

National Conclave on 'Earth Systems and Climate Change Research'

13th March 2010

In recent years, the emphasis on understanding the exogenic and endogenic processes operating on Earth has shifted towards adopting a more holistic view of the Earth as a 'system' comprising the lithosphere, the biosphere, the hydrosphere and the atmosphere. The most important example of this 'integrated' system is the Earth's climate system, which requires the understanding of the atmosphere, ocean and land systems, and their interactions within and with societies and technologies. The issue of global climate change and its impact on socio-economic and natural resources has become a major concern in all parts of the world.

We must discover, develop and broadly apply physical and institutional solutions for collective survival. IIT Kanpur, therefore, planned to initiate a coordinated program on 'Earth Systems and Climate Change Research'. The primary goal of this initiative would be to develop infrastructure facilities for climate research and a coherent, multi-disciplinary research group and manpower to take up large projects of national and social relevance. A National Conclave on Climate Change Research was held at IIT Kanpur on 13th March 2010 to debate the implications of climate change on the earth's resources.

The chief guest for the conclave was Prof. V. K. Gaur, a distinguished scientist at CMMACS Bangalore. There were insightful talks by faculty members from IITK as well as other institutions including Profs. Rajiv Sinha, Rajesh Srivastava, Tarun Gupta, D. Paul (all from IITK), S. K. Tandon, Devesh Sinha, Vikrant Jain (all from Delhi University), K. Ashok (IITM Pune), P. P. Muzumdar (IISc Bangalore). K. Ramesh (MOES) and many others. Several crucial issues were highlighted, such as water resource management and river future, the need for generation of high resolution proxy records, the use of oceanic records to unravel the paleoclimatic fluctuations over long time scales and the need to link this data with the continental records. Another important aspect of impact, the economics and policy of climate change research, was presented by Prof. Praveen Kulshreshtha. While Dr. D. Paul described his forthcoming project, Prof. Tarun Gupta and Prof. M. K. Verma spoke about the modeling capabilities available at IIT Kanpur and the proposed research for studying climate change. Another highly promising concept of green design and consumption in the context of climate change was shared by Prof. Jayanta Chatterjee (IITK). The main point of this talk was the issue of resource productivity in a variety of connotations.

The final session of the conclave, coordinated by Prof. V. K. Gaur, focused on identifying the outstanding research issues to address climate change education and research.