2024-204	S V Anirudh	Development of Data-driven Method for Improving Sub-seasonal Forecast of Indian Summer Monsoon Rainfall
10.	TROPMET2024-214	Ankita Singh	Optimizing Predictors for Drought, Flood, and Normal Conditions in India: A Regional Correlation and Classification Approach
11.	TROPMET2024-P013	Leepakshi Singh Banswala	Spatial-Temporal Deep Learning for Glacial Lake Outburst Flood Prediction: A ConvLSTM Approach



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11 December 2024 (Wednesday)

Time: 11:30 -13:00 Hrs

Venue: TIIR Room No 3

TS: Diagnostics and numerical modelling of extreme weather events over the Indian subcontinent

SN	Abstract ID	Author	Title of the paper
1.	TROPMET2024-261	Dr. Ashish Routray	Rapid Update Cycle Data Assimilation for Severe weather Prediction over Indian Himalayan Region
2.	TROPMET2024-148	Ankur Garg	Fog Forecasting and Verification Using Fog Stability Index Technique at IGI Airport, New Delhi
3.	TROPMET2024-289	Hemadri Bhusan Amat	Dynamical Diagnostics and WRF Simulation of the Prolonged May-June 2024 Heatwave Over India
4.	TROPMET2024-264	Dr. Rupraj Biswasharma	Simulation of Premonsoon Thunderclouds over Two Climatic Regimes: Evaluation and Dichotomous Detection
5.	TROPMET2024-331	Revanth Reddy. B	Impact of High Resolution GFS (6.5 Km) Model on the Prediction of Extreme Rainfall Event
6.	TROPMET2024-100	Soumyajyoti Jana	Large-scale influences on extreme rainfall events during 9-10 July 2023 over New Delhi
7.	TROPMET2024-077	Pratishtha Vashishtha	Assessment of WRF Model for Simulation of Extreme Weather Events in Different Parts of India
8.	TROPMET2024-048	Bhavyasree	Assessing the performance of WRF model in simulating severe hailstorm events over Assam and Bihar, India
9.	TROPMET2024-318	Achintya Paliwal	Assessing background environmental conditions influencing intense convective storms
10.	TROPMET2024-233	Vasana Madhuri Sai Latha	Simulation of heavy precipitation event over Kayalpattinam, India using WRF: Sensitivity to cumulus and microphysics schemes
11.	TROPMET2024-P016	Richa Singh	Rainfall Shifts in a Changing Climate over Ladakh

Lunch: 13:00-14:00 Hrs

Panel Discussion on Agrometeorology Policy, Agriculture association

Time: 14:00-15:00 Hrs

Venue: CDC Auditorium



TROPMET 2024

Recent Advances and Challenges in Understanding and Predicting High-impact Weather and Climate Extremes over Indian Subcontinent in the Climate Change Context



11 December 2024 (Wednesday)

Time: 15:00 -16:30 Hrs

Venue: CDC Auditorium

TS: Climate data analysis, assessments and projections

SN	Abstract ID	Author	Title of the paper
1.	TROPMET2024-P028	Dr. T. V. S. Udaya Bhaskar	INCOIS data repository and its usage to extreme weather and climate events
2.	TROPMET2024-085	Anika Arora	Mechanistic challenges of prolonged ENSO events in CMIP6 climate models: an analysis
3.	TROPMET2024-160	Abhishek Gupta	Drag scaling in Truly Neutral Atmospheric Boundary Layer Using LES
4.	TROPMET2024-377	Dr. Alok Kumar Mishra	Assessing Climate Change Impacts on Precipitation Patterns in the Indo-Gangetic Plain: An Observational and HighResMIP Model Perspective on Extremes and Intraseasonal Variability
5.	TROPMET2024-150	Dr. Divya Surendran	Understanding Climate Indices related to Maximum Temperatures over Madhya Pradesh
6.	TROPMET2024-259	Archana Sarkar	Scientometric Analysis of Climate Change Research in India
7.	TROPMET2024-281	Abheendra Bandary	Effect of BSISO on Long Term Trends in Monsoon Depressions
8.	TROPMET2024-042	Arnab Sen	Teleconnection and the Antarctic response to the Indian Ocean Dipole in CMIP5 and CMIP6 models
9.	TROPMET2024-416	Ishita Sharan Srivastava	Indication of milder winters in past decades over several parts of India and adjoining
10.	TROPMET2024-419	Manisha Rani Sahu	Why Chromolaena odorata Prefers a Stable Climate with Minimal Temperature Variation? - Species Distribution Modeling of an Invasive Plant Species



