

## **Academic curriculum vitae**

**Sheikh Nawaz Ali**

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(Total papers = 91; Total citations = 1505; h-index = 22; i10-index = 42)

<https://scholar.google.com/citations?user=pzKmWAIAAAAJ&hl=en>

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**Present position:** Scientist D, Birbal Sahni Institute of Palaeosciences, Lucknow, and honorary associate professor, AcSIR, New Delhi.

### **Positions held in the past:**

|              |                                                                                                                                                                           |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2024-Present | Scientist 'E', Birbal Sahni Institute of Palaeosciences, Lucknow, and Honorary Assistant Professor, AcSIR - Academy of Scientific & Innovative Research, New Delhi, India |
| 2020-2024    | Scientist 'D', Birbal Sahni Institute of Palaeosciences, Lucknow, and Honorary Assistant Professor, AcSIR - Academy of Scientific & Innovative Research, New Delhi, India |
| 2016 – 2020  | Scientist 'C', Birbal Sahni Institute of Palaeosciences, Lucknow                                                                                                          |
| 2013 – 2015  | Scientist 'B', Birbal Sahni Institute of Palaeosciences, Lucknow                                                                                                          |
| 2011 – 2013  | Post-Doctoral Fellow, Physical Research Laboratory, Ahmadabad                                                                                                             |
| 2007 – 2011  | Research Fellow, University of Lucknow                                                                                                                                    |

### **Academic Qualifications:**

1. Ph.D. (Geology) 2008-2011, Thesis title: Late Quaternary Palaeoclimatic study using different proxies along the upper reaches of Pindar Valley, Kumaun Himalaya. University of Lucknow, Lucknow (U.P.), India
2. M.Sc. (Geology) 2004-2006, Dept. of Geology, University of Jammu, Jammu and Kashmir, India
3. B.Sc. (with Geology) 2001-2004, GGMS College, University of Jammu, Jammu and Kashmir, India

## **Awards and honors:**

1. Geochemical Journal 5-Year Most Cited Paper Award – 2025 by Geochemical Society of Japan.
2. Recipient of Geological Society of India S.S. Merh Award – 2021 for noteworthy contribution in Quaternary Geology.
3. Recipient of Prof. S. K. Singh Memorial Gold Medal by Palaeontological Society of India – 2018 in recognition of contribution towards Quaternary climate change studies.
4. Principal investigator and leader of the expedition conducted on Quaternary studies in Ladakh Himalaya. Principal investigator and leader of Himalayan glaciers in Sikkim Himalaya sponsored by the DST research grant project.
5. Principal investigator and leader for central and western Himalayan field expeditions under the DST Young Scientist project.

## **Research Domain and summary of few selected works**

I am trained in the Quaternary geology with emphasis on understanding the long-term (multi-millennial) and short-term (centennial) scale impact of climate change on the earth surface processes and landform evolution with emphasis on glacial and para-glacial environments. My research domain can be grouped under the following broad categories (i) causes and consequences of climate change in Himalaya with emphasis on Late Quaternary glaciation (ii) reconstructing high resolution climate variability from relict and active lakes employing biotic and abiotic proxies (iii) the impact of recent glacier recession on para-glacial sediment dynamics particularly the impact on Glacial lakes, and (iv) the dynamics of Himalayan cryosphere in a changing environment with emphasis on glacial-glacial lake interactions and glacial lake outburst vulnerabilities.

## **A brief summary of my few selected projects**

***Quaternary glaciations:*** The Quaternary period is known for frequent climatically driven expansion and contraction of ice sheets and glaciers. In the Himalayan context, the relative role of the Indian Summer Monsoon (ISM) and the mid-latitude westerlies in driving the glaciation during the Quaternary period is still up for debate. Most studies published so far suggested that on multi-millennial time scales, Himalayan glaciers responded to the enhanced ISM and were asynchronous with that of the northern latitude glaciation.

However, based on detailed field mapping, supported by robust optical dating of the glacier deposits covering the monsoon dominated central Himalaya and eastern Himalaya our results demonstrated that contrary to the earlier studies, the Himalayan glaciers indeed advanced during the global Last Glacial Maximum (LGM). This would imply that the mid-latitude westerlies which became stronger during the LGM could penetrate as far as the eastern Himalaya and resulted in glacier expansion. The study has implication as it conclusively demonstrates a coupling between the northern latitude cooling events indicating that during the weakened ISM, moisture was

transmitted to the Himalayan glaciers through the enhanced westerlies which assisted in the expansion of the glaciers in the Himalaya at multi-millennial time scales.

