

CV - Dr. Pankaj Kumar

Dr. Pankaj Kumar
Professor



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Dr. Pankaj Kumar is a Professor in the Department of Geography at the University of Delhi and currently serves as Assistant Secretary General of the International Geographical Union (IGU). He is the liaison between IGU and CODATA and a member of CODATA's International Data Policy Committee (IDPC). Prof. Kumar is coordinating the activities of the Geographical Artificial Intelligence (GeoAI) Task Force of the International Geographical Union. Prof. Kumar served as Secretary of the IGU Commission on Biogeography and Biodiversity from 2016-2020 and the Commission on Mountain Studies from 2020-2024. Prof. Pankaj also holds the responsibility of Assistant Secretary of the Indian Society of Remote Sensing, Delhi Chapter, and Treasurer, Association of Geographical Studies (AGS), University of Delhi. Travels widely and frequently in India and abroad to deliver invited talks and keynotes at universities, research organizations, and conferences.

Educational Qualifications

- +2014** Ph.D. from Department of Geography, Delhi School of Economics, University of Delhi on topic "Glacial Lake Outburst Floods and Associated Geo-hazards in Himachal Himalaya"
- +2007** M.Phil from Department of Geography, Delhi School of Economics, University of Delhi on topic "Sustainable Mountain Tourism in Uttarkashi district".

Areas of Interest / Specialization

Mountain Environment & Landscape Dynamics; Climate Change, Hazards, Disasters and livelihoods; Earth Observation and GIS; Open Big Data and GeoAI

Association with International and National Professional Bodies

- +2023** **Member**, International Data Policy Committee (IPDC), CODATA
- +2020** **Assistant Secretary General**, International Geographical Union (IGU)
- +2021** **IGU Liaison** to ISC Committee on Data for Science and Technology (CODATA)
- +2020-2021** **Fellow**, Institute of Lifelong Learning (ILL), University of Delhi, India
- +2020** **Life Member**, The Indian Science Congress Association (ISCA), Kolkata, India
- +2018** **Treasurer**, The Association for Geographical Studies, Delhi, India
- +2020-2024** **Secretary**, Commission on Mountain Studies, IGU
- +2016-2020** **Secretary**, Commission on Biogeography and Biodiversity, IGU
- +2009** **Life Member**, National Association of Geographers, India (NAGI), Delhi, India

Courses Taught at Master's Level

Semester	Courses
M.A Semester-I	GEOG-C103: Geography in Practice: Field Investigation (Core)
M.A Semester-II	GEOG2E04: Geography of Cryosphere (Elective)
M.A Semester-III	GEOG3E13: Regional Development in India (Elective)
M.A Semester-IV	GEOG4E11: Integrated Watershed Management (Elective)
Ph.D Coursework	Course III: Specialization (GEO-AI and Big Data)
Course IV: Research and Publication Ethics (RPE)	

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Recent Publications

Journal Articles:

