

Birbal Sahni Institute of Palaeosciences **Monthly Summary Report-January 2026**

Any significant development/achievement that you feel warrants being brought to Cabinet Secretary's notice:

Tree rings from deodar trees in Batseri village of the Sangla Valley, Himachal Pradesh, reveal a long-term shift from wetter spring conditions during the Little Ice Age to progressively drier conditions after 1757 CE, with frequent spring droughts in recent decades. Triggered by a major rockfall event in 2021, scientists from BSIP studied tree-ring records to understand how climate-driven moisture changes influence geohazards in the western Himalayas. By combining dendroclimatology and dendrogeomorphology, the study reconstructed 378 years of spring moisture history and 168 years of rockfall activity. Results show that reduced spring moisture, linked to changes in Western Disturbances, weakens vegetation cover and increases slope instability, especially when followed by intense monsoon rains. The study highlights growing climate-driven geohazard risks and underscores the need for improved forest management, monitoring, and early warning systems to protect Himalayan communities and infrastructure.

(Chinthala et al 2025, Catena; <https://doi.org/10.1016/j.catena.2025.108950>).

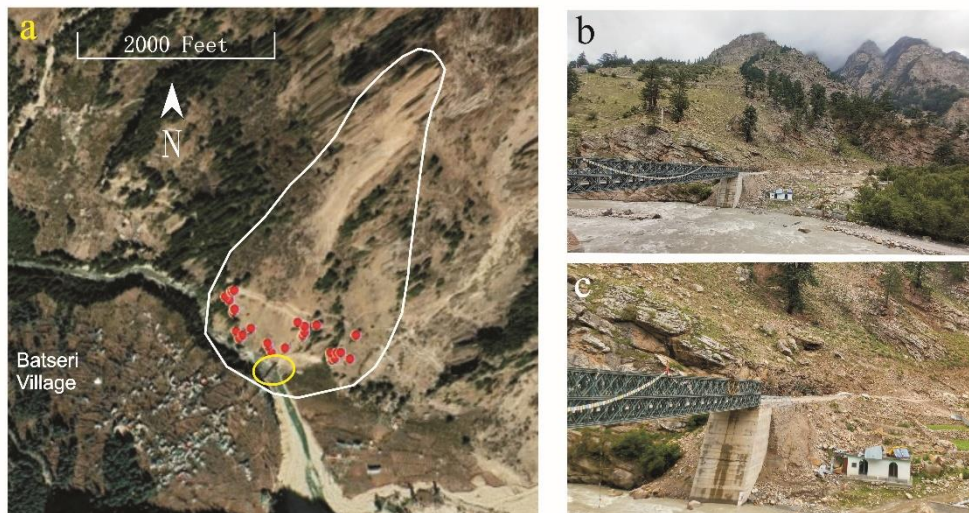


Figure 1: Google Earth image and ground photographs from the study area Batseri, Kinnaur. (a) Red dots indicate location of collected, rock fall-impacted *Cedrus deodara* trees from a hazard prone slope (catchment area indicated with white lined area) opposite to Batseri village. The yellow circle indicates the location of a bridge and a house damaged by a rockfall in July 2021. (b) View on the rockfall prone slope and Deodar trees. (c) Damaged house and reconstructed bridge after damage in July 2021.

Events during January 2026:

1. 12th Dr. B. S. Venkatachala Memorial Lecture on 1st January 2026
2. Hands-on Workshop on Creating Impactful Short Science Videos Using Smartphones
3. Constitution of AcSIR Science Club for PhD students for scientific activities.
4. Dr. Prem Raj Uddandam, Scientist C, BSIP, delivered a Friday Lecture on 16 January 2026 titled "Microfossil Archives of Monsoon and Ocean Change Across the Indian Plate".
5. One day Seminar on "Learning from the past to restore future" on 13th Jan 2026.
6. Ms Divya Verma, AcSIR Ph.D. Scholar, presented his viva-voce presentation on 08 Jan 2026.

7. Participations of scientists and scholar in 41st Indian Association of Sedimentologists at Pune University, Pune.
8. Participations of scientists and scholar in 3rd Indian Quaternary Congress (IQC) held at IITM, Pune.
9. Birbal Sahni Institute of Palaeosciences (BSIP) showcased its rich fossil heritage and ongoing research at Science Expo–2026, inaugurated by Brajesh Pathak, Hon'ble Deputy Chief Minister, Uttar Pradesh, at Regional Science City, Lucknow.
10. A hands-on fossil demonstration and interactive palaeoscience outreach programme was conducted by Dr Poonam Verma (Scientist 'E'), on 13 January 2026 at Bharatiya Vidya Bhawan's GIPCL Academy, Nani Naroli, Surat.
11. Dr. Suraj Bhosale's (Research Associate-III, BSIP) visited Qatar on an invitation for the contribution of geological expertise toward the UNESCO World Heritage nomination of Khor Al Adaid Nature Reserve, Qatar.

Total 09 Research Papers published in high impact international journals during this month.

Photographs showing important highlights of major programs/research activities organized during December 2025:

