



REPORT ON

The 1st Intensive Training Programme for THE YOUNG GEOMORPHOLOGISTS OF INDIA

Organiser: IGI-Young Geomorphologists Forum

Event Dates: 2-5 March 2020

Conveners: **Dr. Shreya Bandyopadhyay** and **Dr. Sayantan Das**

This summary report presents the activities done in the 1st Intensive Training Programme for The Young Geomorphologists of India, held in Kolkata, India, 2-5 March 2020. Following are the highlights of the programme:

- 7 lectures
- 2 laboratory-based hands on exercises
- 1 field-based hands on exercise
- A day-long Field visit to the coastal areas of West Bengal, India

The Programme:

As per the decision of the Executive Council and approved by the General House of the Indian Institute of Geomorphologists (IGI), a Young Geomorphologists Forum (YGF) has been established under the banner of the IGI in November 2019. The IGI-YGF organized a 4 days long Intensive Training Programme for The Young Geomorphologists of India during 2-5 March 2020 in the Department of Geography, University of Calcutta, Kolkata-700019, India. Dr. Shreya Bandyopadhyay (President, IGI-YGF and Assistant Professor, Maharaja Nandakumar Mahavidyalaya, Vidyasagar University) and Dr. Sayantan Das (Vice-President, IGI-YGF and Assistant Professor, Dum Dum Motijheel College, West Bengal State University) were the event conveners. The event has marked the celebration of the newly launched 'International Geomorphology Week' by the International Association of Geomorphologists (IAG), 2020. This was the first ever training programme organised by any Young Geomorphologists Forum in the world under the auspices of the IAG.



The main objectives of this training programme were:

- Promotion and popularization of geomorphology-based research work among the Young Geomorphologists.
- Provide training for carrying out geomorphological research both in the field and laboratory.
- Offer guidance on how to write good quality scientific papers.

Programme Participants:



In all, 70 young Geomorphologists from different parts of India attended this event. The participants came from nine states of India, with 85% of them were from the host state—West Bengal. Total 24 universities and organisations were represented, with high numbers (16) from West Bengal. Institute-wise, University of Calcutta accounted for the highest number of participations (18). The following graph gives the details of the Institute-wise representation.

*Data Source: Dr. Kapil Ghosh (Organising Secretary, IGI-YGF 2020 Intensive Training Programme)
Ms. Saheli Bhattacharjee (Treasurer, IGI-YGF 2020 Intensive Training Programme)*



Session Programme:

The opening session of the training programme was graced by the presence of the Guest of Honour—Prof. A.R. Siddiqui (Secretary General, IGI and Head, Department of Geography, Allahabad University), and the patrons of the programme— Prof. Sunando Bandyopadhyay (Vice-President, IGI and Head, Department of Geography, University of Calcutta) and Prof. Sunil Kumar De (Vice-President, IAG and Professor, Department of Geography, North-Eastern Hill University, Shillong). They welcomed and addressed the participants during the opening session. The programme was formally introduced by the convener of the programme—Dr. Shreya Bandyopadhyay (President, IGI-YGF).

PROGRAMME		PROGRAMME	
Day 1: 02 March 2020 (Monday) Venue: SP Chatterjee Memorial Hall, Department of Geography, University of Calcutta		Day 2: 03 March 2020 (Tuesday) Venue: SP Chatterjee Memorial Hall, Department of Geography, University of Calcutta	
09:30 am	: Registration of the Participants	10:00 am	: Lecture* by Dr. Somasis Sengupta (The University of Burdwan, Bardhaman) Topic: <i>Lecture and hands on Exercise: Quantitative Modelling in Geomorphology</i>
11:00 am	: Welcome to the dignitaries on the Dias	11:45 am	: Tea break
11:05 am	: Inaugural speech by Prof. Sunando Bandyopadhyay Head, Department of Geography, University of Calcutta and Patron, YGF-India 2020	12:00 noon	: Lecture (via skype) by Prof. Avijit Gupta (University of Wollongong, Australia) Topic: <i>Research Trends in Tropical Fluvial Geomorphology</i>
11:15 am	: Introduction to the Programme by Dr. Shreya Bandyopadhyay Convener, Young Geomorphologists Training Programme	01:45 pm	: Lunch
11:25 am	: Address the by Prof. A. R. Siddiqui The Secretary General, Indian Institute of Geomorphologists (IGI)	02:45 pm	: Lecture* by Dr. Priyank Pravin Patel (Presidency University, Kolkata) Topic: <i>Digital Terrain Models: Concepts, Derivations and Uses</i> <i>*Alongside hands on exercise</i>
11:40 am	: Address by Prof. Sunil Kumar De Vice President, International Association of Geomorphologists (IAG) and Patron, YGF-India 2020	Day 3: 04 March 2020 (Wednesday)	
11:50 am	: Presentation of Prof. Marta Della Seta (to be delivered by Prof. Sunil Kumar De) IAG-Executive Council Member (In-charge of Young Geomorphologists Program)	06:30 am –	: Field visit to the coastal areas of West Bengal
12:05 pm	: Inaugural Address (via video message) by Prof. Mauro Soldatti President, International Association of Geomorphologists (IAG)	08:30 pm	: Experts: Prof. Sunando Bandyopadhyay, Dr. Abhijit Chakraborty, Dr. Sayantan Das and Dr. Kapil Ghosh
12:15 pm	: Vote of thanks by Dr. Sayantan Das Co-convener, Young Geomorphologists Training Programme	Day 4: 05 March 2020 (Tuesday)	
12:15 pm	: Tea break	Venue: SP Chatterjee Memorial Hall, Department of Geography, University of Calcutta	
12:30 pm	: Lecture by Prof. Sunil Kumar De (North-Eastern Hill University, Shillong) Topic: <i>Writing good scientific papers</i>	10:30 am	: Lecture by Dr. Parthasarathi Ghosh (Indian Statistical Institute, Kolkata) Topic: <i>Application of RS and GIS in Geomorphological studies: A case study of Kosi Megafan</i>
01:15 pm	: Lecture by Dr. Abhijit Chakraborty (Jogamaya Devi College, Kolkata) Topic: <i>Dispersal of sediment in coastal fringes and probable control on it</i>	11:45 am	: Tea break
01:45 pm	: Lunch	12:00 noon	: Lecture (via skype) by Prof. Takashi Oguchi (University of Tokyo, Japan) Topic 1: <i>How to write good scientific papers and projects</i> Topic 2: <i>Use of RS-GIS in Geomorphology</i>
02:30 pm	: Hands on exercise by Dr. Sayantan Das (Dum Dum Motijheel College, Kolkata) Use of Total Station as a field equipment	2:00 pm	: Lunch
		02:45 pm	: Lecture by Dr. Amal Kar (Central Arid Zone Research Institute, Jodhpur) Topic: <i>Use of RS-GIS in geomorphology: Examples from Indian Desert</i>
		04:15 pm	: Valedictory Session