TROPMET 2024



Recent Advances and Challenges in Understanding and Predicting High-impact Weather and Climate Extremes over Indian Subcontinent in the Climate Change Context

11 December 2024 (Wednesday)

Time: 15:00 -16:30 Hrs

Venue: TIIR Room No 1

TS: Developments of innovative and indigenous met-sensors and ocean technologies

SN	Abstract ID	Author	Title of the paper
1.	TROPMET2024-188	Prof. Pranab Deb	Summer melt trends across West Antarctic ice shelves linked to Interdecadal Pacific Oscillation
2.	TROPMET2024-P022	Dr. Palash Sinha	Heatwave Predictions and Decision Support System for Advisory
3.	TROPMET2024-003	Kumari Lipi	The Role of Patents in Fostering Climate Resilience: A Case Study of the Indian Subcontinent
4.	TROPMET2024-157	Shijo Zacharia	A Novel drone mounted Smartphone based Weather Data logger for Atmospheric observations
5.	TROPMET2024-167	Anand Shankar	A Unified Framework for Visibility Estimation Through Fusion of Multi-Feature Streams and Meteorological Data
6.	TROPMET2024-011	Prabhdeep Singh	Indigenous Filter for Electromagnetic Interference Elimination in DWR
7.	TROPMET2024-098	Diptangshu Sekhar Raj	Development of a Low-cost Electric Field Mill and Machine Learning based Calibration for Atmospheric Electricity measurement.
8.	TROPMET2024-P019	Dr. M Iyyappan	An Interactive Web-GIS based Decision Support System (DSS) for Heat Wave
9.	TROPMET2024-P023	T S Murugesh Prabhu	Flood Early Warning System utilizing direct-rainfall method in a 2-D hydrodynamic model
10.	TROPMET2024-300	Vikranth Teppala	Development of a buoy for monitoring air-water interactions in the creek by Internet of Coastal Things



TROPMET 2024



Recent Advances and Challenges in Understanding and Predicting High-impact Weather and Climate Extremes over Indian Subcontinent in the Climate Change Context

11 December 2024 (Wednesday)

Time: 15:00 -16:30 Hrs

Venue: TIIR Room No 2

TS: Attribution of weather extremes to climate change aspects

SN	Abstract ID	Author	Title of the paper
1.	TROPMET2024-397	Prof. Jagabandhu Panda	Urbanization over Indian Cities and its Role in Modulating the Local Environment: Application of AI/ML and Numerical Modeling
2.	TROPMET2024-251	Dr. Neeraj Kumar	Impact of El Nino on Indian Monsoon
3.	TROPMET2024-005	Vikrant Nimesh	Recent Extreme Weather events of Punjab & Haryana
4.	TROPMET2024-228	G K Sawaisarje	characteristics of rain bearing clouds of southwest monsoon season over India during recent years
5.	TROPMET2024-312	Himanshu Sharma	Analysis of Heavy Rainfall during Monsoon over Rajasthan
6.	TROPMET2024-088	Nandivada Umakanth	Lightning and LCL, EL and Relative Humidity relationship at various CAPE in India
7.	TROPMET2024-276	Roop Narayan Kumawat	Diagnostic Analysis of Extreme Hot Summer Season 2024 in Rajasthan: A Case Study
8.	TROPMET2024-225	Neha Kumari	Analysis of the heat wave over the North-Indian regions.
9.	TROPMET2024-250	Pramod Kumar	How Human-Caused Climate Change is Impacting Mountain Cities of the Himalayas
10.	TROPMET2024-063	Vijai Kumar	Solar influence on Climate change over Indian subcontinent: Analysis and impacts
11.	TROPMET2024-190	Chaithra S T	Changing Extreme Precipitation Patterns over India and the Attribution of External Influences



