

International Academy
of Astronautics



Kerala State Council for Science
Technology and Environment



International Institute
of Space Law



**INTERNATIONAL CONFERENCE
ON CLIMATE CHANGE & DISASTER MANAGEMENT
FEBRUARY 26-28, 2015, THIRUVANANTHAPURAM, INDIA**

Report of the Legal Sessions organized by IISL

Rapporteurs: Mr. Gopalkrishnan, Policy Analyst, ISRO HQ, Mr. Shripad Jagdale, and Mr. Kumar Abhijeet, Assistant Professor, National Law School of India University, Bangalore

This Conference, co-organised by the International Academy of Astronautics (IAA), the International Institute of Space Law (IISL) and the Kerala State Council for Science, Technology and Environment (KSCSTE), addressed all aspects of the contribution of space activities to understanding and solving the problems of climate change and disaster management, from technical/technological, policy and legal perspectives.

The conference served as a prelude to the next Heads of Space Agencies Summit being organised by the IAA on Sept 14-15, 2015 at Mexico. Two legal sessions were held during the 3-day conference, which gathered some 200 participants from various backgrounds.

During the opening session, the Governor of Kerala delivered a speech, and many high profile speakers honoured the gathering with their presence in beautiful Kovalam.

SESSION 1: LEGAL ASPECTS OF CLIMATE CHANGE AND DISASTER MANAGEMENT

Chair: Prof. K.R.Sridhara Murthi, Vice-President, IISL

Of the seven papers accepted for this session, four were presented by their authors. In addition, Prof. Paul Larsen's paper was summarized by V. Gopalakrishnan, and Prof. Balakista Reddy's paper was presented by his research scholar Ms Anita Singh from NALSAR University of Law, Hyderabad.

The first speaker, Mr. Shripad Jagdale spoke about "**International Programmes and initiatives on Space for Disaster Management**". Mr. Jagdale proposed an idea for developing a common satellite for SAARC (South Asian Association for Regional Cooperation) countries, since they

share common geophysical, meteorological and oceanographic factors and this high risk region is poorly populated with observational networks.

He highlighted the legal challenges of evolving satellite based disaster support such as privacy and national security, IPR issues, liability issues, mechanism for integration of data and services etc. The author concluded that international cooperation amongst stakeholders is essential for effective implementation, and governments should enable sharing of data.

The second speaker, Mr. Kumar Abhijeet presented his paper titled “**The Role of Non-State Actors in Enforcing Environmental laws vis-à-vis Remote Sensing Technology and International Obligations**”. He highlighted the role of non-state actors in environmental protection, examined how satellite remote sensing is a tool to realize it. He also identified the increased strength of the National Green Tribunal via space-based evidences and advocated for a legal regime promoting participation of non-state actors. He suggested that in designing the legal landscape, compliance with international obligations, national security and safety should be the top priority. Liability for misinterpretation/ misuse of data needs to be addressed. He also cautioned that satellite-based evidence should be interpreted in a language which courts can understand. Kumar concluded that after the first phase (developing environmental jurisprudence in India by making optimum use of public interest litigation) and the current second phase (bringing environmental cases to an exclusive environmental court - the National Green Tribunal), the third phase will be to grant direct access to space data to non-state actors, thus making satellite based evidence easily available.

Dr. Ranjana Kaul was the third speaker of the session. She spoke about “**Space technology for a common future for all citizens of the World: Managing Climate Change for Long Term Sustainable Development**”, and reiterated the discourse of ecology versus economy and gave an overview of the various environmental summits addressing this discourse. Dr. Kaul explored existing statutory, institutional and technological challenges. Her concerns regarding climate change challenges for India were twofold: firstly, the need to observe international treaties, and secondly, the need to achieve sustainable development. She emphasized the necessity of clearly defining climate change and national land use policy.

The final presentation was made by the session chair, Prof. KR Sridhara Murthi. His paper was titled “**Climate Change and Role of Outer Space: A Multilevel Framework for Legal and Policy Issues**”. He stated that issues of new development agendas of different nations are interwoven with impacts from and actions on climate change. Impacts and actions that arise from climate change involve levels ranging from the total community of nations to national governments, to local bodies. He concluded that having a comprehensive policy still remains an achievable goal despite significant initiatives by the various forums. Coordination is needed at all three levels: global, national and local.

SESSION 2: LEGAL ASPECTS OF DATA MANAGEMENT AND RELATED ISSUES

Chair: Prof. Tanja Masson-Zwaan, President IISL

The second legal session featured three speakers. The first, Ms. Sadaf Amrin Fathima B., discussed “**Intellectual Property Rights protection for data received from outer space**”. Ms. Fathima gave a brief overview of the international legal framework for protection of satellite data. She highlighted the pitfall in applying the domestic IPR regime to outer space, stating that

the former has national territorial application whereas the latter does not recognize territoriality. She expressed that although IPR on earth and in outer space have several common principles, there are many differences in their application. The author concluded that in the light of increasing commercialization of space, there is a need for international data policy, as the existing regime is not capable of addressing this aspect. The shift from state-owned data to private participants requires economic and ethical guarantees. Thus, IPR on satellite data is needed. She shared the experience of space-faring nations towards IPR protection and data distribution policy at international and national fora, and cautioned that IPR should not reduce the availability of data for developing nations.

The second speaker for the session was Mr. Malay Adhikari. He spoke about “**Legal Framework of Indian Satellite Data measuring Climate Change**”. Mr. Adhikari indicated that there is no major Indian policy to regulate the remote sensing. Though scattered policy exists, he expressed the concern that climate change variables are not addressed in these documents. He concluded that there has to be synergy between satellite data technology and its regulation and their effective implementation. He suggested that with free availability of data for climate change analysis, the number of users and data use will escalate, especially by private bodies, which necessitates legal regulation.

The last speaker of this session, Mr. V. Gopalakrishnan presented a paper on “**Policy Dimension of Free and Unrestricted Exchange of Meteorological –a Critical Review.**” The paper explored the perspective of public versus private sector policies in respect of multi-sourced databases and impact of diverse framework of research versus policies in respect of multi-sourced databases. He highlighted that the general international policy of data sharing is based on rights and obligations of members and raised the discourse of free access to data policy versus price for such services, sharing the best practices from the world. He compared the WMO policy with National Meteorological Services (NMS) and shared his opinion that NMS suffers on economic issues. Recent developments like the GEOSS data sharing principles and the UN initiative on Global Geospatial Information Management were also reflected upon. The need for binding international instrument for convergent geospatial environment was stressed.

At the concluding session of the conference, two awards were announced after evaluation of oral and written skills of the young scholars in the two legal sessions. The award for the best written paper by a young scholar was given to **Mr. Kumar Abhijeet**. The award for the best oral presentation by a young scholar was given to **Ms. Sadaf Amrin Fathima B**. Several books, donated by the IISL, were handed over by Mr. K.R. Sridhara Murthi, Vice-President of IISL to the awardees and rapporteurs.

In conclusion, the two legal sessions provided a good platform for scholars working on legal issues pertaining to climate change and the role of space-based technology in disaster management, and demonstrated that the consideration of legal issues is an essential element in the debate , in addition to technical and scientific issues.