NEWS AND NOTES

12th International Earth Science Olympiad (IESO) at Mahidol University, Kanchanburi Campus, Thailand – Hema Achyuthan, National Coordinator IESO (E: hachyuthan@yahoo.com) and K.S. Godhavari Secretary, Geological Society of India, Bengaluru (E: gsocind@gmail.com)

Ministry of Earth Sciences (MoES), New Delhi, has been supporting India’s participation in International Earth Science Olympiad (IESO) program, since 2009. Geological Society of India has been organising/conducting the Indian National Earth Science Olympiad (INESO) for participation Indian students of secondary level in the International Earth Science Olympiad.

The 12th International Earth Science Olympiad was organised during 8-17 August 2018 at Mahidol University, Kanchanburi Province in the Central Plain known for its long history and ancient civilizations, location of the Bridge over the River Khwae—‘Kwai’ as is known internationally and scene of the historic World War II. This province is also famous for caves, waterfalls, Karst topography, forests. Mahidol University, Kanchanburi campus is located about 180 km from Bangkok and can be reached by road in about four hours.

The Indian national team was represented by two students: (1) Abhinav Srinivas Ivaturi, Krishna Public School, Raipur (2) Vaibhav Khater, St. Mary School, Udaipur, Rajasthan, and they were accompanied by Prof. Hema Achyuthan (National Co-ordinator and Mentor, Anna University, Chennai), Dr. K.S. Godhavari, (Secretary and Mentor, Geological Society of India, Bengaluru) and Dr. Jagiv Singh, (Scientist-F and Observer, MoES, New Delhi).

All the delegations were warmly welcomed at the Suvarnabhumi Airport, Bangkok, by the organisers and were driven by buses to Mahidol University.

The opening ceremony was organised on 9th August 2018 in the Auditorium of Mahidol University, Kanchanburi Province. The inaugural function started with the introduction about IESO by Prof. Thatcheavee Leelawat, Chairman, Organising Committee of IESO-2018. He welcomed all participants to the 12th IESO being conducted at Permian-Triassic Karst landscape which provided the best environment to study Earth science. He wished that the competition challenging young secondary school students from all over the world will succeed in inspiring their excellent country representatives to become valuable Earth scientists to solve several critical Earth science research problems in the future. He explained that this participation will create a strong Earth science network with the purpose of raising awareness of Earth science problems in a global stage. The theme of the competition for this year was ‘Earth Science for All’.

The logo of IESO-2018 represents the emergence of Earth science knowledge through the history of mankind. The symbol can be viewed as a leaf of a plant or a backbone skeleton of an animal. It also resembles the shape of prince Mahidol Hall, a landmark located at the main campus of Mahidol University and hence reveals the host of this IESO event. The red and blue colours are two of the three colours of Thai National Flag. Red represents courage and blue represents leadership. Both are necessary for achievement of goal.

Dr. Roberto, Chairman IESO, explained the importance and relevance of conducting such a programme as the IESO for school children as it would inculcate the importance of protecting nature and the environment for future generations. Prof. Prinya Putthapiban was the Chairperson of the Scientific Committee, organized the entire event of 12th International Earth Science Olympiad.

Her Royal Highness Princess Maha Chakri Sirindhorn, Thailand, inaugurated the programme and delivered the welcome address and formally welcoming the delegation representing 38 countries. It was heartening to note that maximum number of countries (represented by 158 students and 127 mentors and observers) participated in this event. Her highness emphasized that our common interest in Earth Sciences serves as a common link in spite of our diverse backgrounds, religion and culture. She advised the young participants that true knowledge is not just learning but applying to human benefit. She said that it is a great opportunity to interact, collaborate and the experience will last for life time. She wished every success. Prof. Thatcheavee Leelawat, Chairman sought permission from Princess to carry out the activities of the 12th IESO program. A media presentation was made about Earth science, history of IESO, to familiarize with local culture, language, food, site seeing places etc. The program concluded with presentation of mementos by the Princess to the dignitaries.

The mentors and observers were engaged in the preparation of the question papers, correctness of the answers both in theory and practical for the next two days (9th and 10th). The mentors and observers of some countries such as Germany, France, Malawi, Spain, Portugal

(a) Team India represented by Vaibhav Khater and Abhinav Srinivas. (b) Buddha Statue at Old city of Kanchanaburi. (c) Students observing the rock samples in the field.
etc., were also involved in translation of the question papers (both theory and practical) as the English language is not the medium of instruction in their schools. During this period the students visited Hellfire Pass Memorial Museum Trail, Dolomite Mine, Srinakarin Dam, famous Kwai river bridge built during second world war, elephant park, old city of Kanchanburi etc.

