



**9<sup>TH</sup> INTERNATIONAL CONFERENCE ON GEOMORPHOLOGY AND IAG-EGU  
INTENSIVE COURSE ON 'GEOMORPHOLOGY FIELD TRAINING IN  
TECTONICALLY ACTIVE MOUNTAIN REGIONS' FOR THE YOUNG  
GEOMORPHOLOGISTS**

**REPORT**

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The 9th International Conference on Geomorphology held at Vigyan Bhawan, New Delhi (Figure.1) included a wide program including oral, poster and plenary session



Figure 1. Vigyan Bhawan, New Delhi

Diverse researchers and students from around the world met and showed their work. The subject that I work is related to slope instability and mass movement processes, so the sessions related to case studies of hillside models seemed to me enriching and gave me a different perspective. Specially the session carried out by the Prof. Alan Dykes intitulated *NEW LESSONS FROM AN OLD LANDSLIDE: WHY THE VAIONT LANDSLIDE WAS MISUNDERSTOOD*, he taught me, to always question the literature and not assume that a theory is the absolute truth, part of a researcher's job is to find the hidden piece, which fuses with the others to shape the response of a process.

As a first year MSc student, attending this event has been enriching and has undoubtedly shaped my interest in pursuing a career in research; there are many things to do around the world and I would like to thank the IAG for the grant that was granted to me to attend this conference.

Meeting people who have been dedicated for years to research and know their methodologies and perspectives, made me reflect on the role of science as a vital tool in the development of societies, part of the answers to many environmental and social crisis are found in the contributions of the literature of each one of us. For instance the problems related with air pollution around the world and especially in India. During our stay in New Delhi, there were between 200 to 700 air quality points, which is 10 times higher than the healthy indexes recommended by the World Health Organization and it clearly affected our stay in the city (Figure 2).



Figure 2. View from Hans Hotel of New Delhi downtown.

On the other hand, it was a pleasure to meet multiple professors from all over the world who shared with me their research works specially Dr. Beneah from South Africa, Dr. Takashi Oguchi from Japan, Dr. Francisco Gutierrez from Spain and Dr. Moshe Inbar from Israel. Each of them works different areas of geomorphology, however, they taught me to complement different methodologies to reach a result.

As part of the congress program, a mid conference trip was scheduled. I visited Agra Fort and the wonderful Taj Mahal. When we were traveling to Agra leaving Delhi, I realized that the gray cloud of pollution was still some 40 kilometers away from the city center, situation that alarmed me. However, upon arriving in Agra, a more favorable weather could be seen.

There is no doubt that India is a country of contrasts and an exceptional cultural wealth. when I arrived at the Taj Mahal (Figure.3) I could see it without doubts, however, seeing so much marginalization on the streets, made me think about his new administration as a *modern society* and of course I wonder about its development over the next few years.

