



INTERNATIONAL CONFERENCE ON CLIMATE CHANGE AND DISASTER MANAGEMENT

26-28 February 2015, Thiruvananthapuram, India

PROGRAMME

DAY 1 THURSDAY, FEBRUARY 26, 2015

08:30 Registration

09:15 Delegates to be seated in the Conference Hall

09:30-10:30 hrs OPENING CEREMONY

THURSDAY, FEBRUARY 26, 2015

09:30 National Anthem

Invocation

09:35 Welcome: **Dr. Shailesh Nayak**, Secretary, MoES

09:40 Opening Remarks: **Dr. G. Madhavan Nair**, IAA President

09:50 Felicitations: **Sri. A. S. Kiran Kumar**, Chairman, ISRO

Dr. Jean-Yves Le Gall, President, CNES

Dr. Tanja Masson-Zwaan, President, IISL

10:05 Inaugural Address: **Sri. Justice (Retd.) P. Sathasivam**,
Honourable Governor of Kerala

10:25 Vote of Thanks: **Dr. Jean-Michel Contant**, IAA Secretary General

10:29 National Anthem

10:30-11:00 Tea Break



11:00-12:40 hrs PLENARY LECTURES THURSDAY, FEBRUARY 26, 2015

- 11:00 **IAA-THI-15-00-01**
Plenary Lecture: Jean-Yves Le Gall, President, CNES, France
- 11:35 **IAA-THI-15-00-02**
Plenary Lecture: A S Kiran Kumar, Chairman, ISRO/Secretary, DOS, India
- 12:10 **IAA-THI-15-00-03**
Plenary Lecture: Shailesh Nayak, Secretary, MoES, India
- 12:40-13:30 Lunch Break

**13:30-15:00 LEGAL ASPECTS OF CLIMATE CHANGE AND DISASTER MANAGEMENT
THURSDAY, FEBRUARY 26, 2015**

- 13:30-14:00 **IAA-THI-15-01-IN**

Invited Lecture: **Tanja Masson-Zwaan**, Legal challenges and opportunities related to the use of satellite data for disaster management and climate change
- 14:00-15:00
- IAA-THI-15-01-01** **Larsen Paul B.**, Prevention and mitigation in two recent disasters
- IAA-THI-15-01-02** **Jagdale Shripad**, International programs and initiatives on space for disaster management
- IAA-THI-15-01-03** **Sadaf Amrin Fathima B.**, Remote sensing contribution in fighting maritime pollution in Niger delta: integrated partnership of oil companies and local authorities
- IAA-THI-15-01-04** **Kumar Abhijeet**, Role of non-state actor in enforcing environmental laws visa-vis remote sensing technology and international obligations
- IAA-THI-15-01-05** **Ranjana Kaul** Space technology for a common future for all citizens of the world
- IAA-THI-15-01-06** **Sridhara Murthi K R. and Gopalakrishnan V** Climate Change and Role of Outer Space: A Multilevel framework for legal and policy issues
- IAA-THI-15-01-07** **Balakista Reddy V** Space technology and disaster management: A techno-legal perspective
- 15:00-15:15 Tea Break

**15:15-16:45 CLIMATE CHANGE: MODELLING & REANALYSIS
THURSDAY, FEBRUARY 26, 2015**

- 15:15-15:45
- IAA-THI-15-03-IN** Invited Lecture: **M. Rajeevan**, Climate Change over the Indian region: Observations and Future Projections



15:45-16:45

- IAA-THI-15-03-01** **Radhika Ramachandran**, Estimation of terrestrial CO₂ fluxes over the Indian Region using Satellite observations, in-situ measurements and atmospheric transport models
- IAA-THI-15-03-02** **Sijikumar S., and S. Aneesh**, Trends and variabilities in the tropospheric water vapour over Indian region
- IAA-THI-15-03-03** **Bala Subrahmanyam D. B., and T. J. Anurose**, Future requirements in the surface-layer parametrization schemes in the regional numerical weather prediction (NWP) models: An overview
- IAA-THI-15-03-04** **Jayanta Sarkar and J. Chicholikar**, Climate change scenario in the Gujarat region – analyses based on LARS-WG (Long Ashton Research Station – Weather Generator) model
- IAA-THI-15-03-05** **Sandhya K. Nair, Thara V. Prabha, N. Purushothaman, S. Sijikumar, S. Muralidharan, N. V. P. Kirankumar, D. B. Subrahmanyam, T. J. Anurose, S. S. Prijith and K.V. S. Namboodiri**, Diurnal variations of the low-level jet over peninsular India during the onset of Asian summer monsoon
- IAA-THI-15-03-06** **John P George, Abhishek Lodh and E. N. Rajagopal**
Soil moisture analysis using satellite observations
- 16:50-17:50 Round Table Discussion: Chiefs of Organisations & Departments
- 17:50-18:10 High Tea
- 18:10-19:00 Address by Chief Patron **Sri. Oommen Chandy**,
Honourable Chief Minister of Kerala
- 19:00-20:30 Cultural Programmes & Dinner

DAY 2 FRIDAY, FEBRUARY 27, 2015

09:00-09:30 hrs CLIMATE CHANGE: MODELLING & REANALYSIS (Contd.)