On the 11th and 12th August when the students were writing their theory and practical examinations, the mentors and observers were taken around to visit the geological exposures around the Hellfire Pass Memorial Museum Trail. Here a railway track was built by war prisoners during the World War II to connect Myanmar from Ratchaburi for supplies to the Japanese troop camping at Myanmar. At Srinakarin rock fill Dam site (with clay in the core) the fold patterns and the fault plane were studied. This dam is constructed mainly for Hydroelectric power generation. Ms. Pothikul Vivetheayolvong, a civil engineer delivered a brief outline of the history and working of this dam. The afternoon was spent visiting an Ordovician dolomite limestone mine site (owned by the Pand’s Group; P and S Milling Co. Ltd.).

A visit to an ancient cultural re-enactment fair at the old city of Kanchanaburi and to the famous Kwai river bridge built during second world war time was organised. This enthused the Hollywood Director Sir. David Lean to direct a Movie “Bridge on the River Kwai” which won several Academy and Oscar awards for him and the actors (although the movie was not filmed here).

After the practical test students carried out tree planting activity in the afternoon. In the evening of the 12th August 2018, on the occasion of the birthday of Her Highness Sirikit Kitiyakara, the Queen Mother of Thailand was celebrated as ‘Mother’s Day’. All the participants of IESO-2018 took part in candle ceremony in the evening organised at Mahidol University. This was followed by star watching/gazing in the night with LX600-ACF 16” f/8 with Starlock telescope. This telescope of National Astronomical Research Institute produces a wider, flatter field with no coma for pinpoint stars.

The patented starlock is an auto-guiding system for automatic fulltime guiding with one arc-second precision under good seeing conditions.

On the 13th August the students of the participating countries were taken to various Geo-environmental sites such as Erawan National Park Ranger station to conduct International Team Field Investigation (ITFI).

The teams were formulated involving students from 6 to 8 countries for a team work with understanding and co-operation. The students had to conduct water quality tests at the water fall on the Sai Yok Noi river site and to measure strike and dip of rock exposures, identify the rock and mineral types.

Students were also taken to Krasae cave site to understand the formation of caves, stalactites and stalagmites. The students had to explain the various karst deposits and explain their processes of formation. For the earth science projects (ESP), oral presentations were delivered on the causes for Bangkok sinking.

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The mentors and observers attended the jury meetings and reviewed the written and practical test papers. Moderation of answer sheets of the written and practical tests of the students was carried out by the Mentors and Observers of the respective countries.

All the participating countries donated interesting rock types from their respective countries to Prof. Priinya Putthapiban for their museum collection at Mahidol University.

A cultural evening was organised on the 13th at Hotel Ban Rim Kwai River Resort wherein all the student teams performed showcasing their talent.

A chartered train was arranged to take the participants from the university campus to the bridge on the Kwai River a part of the
415-km Death railway starting from Ratchaburi Province in Thailand to Thanbyuzayat town in Myanmar. This was followed by a visit to the Mallika city: 1905 A.D. that depicts past Siamese lifestyle in the Chao-Phraya River Basin during the reign of King Chulalongkorn, Rama V (1873-1910 A.D.) that depicts 100 year old tradition.

A panel discussion was organised on the forenoon of 15th August 2018 for the mentors and observers for a discussion about how to further improve the quality of the written and practical tests and a committee has been formulated to look into the suggestions made. The presentations on ESP and ITFI were made by the students on this day.

Finally, the results of the written, practical tests, ITFI and ESP were announced on the concluding day of 16th August as part of the closing ceremony in the forenoon.

The Gold, Silver and Bronze medals with certificates were given away to the students who won the prizes. Abhinav Srinivas Ivaturi won the Bronze Medal in the written and practical tests which is an individual event and a Bronze medal in the team activity on Earth Science Project.

In addition, Vaibhav Khater won a Silver medal in the team activity for International Field Team Investigation.

Team India returned on 17th August 2018.

The Geological Society of India is grateful to Ministry of Earth Sciences for generous funding for the year long program that helped in the successful organisation and participation in the IESO 2018 event. The Society is also grateful to the Center coordinators, invigilators, question paper setters, evaluators, resource personnel drawn from various research institutes, universities, and national laboratories.