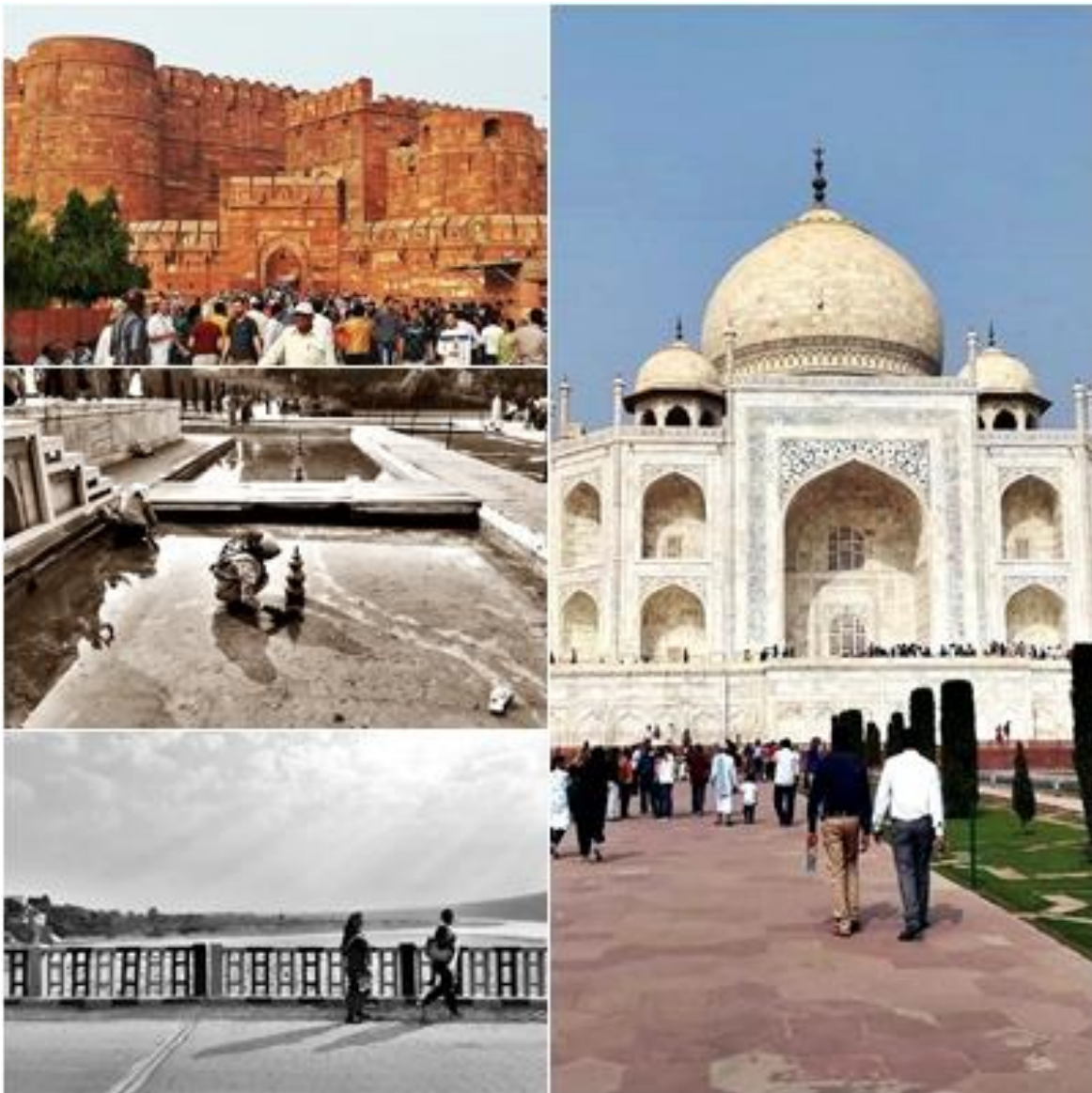


Figure 3. Perspectives of Agra City

***IAG-EGU Intensive course on 'Geomorphology field training in tectonically active mountain regions' for the Young Geomorphologists***

During the first day of the intensive course we departure to Dehradun (Figure 4.)city which is located in the Garhwal region, lying 236 kilometres from New Delhi, place that is consider one of the "Counter Magnets" of the National Capital Region, being developed as an alternative centre of growth in order to help with the migration and population explotion that faces Delhi metropolitan area. The journey took around 8 hours, the further we moved away from the city, we could see a clearer sky, without that gray cloud of dense pollution.



Figure 4. A view of Dehradun City

The second day we had several lectures in the Hotel the speaker were Prof. Peter van der Beek, Prof.P.K. Champati Ray, Prof. Mauro Soldati, Prof. Deepak Chandra Srivastava, Prof. V.S. Kale, Prof Giuseppe Mastronuzzi, Prof. Irasema Alcantara Ayala and Dr. George Philip. The readings were diverse, each one

explains us about his field of study, from landslides to the relation of the rivers with the tectonic geomorphology.

On the third day we departure from Dehradun to Mussorie (Figure 5), and we stopped in key points in order to see the lesser and frontal Himalaya. The profesors explained the litho-stratigraphy of the Krol formation, they told us that this is the most important horizon in the entire sequence and among its sub units, limestone is well developed and was being mined extensively in this area till 1984 when it was discontinued for environmental reasons.



Figure 5. Third day of the field trip

We were able to observe a cultural diversity in the landscape, from Buddhist and Tibetan temples on the road. Finally, arriving in Mussorie best known by the local population as 'Queen of Hill Stations' (Figure 6.), is perched on a ridge 2km, and it's the favourite holiday destination of people who live in Delhi, because of the views of the Doon Valley and the distant white-capped Himalayan peaks, they take a rest from the plains below. Also can be seen, many schools from elementary to high school level, many people from India send their children to study in this place due to better air quality.



Figure 6. Some views from Mussorie

During the days of the course we had meetings with colleagues, where we exchanged views about the locations we visited as the Asan Barrage (Figure 7) which is located at 42 km from Dehradun in the Uttarakhand-Himachal Pradesh border near Dhalipur village in Dehradun district. This place is one of the popular tourist places to visit near Dehradun, a colleague told me that it was founded in 1967 and is on the confluence of two rivers: Asan and Yamuna.

The reservoir is popularly named as Dhalipur Lake and attracts some of the birds listed as globally endangered species in the IUCN (International Union for the Conservation of Nature and Natural Resources) Red Data Book have been spotted at Asan. Though the lake is not quite large by size, the abundance of birds makes it an ideal place for appreciating nature in Dehradun.



Figure 7. Asan Barrage



The last night in Daradhun, we had a feedback session of the course, where all the colleagues gave their point of view regarding the topics seen and the organization of field trips. We all concluded that more training was needed in the field, despite the fact that the professors explained the terraces forming processes and we saw several landslides throughout the course, we did not have the opportunity to make measurements or work teams to interact and exchange opinions in the field, however, knowing the tectonic geomorphology of the Lowest Himalayas has been an enriching experience for all (Figure 8).



Figure 8. Course for Young Geomorphologist