FRIDAY, FEBRUARY 27, 2015

- IAA-THI-15-03-07** **Umakanth U. and Amit P Kesarkar**, Evaluation of the performance of Regional Climate Model (RegCM4.4) over South Asian CORDEX domain
- IAA-THI-15-03-08** **Venkat Ratnam M., and A. Jayaraman**, Indian summer monsoon dynamics in a changing climate
- IAA-THI-15-03-09** **Venkat Ratnam, M., G. Kishore Kumar, N. Venkateswara Rao, B. V. Krishna Murthy, Jan Lastovicka and Liying Qian**, Evidence of long-term change in zonal wind in the tropical lower mesosphere: Observations and model simulations



09:30- 13:05 hrs CLIMATE CHANGE: SPACEBORNE OBSERVATIONS

FRIDAY, FEBRUARY 27, 2015

09:30-10:00

IAA-THI-15-05-11 Invited Lecture: **A. Jayaraman**, “Black Carbon and Climate Change”

10:00-11:00

IAA-THI-15-05-01 **Rajan, D**, Diurnal and spatial variation of monsoon rainfall in the climate scale

IAA-THI-15-05-02 **Nana Ama Browne Klutse, Emmanuel OseiFrimpong, and Benjamin Quansah**, Space solution for climate impact on agriculture in Ghana

IAA-THI-15-05-03 **Prasad, V. S., C.J. Johny, Sanjeev Kumar Singh and E.N. Rajagopal**, Satellite data for monitoring and predicting extreme weather events

IAA-THI-15-05-04 **Yaroslav Yatskiv, Oleksandr Degtyaryov, Gennadi Milinevsky, Ivan Syniavskiy, Michael Mishchenko, Vera Rozenbush, Yurylvanov, Andrii Bovchaliuk, and Vassyl Danylevsky**, New satellite project “Aerosol-UA”: remote sensing of aerosols in the terrestrial atmosphere

IAA-THI-15-05-05 **Hugh J. Christian**, Using space-based lightning observations to monitor severe weather development

IAA-THI-15-05-06 **Nizy Mathew, Suresh Raju C, and Manoj Kumar Mishra**, Megha-Tropiques satellite SAPHIR data analyses for upper tropospheric humidity and deep convective cloud studies

11:00-11:15

Tea Break

11:15-13:05, CLIMATE CHANGE: SPACEBORNE OBSERVATIONS (Contd.)

IAA-THI-15-05-07 **Manoj Kumar Mishra, K. Rajeev and Ashok Kumar Gupta**, Direct observations of the radiative impact of mineral dust over the Arabian sea using Megha-Tropiques ScaRaB

IAA-THI-15-05-08 **K. Rajeev, Ashok Kumar Gupta, Anish Kumar M. Nair and Manoj Kumar Mishra**, Diurnal variations of cloud radiative forcing over the tropics: observations using Megha-Tropiques-ScaRaB

IAA-THI-15-05-09 **Ashok Kumar Gupta, K. Rajeev and Anish Kumar M. Nair**, Spatial distribution and radiative impact of tropical clouds: An integrated approach based on multi-year multi-satellite observations

IAA-THI-15-05-10 **Girach Imran Asatar and Prabha R Nair**, Global long-term trend in tropospheric Carbon Monoxide

IAA-THI-15-05-11 **Anish Kumar M. Nair, K. Rajeev and T. Narayana Rao**, Contrasting characteristics in the 3-dimensional cloud distribution during a deficit monsoon season

- IAA-THI-15-05-12 **Anish Kumar M. Nair, T. Narayana Rao and K. Rajeev**, Dynamics of the 'Pool of inhibited cloudiness' during active and break phases of Indian summer monsoon
- IAA-THI-15-05-13 **Santosh M., and K. Rajeev**, Improved estimation of atmospheric boundary layer height from simulations of atmospheric refractivity over the tropical oceans - a study using DYNAMO 2011 radiosonde data
- IAA-THI-15-05-14 **M. Sandhya and S. Sridharan**, Factors influencing seasonal, interannual and long-term tendencies in tropical stratospheric water vapour
- IAA-THI-15-05-15 **Sridharan, S., M. Sandhya, Oindrila Nath and A. Jayaraman**, Climate change impact on the middle atmospheric temperature, ozone and circulation
- IAA-THI-15-05-16 **Ravi Kiran, V., H. Gadhavi, M. Rajeevan and A. Jayaraman**, Role of vertical structure of cloud micro-physical properties on Cloud radiative forcing over the Asian monsoon region
- IAA-THI-15-05-17 **Berrien Moore III and Sean Crowell (presented by John C. Petheram)**
The GeoCarb Mission: The Logical Next Step in Carbon Measurements from Space.
- 13:05-14:00 Lunch Break