- +2026** Chen, M., Zhu, Z., Wagener, T. et al. Enhancing reproducibility in hybrid Earth system models. *Nat Mach Intell* (2026). <https://doi.org/10.1038/s42256-026-01299-5>
- Rai, A., **Kumar, P.**, Singh, S. et al. Spatiotemporal trends of cryo-climatic parameters in the Chandra Basin, Himachal Pradesh, India. *Discov Geosci* 4, 310 (2026). <https://doi.org/10.1007/s44288-026-00681-5>
- P. Kumar**, S. Singh, M. Vij, et al., Identification and prioritization of critical sub basin using SWAT model in lower Son River basin, India, *HydroResearch* (2024), <https://doi.org/10.1016/j.hydres.2026.06.001>
- Kumar, P.**, Thakur, S., Singh, S., Husain, M. A., & Yadav, A. (2026). Multi-scalar aridity dynamics and climate–vegetation coupling in the Western Himalayan Cold Desert, India. *Science of The Total Environment*, 1032, 181812. <https://doi.org/10.1016/j.scitotenv.2026.181812>
- Kumar, P.**, Sarda, R., Thakur, S., Janmajaya, M., Gonencgil, B. and Yadav, A. (2026), Investigating long term rainfall trends (1901-2021) and forecast over the mountainous state of India using machine learning approach. *Singapore Journal of Tropical Geography*. <https://doi.org/10.1111/sjtg.70054>
- Ashwani and **Pankaj Kumar**, 2026. Assessing the long-term changes in potential evapotranspiration and its impact on agriculture in Lahaul and Spiti, Himachal Pradesh. *Nature Environment and Pollution Technology*, 25(1), B4352. <https://doi.org/10.46488/NEPT.2026.v25i01.B4352>
- Ashwani, **Pankaj Kumar**, Dhanjit Deka; Evaluating Land-Use Dynamics and Snow-Cover Variability in a High-Altitude Region: A Case of Lahaul and Spiti, Western Himalaya. *Environmental & Engineering Geoscience* 2026; doi: <https://doi.org/10.21663/EEG-D-25-00049>
- +2025** Kumar, A., **Kumar, P.**, Dahiya, B., Gonencgil, B., Singh, S., and Ashwani., Rai, A., Evaluating the effectiveness of the city master plan in regulating future urban spatial growth of Varanasi City, India, *Front. Sustain. Cities*, 2-2025, doi: 10.3389/frsc.2025.1649418
- Kumar, A., **Kumar, P.**, Rongpi, R., Ranjan, P., Kumari, A., & Singh, A. (2025). Assessing forest fire vulnerability using artificial neural networks in Almora district, Uttarakhand, India. *Journal of the Bulgarian Geographical Society*, 53, 67-86. 10.3897/jbgs.e159980
- Janmajaya, M., & **Kumar, P.** (2025). Regional variations in aerosol-temperature coupling over the Indo-Gangetic Plains and Central India: A vector autoregression analysis (2005–2023). *The Geographical Journal*, e70040. <https://doi.org/10.1111/geoj.70040>
- Anand, S., Kumar, H., **Kumar, P.** et al. Analyzing landscape changes and their relationship with land surface temperature and vegetation indices using remote sensing and AI techniques. *Geosci. Lett.* 12, 7 (2025). <https://doi.org/10.1186/s40562-024-00372-4>
- Kumar, P.**, Sarda, R., Yadav, A., Ashwani, Gonencgil, B., & Rai, A. (2025). Farmer's

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Perception of Climate Change and Factors Determining the Adaptation Strategies to Ensure Sustainable Agriculture in the Cold Desert Region of Himachal Himalayas, India. *Sustainability*, 17(6), 2548. <https://doi.org/10.3390/su17062548>

Kumar P, Deka D, Husain MA, Kumar M, Choudhari P, Singh S, Kamil A and Banerjee A (2025) Trend analysis of precipitation and temperature in Lahaul-Spiti district, Himachal Pradesh, India. *Front. Clim.* 6:1348132. doi: 10.3389/fclim.2024.1348132

+2024 Singh, S., **Kumar, P.**, Parijat, R., Gonengcil, B., & Rai, A. (2024). Establishing the relationship between land use land cover, normalized difference vegetation index and land surface temperature: A case of Lower Son River Basin, India. *Geography and Sustainability*, 5(2), 265-275. <https://doi.org/10.1016/j.geosus.2023.11.006>

Majid, S. I., Kumar, M., Sahu, N., **Kumar, P.**, & Tripathi, D. K. Application of ensemble fuzzy weights of evidence-support vector machine (Fuzzy WofE-SVM) for urban flood modeling and coupled risk (CR) index for ward prioritization in NCT Delhi, India. *Environ Dev Sustain* (2024). <https://doi.org/10.1007/s10668-024-04926-6>

Kumar, P., Deka, D., Yadav, A., ., A., Kumar, M., Das, J., Singh, A., & Gurjar, A. (2024). Potential and actual evapotranspiration and Landsat derived indices. *Global Journal of Environmental Science and Management*, 10(3), 1227-1248. <https://doi.org/10.22034/gjesm.2024.03.18>

Kumar, P., Thakur, S., Ashwani et al. Urban waterlogging risk susceptibility within changing pattern of rainfall intensity in Delhi, India. *Acta Geophys.* (2024). <https://doi.org/10.1007/s11600-024-01336-0>

Sarda, R., Gonengcil, B., Halder, S. et al. A bibliometric analysis of agricultural vulnerability in the context of climate change from 2010 to 2021. *Spat. Inf. Res.* 32, 297–310 (2024). <https://doi.org/10.1007/s41324-023-00559-5>