TROPMET 2024



Recent Advances and Challenges in Understanding and Predicting High-impact Weather and Climate Extremes over Indian Subcontinent in the Climate Change Context

11 December 2024 (Wednesday)

Time: 15:00 -16:30 Hrs

Venue: TIIR Room No 3

TS: Diagnostics and numerical modelling of extreme weather events over the Indian subcontinent

SN	Abstract ID	Author	Title of the paper
1.	TROPMET2024-P012	Prof. Nagaraju Chilukoti	Recent two decades witness an uptick in monsoon depressions over the northern Arabian Sea
2.	TROPMET2024-P007	S. D. Sanap	Teleconnection between Arctic Oscillation and Winter Precipitation over the Indian region
3.	TROPMET2024-078	Commander Anish Kumar	Simulation of Tropical Cyclones in Bay of Bengal and Arabian Sea for various physics schemes in WRF model
4.	TROPMET2024-333	Lokesh Pandey	Numerical Modeling of extremely long-lasting cyclone Biparjoy: role of increasing ocean heatwaves
5.	TROPMET2024-328	Sujata Pattanayak	Assimilation of Insat-3Dr.Satellite Radiance in NCMRWF Global Forecast System
6.	TROPMET2024-113	Dr. Sahadat Sarkar	Evaluation of very high-Resolution model performance in capturing Delhi's extreme rainfall event during July 2023
7.	TROPMET2024-265	Arindam Ghosh	Influence of Initial Condition in Global Forecast System Model (GFS T1534) for Predicting Heavy and Extreme Rainfall over India
8.	TROPMET2024-244	Oscar Paul	Improving an Extreme Precipitation Simulation: Sensitivity to Resolution and Time-Stepping schemes
9.	TROPMET2024-057	Debjyoti Roy	Performance evaluation of different PBL and microphysics parameterizations in WRF for simulating pre-monsoon thunderstorms over Delhi-NCR
10.	TROPMET2024-140	Ipshita Bhasi	A Study on Dynamic and Thermodynamic Properties of Tropical Cyclones over Arabian Sea through Composite Analysis
11.	TROPMET2024-295	Mohan Murali Krishna Gorja	Sensitivity of cloud microphysics on the simulation of heavy rainfall in WRF- a case study for the 7–10 August 2019 Event over Kerala, India
12.	TROPMET2024-339	Rajith K	Sensitivity of Microphysical Parameterizations in the Simulation of Thunderstorms Over Urban Region

High Tea: 16:30-16:50 Hrs



TROPMET 2024



Recent Advances and Challenges in Understanding and Predicting High-impact Weather and Climate Extremes over Indian Subcontinent in the Climate Change Context

11 December 2024 (Wednesday)

Time: 16:50 -18:10 Hrs

Venue: CDC Auditorium

TS: Early warning systems, mitigation, preparedness and response actions for weather and climate extremes in disaster risk reduction