14:00-15:50 hrS CLIMATE CHANGE: GROUND-BASED OBSERVATIONS
FRIDAY, FEBRUARY 27, 2015

- IAA-THI-15-04-01 **Uma K. N.**, A review on Tropical Meso-scale Convective Systems
- IAA-THI-15-04-02 **Dhanya P, A. Ramachandran, and K. Palanivelu**, Assessing and predicting the past and future drought scenario of Kancheepuram district.
- IAA-THI-15-04-03 **Suresh Raju C, Renju R, Nizy Mathew, Tinu Antony and Manoj Kumar Mishra**, Microwave radiometer observations of vertical structure of water vapor and tropical convections
- IAA-THI-15-04-04 **Prabha R Nair, Liji Mary David, Aryasree S and Kavitha M**, Temporal trends of climatically significant atmospheric constituents over Indian region
- IAA-THI-15-04-05 **Devara P. C. S., Kushagra Rajendra and Sarika Jain**, Do aerosols responsible for precipitation climate change and useful for disaster mitigation?
- IAA-THI-15-04-06 **S V Sunilkumar and K Parameswaran**, Variability of tropical tropopause over the Indian region
- IAA-THI-15-04-07 **Sai Suman, M. N., T. Wankhede, K. Renuka, A. K. Pandit, V. Ravi Kiran, C. Jain, H. Gadhavi and A. Jayaraman**, Aerosols and trace-gases trend in southern India: recent observations from NARL climate observatory



- IAA-THI-15-04-08 **Amit Kumar Pandit, Harish Gadhavi, M. Venkat Ratnam, A. Jayaraman and K. Raghunath**, Cirrus clouds in the changing climate: 16-year climatology of cirrus clouds over a tropical south-Indian station
- IAA-THI-15-04-09 **Amit P Kesarkar, V P M Rajasree, U Umankanth, Jyoti Bhate, Vikas Singh, G Chinna Satyanarayana, and A Jayaraman**, Climate change impact on cyclogenesis patterns
- IAA-THI-15-04-10 **N.Puviarasan, B.A.M.Kannan, and A.K.Sharma**, GPS Meteorology: With focus on weather and climate applications
- IAA-THI-15-04-11 **Harijono Djojodihardjo**, Green Aircraft Technology for Contrails and Cirrus Cloud Avoidance
- 15:50-16:05 **Tea Break**

16:05-17:15 Hrs LEGAL ASPECTS OF DATA MANAGEMENT AND RELATED

FRIDAY, FEBRUARY 27, 2015

- IAA-THI-15-02-01 **Sadaf Amrin Fathima.B**, Intellectual property rights protection for data received from outer space
- IAA-THI-15-02-02 **Barbara Skardzińska**, Legal aspects of the Copernicus (GMES)
- IAA-THI-15-02-03 **Anja Nakarada Pecujlic and Sarah Germann**, Small Approach OverTRIPS a Global solution: An IGA approach to IP Rights regarding climate change
- IAA-THI-15-02-04 **Sethu Nandakumar Menon and Sagee Geetha Sethu**, Legal understanding of 'data originated from outer-space' for a global streamlined policy initiative on climate change & disaster management
- IAA-THI-15-02-05 **Nandini Paliwal and Rishiraj Baruah**, Challenges in governing data sharing policies
- IAA-THI-15-02-06 **Malay Adhikari**, Legal framework of Indian satellite data measuring climate changes
- IAA-THI-15-02-07 **Gopalakrishnan V.**, Policy dimensions of free and unrestricted exchange of meteorological data – a critical review.