Compared to this, during the Holocene, a period known for frequent (short-term) fluctuations, glaciation seems to be driven by a precarious combination of temperature and precipitation changes. The early Holocene glacier advance (climatic optimum) in the Himalaya and Tibetan plateau is attributed to both an increase in monsoon precipitation and lower temperature. We observed that the Holocene glacier advance in the Central Himalaya was driven predominantly by the lowered temperature. The lowering of the Holocene temperature during periods of enhanced and moderate ISM was caused by a combination of the ice-albedo feedback mechanism, precipitation induced increase in the cloudiness and evaporating cooling. Furthermore, we have also been able to provide the chronology for the oldest and most extensive glacier advance in the Central Himalaya which predates the LGM. This implies that the glaciers in the monsoon dominated Himalaya are sensitive to the ISM variability at millennial time scales.

***Relict/active lakes and Holocene climate variability:*** Abrupt shifts in the ISM on decadal to centennial scales might severely affect Indian socio-economy as observed in the recent past and is associated with the rise and fall of ancient human civilizations. Furthermore, the abrupt or extreme ISM events (rainfall) are associated with catastrophic floods in the Himalayan region. Despite the importance of abrupt ISM phases, quantitative palaeo-ISM reconstructions from the Himalayan region are lacking. Towards this, to quantify the past ISM variability, high resolution  $\delta^{13}\text{C}$ , total organic carbon (TOC), sediment texture and environmental magnetic data of a glacial outwash sedimentary profile from the Sikkim Himalaya has been studied. Our results show a variable ISM intensity since 13 ka suggesting that the changes in ISM were coupled to southward shifting in mean position of the Intertropical Convergence Zone (ITCZ) and variations in East Asian monsoon (EAM). Similarly, the reconstruction of past hydroclimatic conditions in the Zaskar region revealed a progressive increase in the moisture availability since the mid-Holocene which is punctuated by some abrupt centennial scale climate events.

***Glacial-glacial lake interactions and glacial lake outburst floods (GLOFs):*** Taking advantage of my expertise in high mountain glacial geology, geomorphology, and palaeoclimatic reconstructions, I have radically expanded my research portfolio to glacier-glacial lake interactions, glacial lake outburst flood (GLOF) modeling. One of our recent research projects on glacier-glacial lake interactions and glacial lake development in the central Himalayas has revealed an accelerated rate of glacier melting and glacial lake expansion. Our research involves the mapping and monitoring of the pro- and peri-glacial lakes, to understand the glacier-glacial lake interactions, influence of glacial lakes in modulating glacier environment and, the simulation on GLOF scenario in the downstream areas. This is very critical, because catastrophic hyper-concentrated flow during the GLOFs and has far-reaching consequences on life, property and infrastructure. Considering that the central Himalayan glaciers are retreating fast and are

associated with the development and expansion of more glacial lakes, some of which have been expanding at an alarming rate, make the area more vulnerable to future GLOFs.

***Elevation dependent warming (EDW) in Himalaya:*** During our research on the glacier-glacial lake changes in the central Himalaya, we have observed that the development/formation of glacier lakes is higher in the higher elevation areas (5000-600 m asl). To understand the accelerated evolution/expansion of glacier lakes at higher elevation is intriguing. Therefore to understand the drivers of these changes, we have recently started working on the reported elevation dependent warming in the central Himalaya and the feedback mechanism/loops between warming and various cryospheric components such as snow cover variability, surface albedo, surface temperature variability and glacier-glacial lake sensitivities/changes. The decrease in snow and ice and increase in lake water bodies, particularly above 5000 m asl have significant influence on change in the surface albedo and energy balance. Our emphasis is to highlight the higher elevation temperature variability as one of the major factors in not only the lake development but also in the increasing occurrences of mass movements (ice, snow, rock avalanches) and bringing this into notice of policy makers and stakeholders.