SN	Abstract ID	Author	Title of the paper
1.	TROPMET2024-P021	Dr. Yesubabu V.	Impact of Western Ghats orography on the simulation of extreme precipitation over Kerala, India during 14–17 August 2018
2.	TROPMET2024-006	Dr. Rizwan Ahmed	A Teleconnection Between Tropical Cyclones and Fog: A Case Study Over the Indo-Gangetic Basin, India
3.	TROPMET2024-257	Suman Chattopadhyay	Importance of Flood Early Warning System under Changing Climate in South Gangetic West Bengal.
4.	TROPMET2024-306	Shailendra Rai	Effect of ENSO on Climatic Variables on Malaria Burden in Hbhi Region of India
5.	TROPMET2024-330	Dr. G. Ch. Satyanarayana	Changes in Pre-Monsoon Rainfall in India (1963-2022) and Its Regional Impacts
6.	TROPMET2024-158	Dr. Rahul Pethe	Smart Safer Environment Monitoring Landsliding System using GEO Spatial Technology
7.	TROPMET2024-212	Harikrishnan N	Role of Ocean in modulation of Tropical Cyclones.
8.	TROPMET2024-041	Ankan Chakraborty	India-wide Extreme Rainfall Driven Flood Hazard Forecasting
9.	TROPMET2024-043	Junaid Bin Yousuf P	Identifying the suitable thermodynamic indices for lightning forecast in India
10.	TROPMET2024-081	Geo Tom	A quantitative tropical cyclone risk assessment over the eastern coast of India



TROPMET 2024



Recent Advances and Challenges in Understanding and Predicting High-impact Weather and Climate Extremes over Indian Subcontinent in the Climate Change Context

11 December 2024 (Wednesday)

Time: 16:50 -18:10 Hrs

Venue: TIIR Room No 1

TS: In-situ and space-based observational and monitoring aspects of extreme weather and climate events

SN	Abstract ID	Author	Title of the paper
1.	TROPMET2024-286	Prof. Ravi Kumar Kunchala	Understanding the regional carbon cycle dynamics over India using remote sensing monitoring and modelling
2.	TROPMET2024-141	Sachin K Philip	Evolution of the Mixed Layer Characteristics During the Withdrawal Phase of the Indian Summer Monsoon over Central India
3.	TROPMET2024-103	Amit Kumar	Differences in rain microphysics between Eastern and Western Ghats of India based on GPM satellite observation
4.	TROPMET2024-423	Dr. A. Aravindhavel	Early Detection of Severe Storms using Differential Reflectivity from Dual Polarimetric Radar for Nowcasting
5.	TROPMET2024-378	B Sudarsan Patro	Challenges in the Utilization of Automatic Weather Station for Operational Use and Weather Forecasting
6.	TROPMET2024-117	Dr. Abhishek Anand	Decreasing Trend of Fog at Kolkata Airport
7.	TROPMET2024-202	Lapynsuk Thabah	Initial studies of Electric Field Effects on the Drop Size Distribution of thunderstorms over North-Eastern region of India
8.	TROPMET2024-127	Chandrani Chatterjee	Retrieval of cloud top properties from Sounder on-board newly launched INSAT-3DS
9.	TROPMET2024-175	Siddhant Arya	Western Disturbance Variability in Recent Years: Evaluation of the Causes and the Impacts on North India
10.	TROPMET2024-285	Shyam Sunder MS	Case Study Over 2022 Forest Fire event, Uttarakhand, India: Investigation on Heatwave and Drought induced the Forest Fire



TROPMET 2024



Recent Advances and Challenges in Understanding and Predicting High-impact Weather and Climate Extremes over Indian Subcontinent in the Climate Change Context

11 December 2024 (Wednesday)

Time: 16:50 -18:10 Hrs

Venue: TIIR Room No 2

TS: Impact of large-scale climate modes on weather extremes (e.g., ENSO, IOD, MJO, etc.)

