

Report on the 35th National Conference of the Indian Institute of Geomorphologists (IGI)

Soumik Das¹, Shashi Shekhar Shukla¹, Jayesh Mukherjee^{1,2*}, Elora Chakraborty¹,
Milap Chand Sharma¹, Padmini Pani¹

¹Centre for the Study of Regional Development, School of Social Sciences, Jawaharlal Nehru University, New Delhi, India

²Earth Surface Processes Research Group, Department of Geography and Earth Sciences, Aberystwyth University, Aberystwyth, Wales, United Kingdom

*Email: jayesh.work05@gmail.com

Received: 6 February 2024 / Accepted: 15 February 2024

© 2024 Geological Society of India, Bengaluru, India

The 35th edition of the annual Indian Institute of Geomorphologists (IGI) national conference (35th IGI), organised by the Centre for the Study of Regional Development (CSRSD), Jawaharlal Nehru University (JNU), New Delhi, was held at the University Convention Centre from 25th to 27th November 2023. The conference was inaugurated in the presence of distinguished members of the IGI executive body, eminent geomorphologists, and foreign delegates. Prof. N. Chandrasekar, Vice Chancellor, Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, Prof. Kaushal Kumar Sharma, Dean, School of Social Sciences (SSS), JNU, Prof. Sunil Kumar De, President, International Association of Geomorphologists (IAG) from North-Eastern Hill University (NEHU), Shillong, Meghalaya along with the executive board members of the IGI and Prof. S. Sreekish, Chairperson, CSRSD. Prof. Shantishree D Pandit, Vice Chancellor, JNU, had sent her warm regards for the successful completion of the conference, as she was out of the country during this period. Prof. Padmini Pani (CSRSD, JNU), Convenor, 35th IGI, introduced the theme of the conference and highlighted different aspects of geomorphology in daily life. The viability of life is altered and re-adjusted with changing environment and physical landscapes. The unfolding of environmental changes is projected to intensify challenges to human survival, evident in the increased occurrence of extreme weather events. As expected, the imminent impact of climate change necessitates a deep understanding of specific processes within the intricately connected realm of geomorphology. Given the impracticality of relocating large populations from environmentally vulnerable areas, geomorphologists can propose practical alternatives for addressing such precarious situations through environmental evaluation and assessment, offering safer solutions. Against the backdrop of rapid population growth and evolving environmental conditions, sustainable development must take centre stage in the discourse on fair resource distribution and responsible utilisation. Accordingly, the central theme of this conference was chosen as “*Geomorphology, Environment and Management*”.

Subsequently, Prof. (Dr.) Marcus Nüsser, South Asian Institute, University of Heidelberg, Germany, delivered a keynote address on a vital topic, “It’s all about water; Cryosphere Components of Ladakh”, where he elaborated upon different water harvesting techniques in the cold-arid Ladakh region. The lecture stressed the pivotal role of such techniques in sustaining the livelihoods of these high mountain communities. Prof. N. Chandrasekar proceeded with a plenary lecture on “Coastal Geomorphology and Geospatial Beach Profile Assessment”, describing the importance of studying coastal geomorphology with regard to climate change. He also discussed the physics behind the formation of such landforms, citing examples from

the Malabar (Kerala) and Coromandel (Tamil Nadu) coasts. The Late Prof. S.R. Basu Memorial Lecture was delivered by Prof. Sunando Bandyopadhyay from the University of Calcutta on the topic, “Cities by an oscillating river: The Ganga and the medieval capitals of Bengal”, citing the significance of geomorphology in unearthing the archaeology of lower Gangetic plains from medieval Bengal.

Among 188 abstracts on various themes of geomorphology, 183 were presented in oral sessions and 5 as posters respectively. There were 52 presentations in fluvial geomorphology, followed by 29 in geohazards, 24 in geomatics, 22 in applied geomorphology, 19 in climate change, 12 in coastal geomorphology, 7 presentations each from alpine geomorphology and geoarchaeology and geoheritage, and 5 from arid and semi-arid geomorphology sessions respectively. Out of 28 abstracts received as entries to the Young Geomorphologist Competition (YGC), seven were shortlisted and presented during the conference. Dr. Arindam Chowdhury, NEHU, was declared as the winner of the YGC with a presentation titled “How can we assess the evolution and outburst flood potential of multi-glacial lake systems? The first case study from the Indian Himalayas”.

For systematising research in the field of periglacial geomorphology and permafrost studies in Himalaya: the Himalayan PERmafrost Consortium (HiPERC) was established in April 2023 at CSRSD, JNU. A special hybrid session was co-organised by HiPERC on the topic “Himalayan Periglacial geomorphology and Permafrost”. This session was chaired by Prof. Guru Prasad Chattopadhyay (former Professor, Viswa Bharati University, West Bengal). The session started with a special lecture titled “Permafrost after Equilibrium” by Prof. Christopher R. Burn, President of the International Permafrost Association (IPA) from Carleton University, Canada. The session also included three more presentations describing permafrost distribution and its importance in the Himalayan context.