***Understanding the people's perception of climate change in the Himalayas:*** Understanding the perception of any native community is crucial as it lays the foundation for environmentalists and governments to frame effective climate change mitigation and adaptation policies by including the native community as stakeholders. Furthermore, society's involvement in curbing climate change is crucial since regulations to reduce greenhouse gas emissions are unlikely to be implemented until people accept their responsibilities and understand how human activity contributes to global warming. Thus, perception studies effectively link the public and policymakers, increasing the likelihood that people will adapt their behavior and accept policy actions. Moreover, perception studies aid in filling up the gaps and estimating the temperature and precipitation of topographically heterogeneous and inaccessible areas, such as the Himalayan region, where the meteorological data is either coarse or scarce. Our perception studies from Ladakh and Sikkim have shown overwhelming responses of people's awareness of climate change concepts as well as their willingness to actively participate in climate-conscious and environment-friendly measures.

Presently, I hold a scientist 'E' position (i.e. senior scientist position with leadership responsibility for research projects and supervision of PhD students) at the Birbal Sahni Institute of Palaeosciences, Lucknow, India. Besides this, I am also having an honorary associate professorship at the AcSIR - Academy of Scientific & Innovative Research, New Delhi and teaching the PhD students. At BSIP I am associated with the Quaternary Research Group which focuses on the palaeoclimatic reconstructions using multiproxy studies. Being a geologist by training and having more than 12 years of field experience in the Indian Himalaya, I have been able to work in almost all the sectors (from northwestern to eastern) Himalaya.

Besides trained as Quaternary geomorphologists with emphasis on quaternary climate variability and its impact on landform evolution, I am trained in Optical Dating technique at Physical Research Laboratory during my post doctorate fellowship and currently running a full-fledged OSL laboratory at BSIP.

Until now my research focus was on reconstructing high mountain paleoenvironments and glacial dynamics on multiple timescales. With the new facilities and opportunity, I will (i) complement the institute in both research and teaching with my expertise in high mountain glacial geology, geomorphology, and quantitative ISM reconstruction, and at the same time, (ii) will radically expand my research portfolio by other research components of the high Himalayan environments including the contemporary changes in the cryosphere. My research will focus on looking in detail into glacier-climate sensitivities and interactions and changes in ISM intensities on centennial-millennial timescales that have been sparsely attempted for the Himalayas. I will strive to merge quantitative paleoclimatology and past glacial dynamics and try to further enhance our understanding of the contemporary cryospheric change with special emphasis on the glacier-glacial lake changes and Simulation and risk assessment of a possible glacial lake outburst flood (GLOF) in the high Himalaya, which has implications for the high mountain communities.

#### **Ph.D. Thesis supervisor:**

1. Mrs. Jyotsna Dubey; Title "Chronology of glaciation, palaeoclimatic reconstruction and their climatic implications in the Thangu valley, Sikkim Himalaya, India" (BHU - Awarded - 2022).
2. Ms. Prachita Arora; Title "Timing, extent, and sensitivity of the glaciers to the Late Quaternary climate variability in the Higher Sikkim Himalaya" (AcSIR – ongoing - Reg. 2020).
3. Ms. Mitra Rajak; Title "Glacial-glacial lake interactions during the last four decades in the Central Himalaya using multi-sensor, multi-satellite data" (AcSIR – ongoing - Reg. 2023).
4. Mr. Shubhajit Ghosh; Title "Spatiotemporal distribution of forest fires and their impact on the central Himalayan cryosphere" (AcSIR – ongoing - Reg. 2024).
5. Mr. Nishant Minz; Title "Transitional Himalayan glaciers: characteristics, mechanism and implications of paradigm shift" (KSKV Kutchh University-ongoing-Reg. 2025).
6. Mr. Benjamin Sam; Title "Understanding Community Perceptions of Natural Hazards and Climate Change for Evidence-Based Policy Making in the Bhagirathi Valley, Central Himalaya"(KSKV Kutchh University-ongoing-Reg. 2025).

