



RAJASTHAN  
The Incredible State of India !

*1<sup>st</sup> International Geodiversity Day Celebrations*

**Field Workshop  
On**

**Zawar Metallurgical National Geological  
Monument & Jhamarkotra Phosphatic  
Stromatolite National Geological  
Monument**

**3-4 March 2023, Udaipur, Rajasthan**

*Organised by*

**Birbal Sahni Institute of Palaeosciences, Lucknow  
Department of Tourism, Government of Rajasthan  
The Society of Earth Scientists**





## PREAMBLE

UNESCO declared 6<sup>th</sup> October as International Geodiversity Day and in the year 2022, we will be celebrating 1<sup>st</sup> IGD across the globe. India is blessed with great geodiversity as it has recorded 3.5 billion year's history of evolution of Earth, some of the sections are unique. The Indian rock record bears the signature of various global geological events including evolution of life, mass extinction, making of Himalaya, meteoritic impact craters etc. We have decided to celebrate 1<sup>st</sup> IGD in a big way. A national program at Delhi followed by field workshops at different important geoheritage sites across the country.

Zawar area is of interest because it has been globally recognized as the world's FIRST ZINC SMELTING SITE. Zawar zinc-lead deposit is located in a rugged and thickly forested area about 40 km south of Udaipur, Rajasthan. This approximately 20-km long mineralized belt has a rich zinc-lead mineralization hosted in hard, compact, siliceous dolomite. This geoheritage site typically contains numerous natural as well as cultural heritage elements.

The American Society of Metals (ASM International) recognized Zawar as an "International Historic Landmark" in 1988 *"At this site are preserved the zinc retort distillation furnaces and remnants of related operation. The village artifacts together with temple ruins attest to the success of this metallurgical technology. This operation first supplied the zinc for making of brass instrument in Europe, a forerunner of the Industrial Revolution"*. It has been recognized as National Geological Monument by the Geological Survey of India.

Stromatolites record the signature of the evolution of earliest life on Earth. The prolific growth of stromatolites is in the carbonate rocks deposited between 3900 million years to 538 million years ago in Earth's history. The Cyanobacteria, responsible for development of stromatolites obtain their energy through photosynthesis and thus utilising carbon dioxide from the water and produce oxygen. India fortunately have extensive development of stromatolites in the limestone and phosphate deposits, thus, provide a natural laboratory of study the past life and environment. The most prominent locality of the phosphatic stromatolites is at Jhamarkotra, Rajasthan, about 25 km southeast of Udaipur city on Udaipur–Jagat road linking the famous Jhamerashwar cave temple. Geological Survey of India declared the site as a National Geological Monument in 1976.

## **PROGRAM**

02.03.2023: Assembly at Udaipur; 5-7 PM: Presentations by scientists; Dinner  
03.03.2023: 8:30 AM Departure Udaipur; 10:00 AM Arrival: Zawar; Visit to ancient mining and metallurgical sites; museums and geological sections.  
03.03.2023: Departure Zawar 2:30 PM Arrival: Udaipur: 4:00 PM; Local sightseeing; Halt  
04.03.2023: 8:30 AM Departure Udaipur; 10:00 AM Arrival: Jhamarkotra; Visit to various geological sections of rock phosphate and stromatolites.  
04.03.2023: Departure Jhamarkotra 2:30 PM Arrival: Udaipur: 4:00 PM; Local sightseeing; Halt at Udaipur; concluding session

## **WHO CAN PARTICIPATE**

Geoscientists, Tourism professionals, Researchers, Conservationist or anyone Loves Mother Earth. Based on available resources we can accommodate up to 20 delegates. Depending upon financial grant few senior scientists and research students may be provided full/part support.

## **PARTICIPATION FEE**

Each Indian delegate need to pay Rs. 5,000/- as participation fee for the field workshop which include boarding & lodging during the workshop (Udaipur to Udaipur). Payment details will be provided soon.

Interested participants are requested to send their interest with all details to **The Society of Earth Scientists Email [india.ses@gmail.com](mailto:india.ses@gmail.com)** before 30<sup>th</sup> January 2023. The selection will be on first come first basis.

## **PATRON**

Dr. M. Ravichandran, Secretary, MoES (Patron of SES)

Dr. Rashmi Sharma, Director of Rajasthan Tourism

Dr. Vandana Prasad, Director, BSIP, Lucknow

## **ORGANISING SECRETARIES**

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## **Our Sincere Tribute to PROF. P. S. RANAWAT**