DAY 3 SATURDAY, FEBRUARY 28, 2015

09:00-11:30 HRS EARTHQUAKES, FLOODS, LAND SLIDES, FIRES

SATURDAY, FEBRUARY 28, 2015

09:00-09:30

- IAA-THI-15-06-IN **Invited Lecture: P. G. Diwakar "Bhuvan"**



09:30-10:40

- IAA-THI-15-06-01** **Anatoly N. Perminov and Sergei V.Cherkas**, Methodology of short-term powerful earthquakes forecasting and warnings through the using of Earth-Space Monitoring Data: Russian approach
- IAA-THI-15-06-02** **Kazuya Kaku, Noriko Aso and Futoshi Takiguchi**, Space-based response to the 2011 Great East Japan Earthquake: Lessons learnt from JAXA's support using earth observation satellites
- IAA-THI-15-06-03** **Degtiar V.G. and S.T. Kalashnikov**, Small size spacecraft VULKAN-KOMPAS-2
- IAA-THI-15-06-04** **Degtyarev A., A. Makarov , S. Moskalov , O. Fedorov and V. Korepanov**, Directions of space researches of earthquake precursors
- IAA-THI-15-07-01** **Urvashi Meena, Vipin Chanaliala and Pradeep Kumar Garg**, Integrating geospatial technology with models and warning systems for landslide mitigation: a review
- IAA-THI-15-07-02** **Hetscher M., T. Terzibaschian, E.Lorenz**, FIREBIRD – a fire reconnaissance mission for disaster management
- IAA-THI-15-07-03** **Guru Balamurugan and Prakash Priyadarshi**, Study the 2013 flood damages and risk assessment in Kedarnath area using Geoinformatic techniques
- IAA-THI-15-07-04** **Guru Balamurugan, SomanthBera, Meghna G, Rishikesh S, Hirday K, Akansh and Aswini K**, Post disaster damage impact assessment and challenges due to heavy rainfall in 2013 – a case study of Bhatwari block, Uttarkashi
- 10:40-10:55 **Tea Break**

10:55-11:30 EARTHQUAKES, FLOODS, LAND SLIDES, FIRES (Contd.)

- IAA-THI-15-07-05** **Francis Sangma and Guru Balamurugan**, Flood and bank erosion analysis of Majuli Island, Assam using Geoinformatics
- IAA-THI-15-07-06** **Kanungo D. P., and S. Sarkar**, Landslide observatory for real time monitoring of Pakhi landslide, Garhwal Himalayas, Uttarakhand – an effort towards landslide early warning
- IAA-THI-15-07-07** **Suresh Raju C, Tinu Antony, Nizy Mathew, Renju R and Manoj Kumar Mishra**, Flood extent analysis using satellite microwave radiometric observation

**11:30-13:20 hrs DISASTER MANAGEMENT AND RELATED
SATURDAY, FEBRUARY 28, 2015**

11:30-12:00

- IAA-THI-05-08-IN** **Invited Lecture : Qi Haiming**, The Latest Progress in the Application of Space Technology to Respond to Climate Change and Natural Disasters in China



12:00-13:20

- IAA-THI-15-08-01** **Igor V. Sorokin**, Instruments and methods applicable for purposes of disaster management aboard Russian segment of the ISS
- IAA-THI-15-08-02** **Aidaraliev, A. A.**, Global warming and sustainable development of mountain regions of Kyrgyz Republic
- IAA-THI-15-08-03** **Aparna Sengupta**, Exploring the role of information and communication technology in disaster management in India
- IAA-THI-15-08-04** **Gil Denis, Hélène de Boissezon, Steven Hosford, Bruno Montfort and Xavier Pasco**, The evolution of earth observation satellites in Europe and its impact on emergency response services
- IAA-THI-15-08-05** **Zhang Shaowei Hanfei**, Real-time earth observation system based on micro-nano networks
- IAA-THI-15-08-06** **Alessio Di Iorio, Salvatore Stramondo, Stefano Corradini, Luca Merucci and Christian Bignami**, An European Union FP7 "Space" project: Aphorism "Advanced Procedures for volcanic and Seismic Monitoring"
- IAA-THI-15-08-07** **Chandrasekhar M.V, Kartik A., Neetha Tirmal, Rathnakara S. C. and A. S. Ganeshan**, Proposal of Early Warning Information broadcast service through IRNSS
- IAA-THI-15-08-08** **Mall, R K**, Integration of Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) in SAARC Region: New approach towards Disaster Risk Resilient
- IAA-THI-15-08-09** **Murthy Remilla**, Space for disaster management: perspectives on technology, design & beyond
- IAA-THI-15-08-10** **G S Srinivasa Reddy and C N Prabhu**, The Application of ICT tools in Disaster Monitoring and Mitigation – Karnataka Model
- IAA-THI-15-08-11** **Tverdokhlebova E.M, Korsun A.G., Kurshakov M.Yu., Shuvalov V.A., Khakhinov V.V, Lebedev V.P., Ratovskiy K.G.**, Experimental results of technogenic impacts of spacecraft' engines on ionosphere measured by radiosonde method

13:20-14:00

Lunch Break

14:00-16:00

**Report /Panel discussion/Award Distribution/
Concluding Session**