#### **Master's dissertation supervised:**

1. Ms. Shradha Murkute, KSKV Kachchh University, Bhuj-Kachchh (Gujarat) – 2016
2. Ms. Priyanka Patel, CAS in Geology, Lucknow University (Lucknow) - 2016
3. Ms. Akanksha Gupta, CAS in Geology, Lucknow University (Lucknow) - 2016
4. Mr. Vishal Kumar Ojha, HNB Gharwal University (Uttarakhand) – 2018
5. Ms. Aparna Agarwal, CAS in Geology, Lucknow University (Lucknow) - 2019
6. Mr. Vishal Kumar Ojha, HNB Gharwal University (Uttarakhand) – 2019

7. Ms. Samia Khan, BBA University (Lucknow) – 2021
8. Ms. Garima Pal, BBA University (Lucknow) – 2021
9. Ms. Sweta Saina, CAS in Geology, Lucknow University (Lucknow) - 2021
10. Ms. Yashu Singh, CAS in Geology, Lucknow University (Lucknow) – 2021
11. Mr. Hritik Tripathi, ONGC Centre of Adv. Std., Lucknow Uni. (Lucknow) - 2022
12. Ms. Shivani Srivastava, ONGC Centre of Adv. Std., Lucknow Uni. (Lucknow) - 2022
13. Mr. Anubhav, CAS in Geology, Lucknow University (Lucknow) - 2022
14. Mr. Varun Raj, CAS in Geology, Lucknow University (Lucknow) – 2022
15. Mr. Aanis Rashid, Dept. of Geography, Amar Singh College, Srinagar (J&K) – 2023
16. Mr. Jahangir Ahmad Bhat, Dept. of Geography, Amar Singh College, Srinagar (J&K) – 2023
17. Mr. Amit Mishra, Central Uni. of South Bihar, Gaya, Bihar - 2024

### **Significant Research Projects executed**

1. Department of Science and Technology Young Scientist research project (Fast track)  
*Role: Principal Investigator " Title: Chronology and climatic implications of Late Quaternary glaciations in the upper Dhauliganga and Alaknanda valleys, Central Himalaya, India"*
2. Department of Science and technology research project (Himalayan Glaciology)  
*Role: Principal Investigator " Title: Glacial chronology, Palaeoclimatic reconstruction and their climatic implications in the Thangu Valley, Sikkim Himalaya, India with special emphasis on luminescence characteristics of feldspar and quartz".*
3. INDO-UK Collaboration Program; MoES-UKRI project (APP-18128) - 2024  
*Role: Principal Investigator (Indian partner) "An interdisciplinary analytical framework for high-mountain landslides and cascading hazards: implications for communities and infrastructure."*

### **Representation in committees/Board:**

1. Member of **RGIK Rock Glacier Inventory (RoGI) Working Group.**
2. Member of **Bureau of Indian Standards, Panel on GLOFs, Bathymetry**
3. Member of **International Permafrost Association: India.**

### **Research publications (\* - corresponding author):**

1. Bhardwaj, A., **Ali, S.N.\***, Sam, L. and Pandey, P., 2025. Time to diffuse the “ticking time bombs” of the Himalaya. Physics and Chemistry of the Earth, Parts A/B/C, p.103908.
2. Paulramasamy, M., Sivasubramaniam, S., Muthalankurichi, K., Singh, P., Kumar, K., **Ali, S.N.** and Khonde, N., Investigating historical attribution: Luminescence dating of bricks from a submerged structure in southeastern India. Frontiers in Environmental Archaeology, 4, p.1464315.