SN	Abstract ID	Author	Title of the paper
1.	TROPMET2024-226	Dr. Jyoti Narayan Bhate	Diagnostic Study of Global Heat Waves
2.	TROPMET2024-045	A. Sabarinath	Evaluation of CMIP6 GCM's Simulations of Surface Air Temperature over India
3.	TROPMET2024-014	Dr. Pralhad Jaybhaye	Assessment of Agricultural Drought Based on Various Drought Indices by Using RS and GIS Approach for Beed District of Maharashtra (India).
4.	TROPMET2024-247	Lt Cdr. Santhoshkumar G	A Study on Variation in Indian Summer Monsoon Rainfall (ISMR) in Relation with ENSO Cycle
5.	TROPMET2024-380	Lt Cdr. Beena Jain	Investigation on the remote and local factors influencing the frequency of fog occurrences over the Gangetic plains of India
6.	TROPMET2024-027	Sarin TS	Relationship between Atmospheric Aerosols and Surface Temperature over the Indian Region
7.	TROPMET2024-359	Manendra Singh Nag	Influence of Meteorological Parameters on Lightning Events over the Indian Region
8.	TROPMET2024-262	Jadhav Ankita Kailas	Southern Ocean Climate Dynamics: Observations, Modeling, and Future Projections



TROPMET 2024



Recent Advances and Challenges in Understanding and Predicting High-impact Weather and Climate Extremes over Indian Subcontinent in the Climate Change Context

11 December 2024 (Wednesday)

Time: 16:50 -18:10 Hrs

Venue: TIIR Room No 3

TS: Diagnostics and numerical modelling of extreme weather events over the Indian subcontinent

SN	Abstract ID	Author	Title of the paper
1.	TROPMET2024-P029	Dr. Amit Keserkar	Helical Paradigm of Tropical Cyclones Life Cycle
2.	TROPMET2024-361	Suneet Dwivedi	Effect of Climate Change on the Clustering and Waiting Time Between the Extreme Precipitation Events over India
3.	TROPMET2024-P008	Sunanda Moka	Extreme weather events in Monsoon 2024
4.	TROPMET2024-P005	Nagarjuna Rao. D	Fidelity of coupled hindcast simulations in representing intraseasonal biases over South Asia
5.	TROPMET2024-P032	Ravi Kiran Varaha	Key Factors Influencing the Cloud Condensation Nuclei In Rural
6.	TROPMET2024-230	Rituparna Sarkar	Performance of A Novel NWP-AI Hybrid Lightning Early Warning System (C2AE) over Indian Subcontinent
7.	TROPMET2024-182	Manisha Chaturvedi	Statistical Downscaling and Future projection of CMIP6 GCM's Minimum Temperature data over India
8.	TROPMET2024-219	Ame Maheshbhai Chhatbar	Machine Learning-Based Identification of Convective Clouds Using INSAT-3DR.Data and Ground Based Lightning Data
9.	TROPMET2024-069	Prathamesh Sanjay Kadam	Classification of aerosols using machine learning algorithm

Time: 18:15-19:15 Hrs

Venue: Auditorium

Indian Meteorology Society General Body Meeting

Time: 19:15 Hrs onwards

Venue: NCC Ground, NIT RKL

Dinner



TROPMET 2024

Recent Advances and Challenges in Understanding and Predicting High-impact Weather and Climate Extremes over Indian Subcontinent in the Climate Change Context



Day-3: 12 December 2024 (Thursday)

PLENARY SESSION 3

Time: 10:00-10:45 Hrs

Venue: Auditorium

Plenary Talk 1 by Dr. R. Krishnan, Director, IITM Pune

Session Chaired by

Shri Anand Sharma, President, IMS

Tea /Coffee Break & Visit to Poster (10:45-11:00 Hrs)



TROPMET 2024



Recent Advances and Challenges in Understanding and Predicting High-impact Weather and Climate Extremes over Indian Subcontinent in the Climate Change Context