Programme at a glance



The inaugural address of the programme was delivered from Italy via video message by Prof. Mauro Soldatti (President, IAG), as he couldn't come to India due to the ongoing global pandemic caused by the spread of COVID-19 disease. For the same reason, on behalf of Dr. Marta Della Seta (IAG Executive Council Member and In-charge of the Young Geomorphologists Programme), the presentation related to the IAG-Young Geomorphologists Programme was delivered by Prof. Sunil Kumar De. Prof. De also highlighted the importance of forming this Young Geomorphologists Forum in India. This is the second Young Geomorphologists Group formed outside Europe after Australia. He has also mentioned that the Young Geomorphologists Forum of the Indian Institute of Geomorphologists has made a history to celebrate the Geomorphology Week of the International Association of Geomorphologists (IAG) for the first time in the World and to organize this Intensive Training Programme for the Young Geomorphologists.

The closing session of the programme was chaired by Prof. Sunando Bandyopadhyay (Vice-President, IGI). Whereas, Dr. Amal Kar (Former President, IGI) and Prof. Lakshminarayan Satpati (Director, UGC-Human Resource Development Centre, University of Calcutta, Kolkata) were present as the guests.

The programme had the following sub-themes:

- *Geomorphological research: Present trends*
- *Writing good scientific papers and projects*
- *Quantitative techniques in geomorphology*
- *Use of RS-GIS in geomorphology*
- *Geomorphology-based field excursion*

Altogether, seven lectures, two laboratory-based hands on exercise sessions, and one field-based hand on exercise session were delivered on the 1st, 2nd and 4th day of the programme. Eminent Geomorphologists like Prof. Avijit Gupta (Former Publication Secretary, IAG and Honorary Principal Fellow, University of Wollongong, Australia), Prof. Takashi Oguchi (Former Editor-in-Chief, Geomorphology Journal; IAG Executive Committee member and Professor, University of Tokyo, Japan), Dr. Amal Kar (Former President, IGI and Former Head, Division of Natural



Resources and Environment, Central Arid Zone Research Institute, Jodhpur), Prof. Sunil Kumar De (Vice-President, IAG and Professor, Department of Geography, North-Eastern Hill University, Shillong), Prof. Parthasarathi Ghosh (Professor, Indian Statistical Institute, Kolkata) and Dr. Abhijit Chakraborty (Associate Professor, Jogamaya Devi College, Kolkata) delivered lectures on various topics in tune with the sub-themes. Prof. Gupta and Prof. Oguchi, although could not reach India due to the COVID-19 outbreak, delivered their lectures from abroad via Skype calls. Two relatively young academicians—Dr. Priyank Pravin Patel (Assistant Professor, Presidency University) and Dr. Somasis Sengupta (Assistant Professor, The University of Burdwan), conducted two laboratory-based hands on exercise sessions related to the sub-theme *Quantitative techniques in geomorphology*. While Dr. Patel explained the analysis of Digital Terrain Models using Surfer and WhiteboxTools softwares, Dr. Sengupta enlightened the Quantitative Analysis techniques using PAST software. Dr. Sayantan Das (Assistant Professor, Dum Dum Motijheel College, Kolkata) conducted the field-based hands on exercise session on the use of Total Station as a field equipment.