3. **Ali, S.N.\***, Dubey, J., Arora, P., Sharma, S., Morthekai, P., Sharma, M., Kumar, P., Srivastava, V., 2025. Glacier sensitivity to climate variability since MIS-2: Insights from monsoon dominated north-eastern Himalaya. *Geografia Fisica e Dinamica Quaternaria (GFDQ)* 47 161-173. DOI 10.4454/ki45dfv4.
4. Hassan, S., Bali, B.S., Arora, P., **Ali, S.N.**, Morthekai, P., Muneer, W., Wani, A.H., Yaseen, A., Zaman, M. and Ganai, B.A., 2025. Apportioning and modeling the anthropogenic fingerprints in a Himalayan freshwater lake over the last~ 3.7 ka: Insights into pollution chronology and future policy implications. *Environmental Chemistry and Ecotoxicology*.
5. Hassan, S., Bali, B.S., Muneer, W., **Ali, S.N.**, Morthekai, P., Wani, A.H. and Ganai, B.A., 2024. Deciphering source, degradation status, and temporal trends of organic matter in a Himalayan freshwater lake using multiproxy indicators, optically stimulated luminescence dating, and time series forecasting. *Science of The Total Environment*, 957, p.177618.
6. Arora, P., **Ali, S.N.\***, Singh, P., Shekhar, M., Morthekai, P., Ghosh, R. and Maharana, P., 2024. An assessment of the correlations and causations of palaeo-hydroclimatic variability in India's monsoon-dominated Central Himalaya. *The Holocene*, p.09596836241254480.
7. Pandey, P., **Ali, S.N.\***, Das, S.S. and Khan, M.A.R., 2024. Rock glaciers of the semi-arid northwestern Himalayas: distribution, characteristics, and hydrological significance. *Catena*, 238, p.107845.
8. Pandey, P., **Ali, S.N.\***, Bhardwaj, A., Banerjee, D., Khan, M.A.R. and Fulkar, P.G., 2024. Pattern and imprints of elevation-dependent warming on central Himalayan cryosphere as revealed by Earth Observation datasets. *Results in Earth Sciences*, 2, p.100021.
9. Dubey, J., **Ali, S.N.**, Quamar, M.F., Singh, P., Morthekai, P., Ghosh, R., Sharma, A. and Srivastava, V., 2024. Vegetation diversity in response to monsoonal variability in the Eastern Himalaya, India over the past~ 13 000 yrs. *The Holocene*, p.09596836241236355.
10. Trivedi, A., Agrawal, S., Sharma, A., **Ali, S.N.**, Manoj, M.C., Nag, A., Misra, S. and Kawsar, M., 2024. Climatic Oscillations and Dynastic Trends: A Multiproxy analysis of the past two millennia in the Indian Subcontinent. *CATENA*, 246, p.108424.
11. Trivedi, A., **Ali, S.N.**, Manoj, M.C., Agrawal, S., Sharma, A., Phartiyal, B., Kumar, K., Tiwari, A., Morthekai, P., Thakur, B. and Farooqui, A., 2024. Characterization of biotic and abiotic signatures of modern lake sediments of western India, and its palaeo-environmental implications. *Quaternary International*, 708, pp.36-57.
12. Phartiyal, B., Tiwari, A., Kawsar, M., Manoj, M.C., Shekhar, M., **Ali, S.N.**, Bhushan, R., Pachchigar, R.R., Kumar, A., Prasanna, K. and Sharma, A., 2024. Millennial to centennial-scale climate oscillations since 15000 cal yrs BP from Kanwar wetland in the Central Ganga Plain, India. *Quaternary Science Reviews*, 335, p.108760.
13. Pandey, P., Khan, M.A.R. and **Ali, S.N.\***, 2024. Space and field-based investigations towards understanding the characteristics and origin of an inhabited rock glacier in NW Himalaya. *Journal of Palaeosciences*, 73(1), pp.1-15.