+2023 **Kumar P.**, Thakur S., Junawa S., Anand S. Altitudinal Appraisal Of Land Use Land Cover And Surface Temperature Change In The Satluj Basin, India. *GEOGRAPHY, ENVIRONMENT, SUSTAINABILITY*. 2023;16(4):26-38. <https://doi.org/10.24057/2071-9388-2023-2958>

Majid, S.I., Kumar, M., **Kumar, P.** et al. GIS-Based Flood Susceptibility Mapping of Srinagar District, India Using Weights-of-Evidence (WofE), Frequency Ratio (FR) and Fuzzy Gamma Operator (FGO). *J Indian Soc Remote Sens* 51, 2421–2446 (2023). <https://doi.org/10.1007/s12524-023-01776-z>

Kumar, P., Ashwani, Mishra, S., Thakur, S., Kumar, D., & Raman, V.A.V. (2023). Vulnerability of tribal communities to climate variability in Lahaul and Spiti, Himachal Pradesh, India. *Cografya Dergisi*. 47, 29-43. <https://doi.org/10.26650/JGEOG2023-1233134>

Husain, Md. Arif, **Pankaj Kumar**, and Barbaros Gonengcil. 2023. "Assessment of Spatio-Temporal Land Use/Cover Change and Its Effect on Land Surface Temperature in Lahaul and Spiti, India" *Land* 12, no. 7: 1294. <https://doi.org/10.3390/land12071294>

+2022 Husain, M. A., **Kumar, P.**, Singh, A., Raman, V. A. V., Dua, R., & Thakur, S. (2023). Snow Cover and Snowline Variation in Relation to Land Surface Temperature in Spiti Valley, Himachal Pradesh, India. *International Journal of Ecology and Environmental Sciences*, 49, 187-199. <https://doi.org/10.55863/ijees.2023.2624>

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- Rahaman, S., Jahangir, S., Chen, R., & **Kumar, P.** (2022). Restricted Anthropogenic Activities and Improved Urban Air Quality in China: Evidence from Real-Time and Remotely Sensed Datasets Using Air Quality Zonal Modeling. *Atmosphere*, 13(6), 961. <https://doi.org/10.3390/atmos13060961> (IF 3.110)
- +2021** Wu, Feng; Guo, Naliang; **Kumar, Pankaj**; Niu, Lulu, Scenario-based extreme flood risk analysis of Xiong'an New Area in northern China, *Journal of Flood Risk Management*, 2021, <https://doi.org/10.1111/jfr3.12707> (IF 4.005)
- Saidur Rahaman, Selim Jahangir, Ruishan Chen, **Pankaj Kumar**, Swati Thakur, COVID-19's lockdown effect on air quality in Indian cities using air quality zonal Modeling, *Urban Climate*, 2021, 100802, ISSN 2212-0955, <https://doi.org/10.1016/j.uclim.2021.100802> (IF 6.663)
- +2020** Saini, A.; Sahu, N.; **Kumar, P.**; Nayak, S.; Duan, W.; Avtar, R.; Behera, S. Advanced Rainfall Trend Analysis of 117 Years over West Coast Plain and Hill Agro-Climatic Region of India. *Atmosphere* 2020, 11, 1225. <https://doi.org/10.3390/atmos11111225> (IF 3.110)
- Rahaman S, **Kumar P**, Chen R, Meadows ME and Singh RB (2020) Remote Sensing Assessment of the Impact of Land Use and Land Cover Change on the Environment of Bardhaman District, West Bengal, India. *Front. Environ. Sci.* 8:127, <https://doi.org/10.3389/fenvs.2020.00127> (IF 5.411)
- Abhijeet Ghadge, Sjoerd van der Werf, Merve Er Kara, Mohit Goswami, **Pankaj Kumar**, Michael Bourlakis, Modelling the impact of climate change risk on bioethanol supply chains, *Technological Forecasting and Social Change*, Volume 160, 2020, 120227, ISSN 0040-1625, <https://doi.org/10.1016/j.techfore.2020.120227> (IF 10.884)
- Rahaman, S., Jahangir, S., Haque, M.S. et al. Spatio-temporal changes of green spaces and their impact on urban environment of Mumbai, India. *Environ Dev Sustain* (2020). <https://doi.org/10.1007/s10668-020-00882-z> (IF 4.080)

