



International Association of Geomorphologists

IAG Regional Conference on Geomorphology

“Geoheritage and Geodiversity”

Cappadocia, Türkiye, 12–14 September 2023

IAG Intensive Course for Young Geomorphologists

“High Resolution Mapping and Cosmogenic Dating of Fluvial Landforms”

Cappadocia, Türkiye, 15–16 September 2023

Report

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1. Introduction

I am pleased to provide this report as an International Association of Geomorphologists (IAG) Young Geomorphologists grant holder for presenting and participating at the Regional Conference on Geomorphology and the subsequent Intensive Course for Young Geomorphologists, respectively. These events, held at Nevşehir Hacı Bektaş Veli University (**Figure 1**) in Cappadocia, Turkey, provided invaluable opportunities for me to enhance my expertise further and contribute to the field of geomorphology. In this report, I will outline my participation in these activities and how they have enriched my understanding of the central theme of the conference related to “*Geoheritage and Geodiversity*” and skills related to my doctoral research on “*Glacial Geomorphology and Natural Hazards*”.



Figure 1. Nevşehir Hacı Bektaş Veli University in Cappadocia, Turkey



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Figure 2. Prof. Sunil Kumar De (India) delivered the IAG Presidential Address at the Regional Conference on Geomorphology's opening ceremony at Nevşehir Hacı Bektaş Veli University, in Cappadocia, Turkey



Figure 3. Selected IAG Young Geomorphologists Grant Holders and Executive Committee members of the IAG at the Regional Conference on Geomorphology Nevşehir Hacı Bektaş Veli University in Cappadocia, Turkey



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1.1. IAG Regional Conference on Geomorphology (September 12–14, 2023):

The IAG Regional Conference on Geomorphology, centred on the theme "Geoheritage and Geodiversity," was an excellent platform for early-career, intermediate, and senior geomorphologists worldwide to share their research findings, experiences, and perspectives. My participation in this conference was a crucial step in disseminating the findings of my doctoral research on glacier and glacial lake dynamics and cryosphere risk assessment in the Chhombu Chhu Watershed of the Upper Tista Basin in the Sikkim Himalayas.

During the conference, I had the opportunity to present my research findings through an oral presentation (**Figure 4**) followed by a poster, which was well-received by geomorphologists and researchers. The research findings highlighting the critical factors influencing glacial lake behaviour and assessing the potential risks of Glacial Lake Outburst Floods (GLOFs) in the eastern Himalayan region. The audience responded positively, engaging in thought-provoking discussions and offering valuable feedback, which will undoubtedly enhance the quality and depth of my research. For instance, Professor Emeritus Monique Fort's contributions to the research on glacier change and mountain hazards were extremely informative (**Figure 5**).



Figure 4. Oral Talk on Glacial Lake development and Potential Glacial Lake Outburst Flood Risk



Figure 5. Photograph with Professor Emeritus Monique Fort



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I attended numerous sessions related to Geoheritage and Geotourism, Geomorphological Hazards and Risk Management, Geochronology, Climate Change impacts, and Remote Sensing Techniques. These provided new insights and perspectives for my ongoing and future research endeavours.

This conference allowed me to establish valuable connections with fellow researchers and renowned geomorphologists, fostering future collaborations and knowledge exchange. Additionally, the exposure to diverse research topics and methodologies broadened my horizons and provided me with fresh perspectives to incorporate into my research on geomorphological hazards, geoheritage and geochronology.

1.2. IAG Intensive Course for Young Geomorphologists (September 15–16, 2023):

Following the conference, I was privileged to attend the IAG Intensive Course for Young Geomorphologists. This course focused on "*High-Resolution Mapping and Cosmogenic Dating of Fluvial Landforms*," a topic closely aligned with my future research goals. The intensive course was structured into Theoretical and Practical Field experiences. Hence, it offered a hands-on learning experience that was instrumental in further developing our skills and knowledge.

During the course, I gained experience in the basics of cosmogenic dating, high-resolution mapping techniques, data collection, and dating methods. Further, on the 2nd day of the intensive course, we had a day-long field trip to the Taurus Mountains, which is undoubtedly a significant mountain range in southern Turkey, characterized by complex topography and active tectonics. Professor Dr. Mehmet Akif Sarıkaya and Professor Dr. Cengiz Yildirim (also the General Secretary) of Istanbul Technical University (**Figure 6**) enlightened some advanced dating methods to study the geomorphic features formed by river-related processes in the Taurus mountain range. We also attended a session on using unmanned aerial systems to create geomorphological maps. All this acquired knowledge is highly relevant to my research, as it will enable me to refine my understanding of landscape development and the associated geomorphological processes.



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Figure 6. Participants on the way to the sample collection sites for Cosmogenic Dating



Figure 7. Prof. Dr. Cengiz Yildirim of Istanbul TU interpreting the Geomorphic Processes and landforms



Figure 8. Prof. Dr. Mehmet Akif Sarıkaya & Prof. Dr. Cengiz Yildirim of Istanbul TU illustrating the cosmogenic dating methods



Figure 9. Photograph with Prof. Dr. Akif

1.3. Integration of Learnings, Future Prospects and Acknowledgements:

My participation in the IAG Regional Conference on Geomorphology and the subsequent Intensive Course for Young Geomorphologists in Cappadocia, Turkey, was a great experience in my academic and research journey. The knowledge and skills I acquired during these events have strengthened my research on glacier and glacial lake dynamics and also expanded my horizons in Geomorphology, Geohazards and Geoheritage. Moreover, the intensive course has empowered me with advanced techniques for high-resolution mapping and cosmogenic dating, which are directly applicable to my research on glacial geomorphology.



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I am deeply grateful to the International Association of Geomorphologists for providing me with the grant that facilitated my attendance at these events. I am committed to leveraging the insights and expertise gained to contribute meaningfully to the field of geomorphology and to continue advancing our understanding of various geomorphic processes and landscape development.

Once again, I sincerely thank the IAG selection committee for giving me this opportunity and the IAG grant officers (Prof. Dr. Anita Bernatek-Jakiel and Prof. Dr. Efthimios Karymbalis) for time-to-time clarifications and their help whenever required. I look forward to sharing my future research findings and engaging in collaborative endeavours within the geomorphological community.

Last but not least, I must admit that Turkey is a beautiful country with amazing landscapes, and the people are quite friendly and welcoming.

Thank you for all.

Sincerely,

Arindam Chowdhury

PhD Candidate in Geomorphology

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