14. Chaddha, A.S., Sharma, A., Singh, N.K., **Ali, S.N.**, Das, P.K., Pandey, S.K., Phartiyal, B. and Kumar, S., 2024. Exploring the Astrobiological Potential of Rock Varnish from Mars Analogue Field Site of Ladakh, India. *Planetary and Space Science*, p.105932.
15. Chaddha, A.S., Sharma, A., Singh, N.K., **Ali, N.**, Das, P.K., Pandey, S.K., Phartiyal, B. and Kumar, S., 2023. Ladakh's Rock Varnish: A potential Geomaterial for astrobiological studies. *Authorea Preprints*.
16. Singh, P., Sarangi, V., Bhushan, R., **Ali, S.N.**, Agrawal, S., Tiwari, P., Kawsar, M., Agnihotri, R., Sanyal, P., Kumar, K. and Thakur, B., et al., 2024. Presence and implications of petrogenic organic carbon in High Himalayan Crystalline lake sediment. *Radiocarbon*, pp.1-23.
17. Jahan, N., Rana, Y.P., Singh, R.J., Sathikumar, R., **Ali, S.N.** and Raza, M.A., 2024. Morpho-structural signatures of neotectonic activity along the HFT bound Himalayan mountain front in Kathgodam-Chorgallia sector of NW Himalaya, India. *Quaternary Science Advances*, 13, p.100161.
18. Singh, P., **Ali, S.N.**, Prakash, K., and Morthekai, P., 2023. Efficacy of fading correction procedures to date Late Quaternary Higher Central Himalayan lacustrine sediment. *Journal of Scientific Research (BHU)*, 67(4), 1-11.
19. **Ali, S.N.\***, Pandey, P., Singh, P., Mishra, S., Shekhar, M., Misra, K.G. and Morthekai, P., 2023. Intimidating evidences of climate change from the higher Himalaya: A case study from Lahaul, Himachal Pradesh, India. *Journal of the Indian Society of Remote Sensing*, pp.1-14.
20. Arora, P., **Ali, S.N.\*** and Sharma, A., 2023. Role of Different Moisture Sources in Driving the Western Himalayan Past-glacier Advances. *Journal of Atmospheric Science Research*, 6(3), pp.1-19.
21. Arora, P., Singh, P., **Ali, S.N.**, Morthekai, P., Shekhar, M. and Ghosh, R., 2023. Climate Variability and Its Causal Mechanisms over the Northeastern Indian Himalaya. In *Climate Change and Environmental Impacts: Past, Present and Future Perspective* (pp. 83-110). Cham: Springer International Publishing.
22. **Ali, S.N.\*** and Pandey, P., 2023. Crucial, But Not Systematically Investigated: Rock Glaciers, the Concealed Water Reservoirs of the Himalayas: An Opinion. *Journal of Atmospheric Science Research*, 6(2), pp.33-41.
23. **Ali, S.N.\***, Singh, P., Arora, P., Bisht, P. and Morthekai, P., 2022. Luminescence dating of late Pleistocene glacial and glacio-fluvial sediments in the Central Himalaya, India. *Quaternary Science Reviews*, 284, doi.org/10.1016/j.quascirev.2022.107464.
24. Pandey, P., **Ali, S.N.\*** and Simon, A., 2022. Rock glacier oasis: an alternative for agro-pastoralism in a changing environment in the Himalayan cold desert. *The Geographical Journal*, doi.org/10.1111/geoj.12468.
25. Pandey, P., Banerjee, D., **Ali, S. N.\***, Khan, M. A. R., Chauhan, P. and Singh, S., (2022). Simulation and risk assessment of a possible glacial lake outburst flood (GLOF) in the