Edited Springer Volume:

- +2025** **Pankaj Kumar**, Manish Kumar, Subhash Anand, Dinesh Kumar Tripathi, Naresh Kumar Verma (2025) Humanities and Sustainability from Glocal Perspectives Towards Future Earth, Proceedings of IGU Thematic Conference 2022, India, Springer series Advances in Geographical and Environmental Sciences, Springer Singapore, Series ISSN 2198-3542, <https://doi.org/10.1007/978-981-96-0381-7>
- +2024** Manish Kumar, **Pankaj Kumar**, Subhash Anand, Naresh Kumar Verma and Dinesh Kumar Tripathi (2024) Geographical Dimensions of Environmental Sustainability, Proceedings of IGU Thematic Conference 2022, India, Springer series Advances in Geographical and Environmental Sciences, Springer Singapore, Series ISSN 2198-3542, <https://doi.org/10.1007/978-981-96-0605-4>
- +2022** **Kumar, P**; Nigam, G; Sinha, M.K; Singh, Anju (2022) Water Resources Management and Sustainability, Springer series Advances in Geographical and Environmental Sciences, Springer Singapore, Series ISSN 2198-3542, <https://doi.org/10.1007/978-981-16-6573-8>

Chapters in Edited Books:

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- +2026** **Kumar, P.**, & Rai, A. (In Press). Water and culture in the high Himalayas: Exploring the water dynamics of Lahaul and Spiti District, Himachal Pradesh. In A. Yépez & A. Haller (Eds.), *Water in mountainscapes: Converging nature and culture* (Montology, Vol. 3). Springer.
- Rai, A., Bhardwaj, A., Ahmed, A., Mir, R. A., Varade, D., & **Kumar, P.** (2026). Unlocking hydrological insights: Spatial data analysis for modeling and management. In *Advances in Hydrology* (pp. 79-94). Elsevier. <https://doi.org/10.1016/B978-0-443-26777-2.00005-3>
- +2025** **Kumar, P.**, Ashwani (2025). Assessment of Livelihood Vulnerability and Climate Change Perception in Lahaul and Spiti District, Himachal Pradesh, India. In: Banu, N., Fazal, S. (eds) *Livelihoods and Well-Being in the Era of Climate Change*. Springer, Cham. https://doi.org/10.1007/978-3-031-81132-6_4
- +2024** **Kumar, P.** (2024). Highlands, Midlands, Lowlands: Spatial Explicit Models to Study Vertically Differentiated Areas. In: Sarmiento, F.O., Gunya, A. (eds) *Mountain Lexicon. Montology*, vol 2. Springer, Cham. https://doi.org/10.1007/978-3-031-64884-7_24
- +2022** Kumar, S., **Kumar, P.**, Singh, A., Ashwani, Kumar, M. (2022). Socio Economic Livelihood Vulnerability to Mountain Hazards: A Case of Uttarakhand Himalaya, India. In: Singh, R.B., Kumar, M., Tripathi, D.K. (eds) *Remote Sensing and Geographic Information Systems for Policy Decision Support*. Advances in Geographical and Environmental Sciences. Springer, Singapore. https://doi.org/10.1007/978-981-16-7731-1_8
- Kapur, A.S., **Kumar, P.**, Areendran, G., Raj, K. (2022). The Magnitude of Transformation in Land Use Land Cover of Kalyan-Dombivli, Smart City. In: Singh, R.B., Kumar, M., Tripathi, D.K. (eds) *Remote Sensing and Geographic Information Systems for Policy Decision Support*. Advances in Geographical and Environmental Sciences. Springer, Singapore. https://doi.org/10.1007/978-981-16-7731-1_14
- Kumar, P.**, Ojha, S., Nigam, G.K., Singh, A., Sinha, M.K. (2022). Water Resources, Livelihood Vulnerability and Management in Rural Desert Communities of Jaisalmer, India. In: Kumar, P., Nigam, G.K., Sinha, M.K., Singh, A. (eds) *Water Resources Management and Sustainability*. Advances in Geographical and Environmental Sciences. Springer, Singapore. https://doi.org/10.1007/978-981-16-6573-8_1
- Bhadwal, S., Verma, N. K., Kumar, S., Kumar, M., & **Kumar, P.** (2022). Morphometric Analysis and Geohydrological Inference of Bhilangna Drainage Basin, Uttarakhand (India) Using Remote Sensing and GIS Techniques. In *Water Resources Management and Sustainability* (pp. 403-422). Singapore: Springer Nature Singapore https://doi.org/10.1007/978-981-16-6573-8_19
- +2021** Husain, A., & **Kumar, P.** (2021). Remote Sensing and GIS-Based Morphometric Analysis of Spiti River Basin. *Water Science and Sustainability*, 213-223. https://doi.org/10.1007/978-3-030-57488-8_16
- +2016** Kumar, M., & Kumar, P. (2016). Snow cover dynamics and timberline change detection of Yamunotri watershed using multi-temporal satellite imagery. *Climate Change, Glacier Response, and Vegetation Dynamics in the Himalaya: Contributions Toward Future Earth Initiatives*, 391-399. https://doi.org/10.1007/978-3-319-28977-9_20
- Kumar, P.**, & Singh, R. B. (2014). Climate Change, Glacier Lakes, and Livelihoods. In *Livelihood Security in Northwestern Himalaya* (pp. 27-40). Springer, Tokyo. https://doi.org/10.1007/978-4-431-54868-3_3