12 December 2024 (Thursday)

Time: 11:00 -13:00 Hrs

Venue: CDC Auditorium

TS: Air Pollution Interactions with weather extremes

SN	Abstract ID	Author	Title of the paper
1.	TROPMET2024-P014	Dr. Sachin Ghude	Integrated Air Quality Monitoring System for the Indian Region
2.	TROPMET2024-038	Dr. Sanjeev Dwivedi	The Role of Dust in the Formation and Maintenance of Monsoon Inversion over the Arabian Sea
3.	TROPMET2024-109	Dr. Gauravendra Pratap Singh	Comparative study of ventilation coefficient and its impact on air pollution over the two mega cities of India
4.	TROPMET2024-363	Dr. Vikram Singh Bhati	Long-Term Trends of UV Index, PM _{2.5} , and Aerosol Optical Depth (AOD) Over Northern India: Insights from Satellite Observations
5.	TROPMET2024-P31	Dr Ravi Kumar Reddy Addula	Modeling homogeneous ice nucleation from drop-freezing experiments: impact of droplet volume dispersion and cooling rates
6.	TROPMET2024-073	Aparna Aparajita	High-resolution satellite observations to understand the regional scale analysis of atmospheric CO ₂ and its links with SIF and climate parameters
7.	TROPMET2024-120	Anagha K S	Observed Changes in Surface Ozone Pollution During Major Heatwave Events in India
8.	TROPMET2024-373	Peri Subrahmanya Hari Prasad	Impact of Air-pollution on outdoor human thermal comfort during the last demi-decade over the megacity of Hyderabad
9.	TROPMET2024-035	Smaran Maji	Understanding The Background Black Carbon over the Indian Region
10.	TROPMET2024-235	Arun Nair	Impacts of aerosols on radiation fog structure and lifetime over North India
11.	TROPMET2024-277	Akanksha Pandey	Impact of Agricultural Biomass Burning on Land Surface Temperature and Aerosol Loading in the Upper Indo-Gangetic Plain
12.	TROPMET2024-405	Pritam Meher	Can Air Pollution Change the Raindrop Size Distributions? A case study for Pre-monsoon Thunderstorms over an Industrial Station



TROPMET 2024



Recent Advances and Challenges in Understanding and Predicting High-impact Weather and Climate Extremes over Indian Subcontinent in the Climate Change Context

12 December 2024 (Thursday)

Time: 11:00 -13:00 Hrs

Venue: TIIR Room No 1

TS: Analysis and prediction of weather and climate extremes using AI/ML/DL techniques & Impact of land use and land cover changes on extreme weather and climate events

SN	Abstract ID	Author	Title of the paper
1.	TROPMET2024-379	Dr. Rekha Bharali Gogoi	Comparative Analysis of Deep Learning and Empirical Methods for Enhancing Thunderstorm Detection in Northeast India Using INSAT-3D/3DR.Data
2.	TROPMET2024-097	Pinaki Ranjan Sarkar	Forecasting Extreme Climatic Events using Physics Informed Neural Networks: A case study on Cyclone YAAS
3.	TROPMET2024-410	Menaka Gandhi J	Analysis of Thunderstorm Prediction Using Artificial Intelligence / Machine Learning Techniques
4.	TROPMET2024-P015	Harvir Singh	Machine Learning-Based Improvements to IMDAA Reanalysis for Maximum and Minimum Temperatures
5.	TROPMET2024-326	Neha Rajput	Assessment of Near Real Time Blended rainfall product for an extreme rainfall event
6.	TROPMET2024-417	Arpita Dhamija	Thunderstorm prediction for Indian region using gradient boost machine learning techniques
7.	TROPMET2024-033	Soumya Satyakanta Sethi	Warming over Indian Cities: Urbanization or Climate Change
8.	TROPMET2024-053	Nandini G	Deciphering Urbanization and Climate Change led Thermal Signatures over the Smart City Bhubaneswar using Urban Scale Model Simulations
9.	TROPMET2024-066	Rohan Anand	Particulate Matter Shifts in India's Expanding Urban Areas Over the Last Two Decades (2000-2020)
10.	TROPMET2024-132	Priya Priyadarshni	Leveraging Google Earth Engine to Study Land Use Land Cover Change in the Western Ghats Region
11.	TROPMET2024-144	Dikshika Mahapatra	Surface Energy Balance Scenarios of Cities in Different Climate Zones of India