Field Trip:

The 3rd day of the programme was reserved for a day long field visit to the coastal areas of West Bengal (coordinated by Prof. Sunando Bandyopadhyay, Dr. Abhijit Chakraborty, Dr. Sayantan Das and Dr. Kapil Ghosh). The excursion group went to the macro-tidal Hatania-Doania River at Namkhana (104 km south of Kolkata) in the beginning to see the usage of the equipment like Echo-sounder and Water Current Meter. The latter half of the day was spent at Bakkhali Beach neighboring the Bay of Bengal (127 km south of Kolkata; 21.559020°N, 88.271960°E) to see the seaside sedimentary structure in a macro-tidal region and bioturbation by burrowing crab community.

Support:

This training programme was organized under the banner of the Indian Institute of Geomorphologists (IGI), Allahabad. Besides, it received the auspices of the International Association of Geomorphologists (IAG). Prof. Sunil Kumar De provided financial support to the



event organisers, whereas Prof. Sunando Bandyopadhyay was extremely helpful for the venue arrangement. The organisers thanked all the above agencies and dignitaries for their support during the opening and closing sessions of the conference.

Feedback and Recommendations:

Based on the activities at various sessions of this programme, the participants were asked to fill-in the online feedback form. About 95% of the participants agreed that the programme has fulfilled their expectations with adequate hands on training sessions and field trip. Overall, all the participants were satisfied with the selection of speakers and programme contents.

Certain recommendations were made by the participants:

1. This kind of training programme should give more emphasis to the hands-on training sessions rather than continuous lecture sessions.
2. More time could be allotted to the software training.
3. The duration of the programme can be extended. A 4 day window is too little for the training program of this kind that includes field survey. A one or two week-long program would serve the purpose in a much better way.
4. Usage of Differential GPS, training on dating techniques, soil coring etc. can be incorporated in the future programmes.



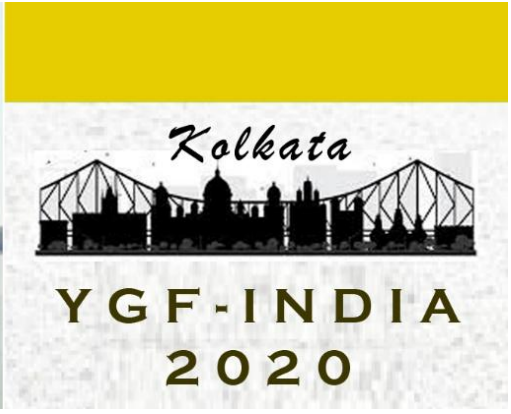
PHOTOGRAPHS OF THE IGI-YGF 1st INTENSIVE TRAINING PROGRAMME



Prof. A.R. Siddiqui (Secretary General, IGI; left image) and Prof. Sunil Kumar De (Vice-President, IAG; right image) welcoming the participants in the opening session of the programme. Present alongside, Prof. Sunando Bandyopadhyay (Vice-President, IGI) and Dr. Shreya Bandyopadhyay (Convener, IGI-YGF 2020 Intensive Training Programme)



Inaugural address of the programme via video message is giving by Prof. Mauro Soldatti (President, IAG; left image). Prof. Sunil Kumar De is delivering a lecture on writing good scientific papers.



Hands on exercise session on the use of Total Station as a field equipment (left image). A participant is interacting with Prof. Avijit Gupta (University of Wollongong, Australia) after his lecture (right image).



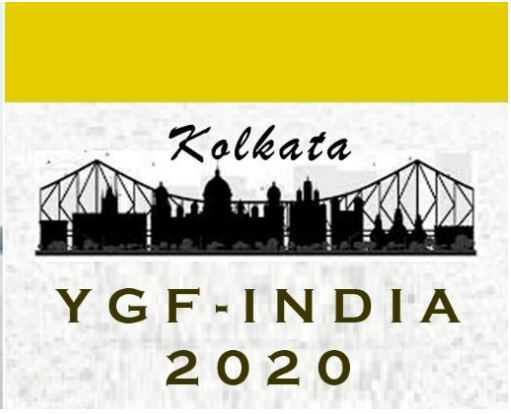
Dr. Somasis Sengupta (The University of Burdwan, India) is interacting with the participants (left image). Dr. Priyank Pravin Patel (Presidency University, India) is conducting the exercises on the analysis of Digital Terrain Models using open source softwares (right image).



Prof. Takashi Oguchi (University of Tokyo, Japan) is delivering his lecture via Skype (left image), followed by his interaction with a participant (right image).



Bathymetric survey of Hatania-Doania River by using Echo-sounder (left image). Survey of beach morphology at Bakkhali (right image).



Dr. Abhijit Chakraborty (Jogamaya Devi College, Kolkata) is explaining the sedimentary structure of the Bakkhali beach to the participants.

The IGI-YGF 2020 Young Geomorphologists group along with the organisers and field experts.