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Singh, R. B., & **Kumar, P.** (2014). Geographic and socio-economic realities of Himachal Pradesh, Northwestern Himalaya. In *Livelihood Security in Northwestern Himalaya* (pp. 11-26). Springer, Tokyo. https://doi.org/10.1007/978-4-431-54868-3_2

Singh, R. B., & **Kumar, P.** (2014). Climate change and glacial lake outburst floods in Himachal Himalaya, India. In *Climate change and biodiversity* (pp. 3-14). Springer, Tokyo. https://doi.org/10.1007/978-4-431-54838-6_1

Research Projects Ongoing/Completed:

- +2025** Indian lead of the European Research Council project '**Climate and Contemporary Transformations of Vernacular Architecture - Interaction, Effects and Perspectives (CLIMATE-Arch)**', based at the Austrian Academy of Sciences' Institute for Social Anthropology, **Vienna, Austria**. (Ongoing)
- + 2024** Project Director (PD) of Research Project "**Assessing the interplay of Ecosystem Services and Sustainable Development Goals (SDGs) in the Himachal Himalaya**" funded by Institution of Eminence, **University of Delhi, India** (Completed)
- +2022** Project Director (PD) of Major Research Project titled "**Evolving adaptive Feed-forward Agricultural Practices (FFAP) for climate vulnerable Tribal Households of Cold Desert region, Lahaul and Spiti District**" funded by **ICSSR, New Delhi** (Completed)
- +2021** Principal Investigator (PI) of Institute of Eminence (IoE), University of Delhi Faculty Research Programme Grant titled "**Water logging, Vulnerability Assessment and Mitigation Measures: A case study of North Delhi**" funded by **University of Delhi** (Completed)
- +2020** Principal Investigator (PI) of Department of Science and Technology (DST)-BRICS International Project between India, Russia and China on the titled "**Joint Validation of Multi-Source Remote Sensing Information and Sharing in BRICS Countries**" funded by Department of Science and Technology, Government of India. (Completed)
- +2015** Project Title "Assessment of Glacial Lake Outburst Flood (GLOF) of Samudratapu Glacial Lake, Himachal Pradesh" funded by **University of Delhi** (Completed)
- +2014** Project Title "Snow cover dynamics and its impact on livelihoods: A case study of Spiti river, Lahaul and Spiti district, Himachal Pradesh" funded by **University of Delhi** (Completed)
- +2013** Project Title "Monitoring and modeling socio-economic impact of Land use/cover and Pollution along Yamuna River, Delhi" funded by **University of Delhi** (Completed)

Invited Talks/Resource Person

- +2026** Presented research findings on the topic "**Climate-Induced Environmental Change and Agricultural Vulnerability in the High-Altitude Region of Lahaul and Spiti, Western Himalaya, India**" in the International Symposium of Mountain Studies organized in the *IGU Regional Conference 2026* held in Istanbul, Türkiye, between **17th and 22nd August 2026**.