TROPMET 2024



Recent Advances and Challenges in Understanding and Predicting High-impact Weather and Climate Extremes over Indian Subcontinent in the Climate Change Context

12 December 2024 (Thursday)

Time: 11:00 -13:00 Hrs

Venue: TIIR Room No 2

TS: Climate data analysis, assessments and projections

SN	Abstract ID	Author	Title of the paper
1.	TROPMET2024-344	Dr. Sachin M. Deshpande	Structure and Evolution of Mesoscale Convective Systems Over the Monsoon Zone: Insights from High-Resolution Observations and Model Simulations
2.	TROPMET2024-084	Deepak Singh Bisht	Enhancing Satellite Precipitation Estimates Using Mumbai-Mesonet Observations: A Random Forest Approach to Bias Correction
3.	TROPMET2024-173	M. Ashok Williams	Comparison and Validation of Global Forecast System Datasets with Observations from Radiosonde
4.	TROPMET2024-407	Goriparthi Pavani	Diagnostic analysis of extreme rainfall events due to monsoon depression
5.	TROPMET2024-404	Yenugula Rashmitha	The Urban Heat and Pollution Island of Hyderabad: Implications for Sustainability of Indian Cities
6.	TROPMET2024-316	Akash Vishwakarma	Performance of CMIP6 models to understand nature of evolution of drought and flood over India its six homogeneous regions
7.	TROPMET2024-142	Sanjitava Biswas	Sensitivity study of WRF model cumulus parameterization schemes for simulating Very Sever Cyclonic Storm
8.	TROPMET2024-409	Arun Jo Mathew	Extraction of Atmospheric Gravity waves from COSMIC GPSRO profiles and Identification of their Source Using GROGRAT model



TROPMET 2024



Recent Advances and Challenges in Understanding and Predicting High-impact Weather and Climate Extremes over Indian Subcontinent in the Climate Change Context

12 December 2024 (Thursday)

Time: 11:00 -13:00 Hrs

Venue: TIIR Room No 3

TS: Diagnostics and numerical modelling of extreme weather events over the Indian subcontinent

SN	Abstract ID	Author	Title of the paper
1.	TROPMET2024-029	Dr. Ipsita Putatunda	Identification of Extreme rainfall hotspots over rainfall homogeneous regions in India
2.	TROPMET2024-216	Sushil Kumar	Spatial and temporal trends of mean and extreme rainfall for the 75 districts of the state of Uttar Pradesh, India
3.	TROPMET2024-047	Sarvesh Kumar Dubey	Understanding rapid intensification of tropical cyclones in the Bay of Bengal through energetics
4.	TROPMET2024-297	Makwana Nikitabehn Navinchandra	Is Cloud Turbulence Different from Standard Turbulence?
5.	TROPMET2024-384	Satyabrata Datta	Early Warning System for Extreme Weather in the Climate Change Context
6.	TROPMET2024-240	Nitha T S	Unraveling The Meteorological Drivers of Floods on the Leeward Side of the Western Ghats in Maharashtra
7.	TROPMET2024-279	Aashna Verma	Fidelity of the CHyM in Capturing Flood Patterns in the Ganga River Basin.
8.	TROPMET2024-151	Swarnendu Bhattacharya	Land-Atmospheric Feedback Determines Pre-Monsoon Thunderstorm Initiation and Invigoration over India

Time: 13:00-14:00 Hrs

Venue: NCC Ground

Lunch



TROPMET 2024

Recent Advances and Challenges in Understanding and Predicting High-impact Weather and Climate Extremes over Indian Subcontinent in the Climate Change Context



Time: 15:30-17:30 Hrs

Venue: CDC Auditorium

VALEDICTORY SESSION

Time: 17:30-18:00 Hrs

Venue: TIIR Building

High Tea