Dr. Manasi Debnath, President of the Young Geomorphologists Forum (IGI-YGF) from Nagaland University (NU), conducted an interactive session for young geomorphologists. The session aimed at the active participation of young researchers, postgraduates, PhD students, early career researchers (ECRs) and young faculty members to discuss geomorphological processes and corresponding geomorphological techniques. The interaction session culminated with discussions on combining the use of traditional approaches in geomorphology and geospatial Big Data with Artificial Intelligence (AI) for robust results in geomorphological research.

The IGI Executive Committee (EC) meeting was held on 27th November 2023 in the Moonis Raza Memorial Committee Room of CSRSD. During the meeting, Prof. A.R. Siddiqui, University of



Fig. 1: Snapshots from the 35th IGI in JNU. (a) Inaugural ceremony with the lighting of the lamp by Prof. K.K. Sharma with Prof. S.K. De and Prof. (Dr.) Marcus Nüsser in the backdrop (b) Engrossed participants during the plenary lectures (c) Poster session (d) Group photo of the IGI-YGF intensive field training at Kalesar, Haryana (e) Dr. Arindam Chowdhury being awarded the winner of YGC (f) A glimpse from a technical session during the conference (g) A snap from the special session on Himalayan Periglacial Geomorphology and Permafrost with Prof. Christopher Burn (President, IPA-top centre) organised by HiPERC (<https://www.hiperc.in/>) (h) Closing ceremony with the IGI executive members and newly elected IGI-YGF members.

Allahabad, presented the annual report for the year 2022-23 and the same stood approved by the EC. The EC unanimously declared the new panel of office bearers for 2024 and Prof. Sunil Kumar De was decided to head the IGI as President for the 36th edition of the IGI in 2024. Prof. Subhamita Chaudhari from West Bengal State University was re-elected as the Editor-in-Chief of the Journal of Indian Geomorphology. Prof. A.R. Siddiqui continues to serve as the Secretary-General of the organisation. Dr. Sumantra Sarathi Biswas from Sukumar Sengupta Mahavidyalaya (SSM), Keshpur, West Bengal and Dr. Arindam Chowdhury from NEHU, were nominated as the President and Vice-President of the IGI-YGF respectively, for the year 2024. The EC accepted the request at the willingness of Prof. Mahtab Singh Rana, Head, Department of Geography, Maharshi Dayanand University, Rohtak (Haryana) to organise the 36th IGI annual conference in 2024. The conference concluded with a vote of thanks from the 35th IGI President, Prof. Milap Chand Sharma (CSR, JNU), to all the participants and volunteers for making the conference a grand success.

A post-conference field training programme “The 4th Intensive Field Training Programme (ITP)” was organised by the IGI-YGF from 28th November 2023 to 1st December 2023 in JNU, New Delhi and Kalesar, Haryana. The program observed participation from post-graduate students, PhD researchers and early career researchers (ECR) On the first day Dr. Pankaj Kumar (Scientist-F, Inter-University Accelerator Centre, New Delhi) delivered a lecture on the topic “Deciphering the records written in cosmic ink” elucidating on the use of Cosmogenic Radionuclides (CRN) in geomorphological and

geochronological research. Dr. Atul K. Singh (Department of Geology, North-Eastern Hill University, Shillong, Meghalaya) delivered a lecture titled “Optically Stimulated Luminescence Dating (OSL): An Introduction” elucidating on the uses of luminescence as a vital dating method in geomorphological research. Hands on training for OSL sample preparation were carried out in OSL/TL laboratory, JNU. Dr. Pradeep Srivastava (IIT Roorkee) was invited on-field as a resource person to this programme owing to his regional expertise Apart from field identification, participants were introduced to the various applications of Ground-penetrating Radar (GPR), Differential Global Positioning System (DGPS) and in geomorphological research. Luminescence sample collection techniques were covered from a riverine section by Dr. Atul K. Singh and CRN sampling techniques were explained by Prof. Milap Chand Sharma through a lecture on the field.

Acknowledgement: The conference organising committee extends its gratitude to the dedicated volunteers and faculty members from CSR for their unwavering support throughout the event. The authors and organising committee are highly grateful to the funding agencies: Indian Council of Social Science Research (ICSSR- NIS/NS/187/IC/2023-24), Ministry of Education, Government of India, New Delhi, Council of the Scientific and Industrial Research (CSIR-SYM/12196/23-HRD), Ministry of Science and Technology, GoI, New Delhi, Agribusiness, Bajaj Allianz General Insurance Company Limited, Pune and the International Association of Geomorphologists (IAG) for sponsoring the national conference and field training programme.