Delivered an invited lecture titled "**Open Science, GeoAI, GeoPrivacy and Data Governance in Social Science Research**" during the 17th Online Refresher Course on

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“Recent Trends and Methodology in Interdisciplinary Research: Theories and Applications organized by the Department of Geography, Deen Dayal Upadhyaya Gorakhpur University, Gorakhpur, Uttar Pradesh on **9th December 2026**.

Delivered invited lectures on "**Open Science, Big Data and GeoAI in Social Science Research**" and "**Longitudinal Research in Social Sciences**" and at the ICSSR-Sponsored Ten-Day Research Methodology Course in Social Sciences, organized by the Department of Geography, Aligarh Muslim University, Aligarh, on **6th August 2026**.

Delivered an invited talk on ‘**Recent Trends in Geospatial Technology GeoAI**’ at the Department of Geography, St. Xavier’s College, Ranchi, Jharkhand, on **25th May, 2026**.

Delivered invited talk on the title “**Environmental Degradation in Cold Desert Region of Himachal Himalaya: Challenges to Sustainable Livelihood**” in the Shivalik’s Geo-Fest and National Seminar 2026 entitled “*Environmental Degradation in the Era of Development: Challenges and Sustainable Alternatives*’ held in Shivaji College, University of Delhi, Delhi on **23rd March, 2026**

Invited as the Guest of Honour and to deliver a talk on “**Sustainability Challenges in the Himalaya in the Context of Environmental Change.**” in the GEOTIME 2026 on the topic ‘India’s Civilizational Ethos in Global Sustainability Dialogues’ organised by Kirori Mal College, University of Delhi on **19th March 2026**.

Deliver the Valedictory Address on the title “**G-governance, GeoAI and Open Science in Social Science Research**” at the National Workshop on Research Methodologies in Social & Scientific Studies (SPSS & GIS), sponsored by PM-USHA, held at the Department of Geography, Jai Narain Vyas University, Jodhpur, Rajasthan on **8th March 2026**.

Delivered talk as Resource Person on the topic “**Assessment, Management, Mitigation and Resilience building to tackle GLOFs Disasters in the Himalaya**” at the UGC Malaviya Mission Teachers Training Center, AMU, under the Refresher Course in Disaster Management held in Aligarh Muslim University, Aligarh, Uttar Pradesh, on **18th February, 2026**.

+2025 Delivered talk as a Resource Person on the topic “**Open Science, GeoAI, Data Sharing and Governance in social science research**” in the online "Refresher Course in Geography" organized by the UGC–Malaviya Mission Teachers Training Center, University of Allahabad, Allahabad, Uttar Pradesh on **13th December, 2025**.

Presented my research, “**Assessing Aridity Changes in the Cold Desert Ecosystem of Western Himalaya in a Warming Climate,**” in the IGU Commission on Mountain Studies session in the *International Mountain Conference (IMC 2025)*, Innsbruck, Austria, on **16th September 2025**.

Delivered a talk on the topic GeoAI, Geoprivacy and Academic freedom in IGU in the panel on ‘**Transforming Open Science Clouds in the AI Era**’ in the *2025 International Symposium on Open Science Clouds (ISOSC 2025)* held in Nanjing University, Suzhou, China on **3rd September, 2025**.

Delivered an invited talk on “**Signs and Signals of Environmental Change and Threats to Sustainable Livelihoods in the High Himachal Himalaya, India**” in the School of Geography Science, Nanjing Normal University, Nanjing, China on **2nd September, 2025**.

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Delivered an invited online talk on “**GeoAI, Geoprivacy and Academic Freedom and Ethics in IGU**” in the *DBAR 2025 Conference*, Chengdu, China on **9th June, 2025**.

Presented a research paper on “**Monitoring Spatial Temporal Aspects of Environmental Indicators: A case of Himachal Himalaya, India**” in the ‘*IGU Thematic Conference 2025*, organized by The Egyptian Geographical Society in Cairo, Egypt on **13th April 2025**.

Delivered a lecture as Resource Person on “**GLOFs disasters risk management through participatory GIS**” in the Department of Geography, Dr. Bhim Rao Ambedkar College, University of Delhi, for organizing a one-day workshop on Disaster Management on 20th March 2025.