- Bhilangna valley, Central Himalaya, India. *Journal of Earth System Science*, 131 (184), doi.org/10.1007/s12040-022-01940-y.
26. Khali, H., Pandey, P., **Ali, S. N.** and Champatiray, P. K. 2022. MODIS Observed Spatiotemporal Variation of Snow Cover in Zaskar Valley, North-Western Himalaya. *Front. Water* 4:853146. doi: 10.3389/frwa.2022.853146
27. Morthekai, P., Tiwari, P., Murari, M.K., Singh, P., Thakur, B., Manoj, M.C., **Ali, S.N.**, Singh, V.K., Kumar, K., Rai, J. and Dubey, N., 2022. Further investigations towards luminescence dating of diatoms. *Radiation Measurements*, 156, p.106803.
28. **Ali, S.N.\***, Singh, R., Morthekai, P., Sharma, A., Phartiyal, B., Quamar, M.F., Kumar, R. and Arora, P., 2022. Perception of climate change from the Himalayan 'cold desert' Ladakh, India. *Journal of Palaeoscience*, 71, 89-111.
29. Pandey, P., Singh, R., Prasad, A.V., Mahagaonkar, A.V. and **Ali, S.N.**, 2022. Facies detection of surge-type glaciers, Karakoram Himalaya using Sentinel-1 images. *Geocarto International*, 37(7), pp.2068-2082.
30. Phartiyal, B., **Ali, S.N.**, Sharma, A., Agrawal, S., Nag, D., Tiwari, P., Kumar, M., Morthekai, P., Govil, P., Thakur, B., Bhushan, R., Jena, P. S., and Shivam, A (2022). The Palaeoclimatic variability during last eight millennia from a morainal lake in Zaskar, northwest Himalaya, India. *Journal of Palaeosciences*, 71, 75-88.
31. Khan, I., Trivedi, A., **Ali, S.N.**, Bali, R., Sangode, S. J. and Deepak, O., (2022). Late Pleistocene-Holocene vegetation and climate variability of the Western Himalaya, India. *Journal of Asian Earth Sciences*. doi.org/10.1016/j.jseaes.2022.105245
32. Arora, P., **Ali, S.N.\*** and Morthekai, P., 2021. Local Perceptions and Trends of Climate Change in the Sikkim Himalaya, North-East India. *Journal of Climate Change*, 7(2), pp.1-26.
33. Kumar, M., Saikia, K., Agrawal, S., Ghosh, R., **Ali, S.N.**, Arif, M., Singh, D.S., Sharma, A., Phartiyal, B. and Bajpai, S., 2022. Climatic control on the C3 and C4 plant abundance during the late Pleistocene-Holocene in the northern Gangetic Plain, India. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 591, p.110890.
34. Pandey, V. K., Kumar, R., Singh, R., Kumar, R., Rai, S. C., Singh, R. P., Tripathi, A. K., Soni, V. K., **Ali, S.N.**, Tamang, D. and Latief, S. U., 2022. Catastrophic ice-debris flow in the Rishiganga River, Chamoli, Uttarakhand (India). *Geomatics, Natural Hazards and Risk*, 13(1), pp.289-309.
35. Farooqui, S., Shah, A.P., Maurya, D.M., Archana, G., **Ali, S.N.** and Sharma, A., 2021. Texture, mineralogy and geochemistry of late Quaternary sediments of the Mahi River basin, western India: Implications to climate and tectonics. *Applied Geochemistry*, 134, p.105088.
36. Khan, M.A.R., Singh, S., Pandey, P., Bhardwaj, A., **Ali, S.N.**, Chaturvedi, V. and Ray, P.K.C., 2021. Modelling Permafrost Distribution in Western Himalaya Using Remote Sensing and Field Observations. *Remote Sensing*, 13(21), p.4403.

37. **Ali, S.N.\*** and Shukla, S., 2021. The Himalayan red lake. Association of Quaternary Researchers (AOQR) 3 (3), 5-6.
38. **Ali, S.N.\*** and Shukla, A.D., 2021. An Exigency for Ice Core Studies to Determine Spatio-temporal Variability in Moisture Sources and Impact of Black Carbon–Mineral Aerosols on the Himalayan Glaciers. *Journal of Atmospheric Science Research*, 4(3).
39. Arora, P., **Ali, S.N.** and Morthekai, P. 2021. Exploring Methodological Approaches for Climate Perception studies in Himalaya. In: *Climate Change - Impacts, Responses and Sustainability in the Indian Himalaya*" Publisher-Springer Nature Switzerland AG, Gewerbestrasse 11, 6330 Cham, Switzerland.
40. Chaddha, A.S., Mathews, R.P., Kumar, K., **Ali, S.N.**, Phartiyal, B., Manoj, M.C. and Sharma, A. 2021. Caves as interim-refugia: Chemical signatures of human habitation under extreme environments of Ladakh, NW India. *Journal of Archaeological Science: Reports*, 36,102799.
41. Pandey, P., Chauhan, P., Ray P.K.C., Sharma, P., Chattoraj, S.L., Sharma, R., Nainwal, H.C., **Ali, S.N.** and Singh R. 2021. Glacial lakes of Uttarakhand (Atlas). Published by Indian Institute of Remote Sensing, Indian Space Research Organization, Dehradun, India, p.95.
42. Pandey, P., Chauhan, P., **Ali, S.N.** and Chauhan, M. 2021. Space-based observation of a newly found high altitude Red Colored Glacial Lake in Ladakh, Northwest Himalaya. *Current Science*, 120(2), 429-431.
43. **Ali S.N.\*** and Sharma S. 2020. Chronology and climate sensitivity of the post-LGM glaciation in the Dunagiri valley, Dhauliganga basin, Central Himalaya, India': Comments. *Boreas*, 50(1), 321-323. DOI 10.1111/bor.12486
44. Pandey, P., **Ali, S.N.** and Champatiray, P. K. 2020. Glacier-glacial lake interactions and glacial lake development in the Central Himalaya, India (1994-2017). *Journal of Earth Science*, 32(6), 1563-1574.
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