Delivered a talk as the Guest of Honor on “**Changing Environmental Indicators in the Higher Himachal Himalaya**” in the Valedictory Function of the International Conference 'Integrating Geospatial Technologies for Promoting Sustainable Livelihoods, Cultural and Environmental Awakening: Pathway to Vikshit Bharat 2047' held in the D.D.U Gorakhpur University, Gorakhpur, Uttar Pradesh on **8th March 2025**.

+2024 Presented my research work “**Climate Change Induced Glacial Lake Outburst Floods as an Emergent Threat to Mountain Livelihood: A case of Indian Himalaya**” in the ICSSR-JSPS Bilateral International Workshop on the title ‘*Climate Change and Sustainable Society: with Special Reference to North East India*’ held at Nara Women’s University, Nara, Japan on **29th December 2024**.

Contributed as a panelist on the topic ‘**Open GIS, Earth Observation (EO) and Glacial Lake Outburst Floods (GLOFs) in Himachal Himalaya, India**’ in the United Nations Geospatial Knowledge and Innovation Week 2024, Deqing, China, **21-24 October 2024**.

Contributed as Panelist on ‘**GeoAI and Precision Agriculture/Smart Agriculture**’ and ‘**Privacy and Ethics in GeoAI: ISC CODATA**’ in the panel discussion session titled ‘The United Nations Program on Global Geospatial Information Management (UN-GGIM) Geography and Artificial Intelligence in the IGU’ organized during *35th International Geographical Congress 2024*, Dublin, Ireland, between **24th-30th August, 2024**.

Delivered talk on the topic “**Best Practices and Case Studies of Resilience of the Hill Cities**” in the *National Conference on face-to-face training program on Enabling Cities for Disaster Resilience to Achieve Sustainable Development* organised by Urban Studies and Research Centre, Miranda House, University of Delhi and National Institute of Disaster Management held between 8th – 12th July 2024.

Delivered talk on “Application of GIS in Disaster Management” as a keynote Speaker in the national workshop on Role of Institutions in Disaster Risk Reduction: An insight to Research and Practice organised by Dyal Singh College and NIDM on 5th May 2024.

+2023 Presented a paper entitled “**Monitoring Snow Cover and Climate Change Impact in Himachal**” in the International Conference on Geography for Asian Development, organized by the Chinese Academy of Sciences, Beijing, China, from **14th to 16th December, 2023**.

Participated in “**National Seminar on Resources and Regional Planning: Issues and Challenges**”, organized by the Department of Geography, Delhi School of Economics, University of Delhi, on **4th and 5th December, 20023**.

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Delivered talk on “**Earth Observation and data sharing platforms: An Indian Experience**” at the *2nd ATES Open Science Conference* organized by ANSO & ATES, Lanzhou University, Lanzhou, China, on **25th August 2023**.

Delivered talk on “**Voices of concern arising from increasing climate change-induced Livelihood Vulnerability in the Himalayas**” on ICSSR-Sponsored Two Days National Seminar On ‘*Geography of Polyvocality: The (Un) heard voices in Sustainability*’ at the Department of Geography, Dyal Singh College, University of Delhi, **8th April, 2023**.

Presented paper titled “**Regional dynamics of Land Use Land Cover induced GLOFs: a case of Himachal Himalaya, India**” in ICSSR-JSPS Joint Research Program in the field of Social Sciences entitled “*Tradition and Succession of Regional Geography in India*” held at Kwansei Gakuin University, Kobe and Oita University, Oita, Japan during 11th 17th March 2023.

Delivered an invited lecture “**Glacial Lake outburst floods emerging threats to livelihoods in Himalayas**” to the M.A./M.Sc. and Ph.D. research scholars at the Department of Geography, University of Mumbai on **27th February 2023**.

+2022 Delivered a talk on “**Emerging GLOF Hazards in Himalayas: A Threat to Mountain Livelihood**” for the *Social and Environmental Justice and Disaster Management seminar*, organized by the Center for Environmental Studies and Disaster Management, Miranda House, on 28th November, 2022.

Delivered talk on “**Geographic Information System (GIS) and effective teaching and its use in Practical Geography**” for Performance Enhancement Workshops for all subjects for classes XI and XII teachers at DAV Centra for Academic Excellence (DAVCAE), Darbari Lal DAV Model School, Pitampura, **27th August, 2022**.

Presented a paper entitled “**Glacial Lake Outburst Floods: Case of Geepang gath and Samudratapu glacial lake, Lahaul Valley, Himachal Himalaya, India**” on International Extraordinary Congress of IGU at Paris, France on 20th May 2022.

Delivered a talk on the “**Role of Remote Sensing & GIS in Disaster Management and Case Study of Western Himalayas**” in Gita Vidya Mandir Girls College, Sonipat on **5th May 2022**.

Delivered a talk on “**Growing GLOFs in Himalaya: Threats to Mountains Sustainability**” for PMMMMT/HRC/MHRFDC, organized by Hansraj College, University of Delhi, on **5th April, 2022**.

+2016 Presented a paper entitled “**Glacial Lake Outburst Floods and Integrated River Basin Management: A Case of Lahaul and Spiti District, Himachal Pradesh**” in the *33rd International Geographical Congress (IGC)* session of Research on Water Scarcity and Water Allocation for Integrated River Basin Management held in Beijing, China between **21-25 August 2016**.

+2015 Delivered a invited talk on “**Contemporary Regional Development in India**” in *HINDAS 2015 4th Regular Seminar* at Hiroshima University on **October 10th, 2015** organized by The Center for Contemporary India Studies, Hiroshima University, Hiroshima, Japan.

+2014 Attended workshop and presented a research paper titled “**Glacial Lake Outburst Flood (GLOF): A Case Study of Parechu Lake Outburst, Himachal Himalaya, India**” in a workshop on “*Ecological Modeling*” organized by Center for Chinese Agricultural

CV - Dr. Pankaj Kumar

Policy, Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, Beijing, China during **10th June to 20th June, 2014**.

- +2013** Presented a paper entitled “**GIS education and research in India**” in *National Seminar on Geographic Information Science Education: International and National Status* organized by Nainital Academic Staff College and Center of Excellence NRDMS, Department of Geography, Kumaun University, SSJ Campus, Almora, Uttarakhand on **1st December, 2013**.

Presented a paper entitled “**Inventory and monitoring of Glacial lakes in Himachal Himalaya using Spatial Information Technology**” in the International Geographical Union (IGU) Conference on Geoinformatics for Biodiversity and Climate Change, organized by the Department of Geography, Maharshi Dayanand University, Rohtak, on **14th to 16th March, 2013**.

- +2012** Presented a paper entitled “**Monitoring Snow Cover of Himachal Himalaya Using Remote Sensing and GIS**” in the *National Association of Geographers India (NAGI) 34th Indian Geography Congress* held at Patna from **November 2-4, 2012**.

Training/Workshops

- Completed online training on “**Geodata Processing using Python**” organized by the Indian Institute of Remote Sensing (IIRS), Dehradun, India, from 20th to 24th February, 2023.
- Completed International Training Workshop on ‘**Scientific Big Data Sharing and Publication for Developing Countries**’ organized by Bureau of International Co-operation Chinese Academy of Sciences, State Key Laboratory of Resources and Environmental Information System, Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences (IGSNRR/CAS) and Committee on Data for Science and Technology (CODATA) - Task Group on Preservation of and Access to Scientific and Technical Data in/for/with Developing Countries (PASTD) between **October 16th - November 4th, 2017, Beijing, China**. Also delivered invited talk on the topic ‘Spatial Information Technology for Sustainable development Goals’.
- Participated in a one-day workshop on “**Rockfall Simulation Model and Debris Flow Calculations**” conducted by SLF Snow and Avalanche Research, Switzerland, in collaboration with DTRL, DRDO, New Delhi, India, on **4th February, 2015**.
- Attended a workshop on “**Ecological Modeling**” organized by the Center for Chinese Agricultural Policy, Institute of Geographic Sciences and Natural Research, Chinese Academy of Sciences, Beijing, China, from **10th June to 20th June, 2014**.
- Refresher course on “**Geographic Information Science and its Application**” organized by Nainital Academic Staff College, SSJ Campus Almora, **12th November to 2nd December, 2013**.
- Completed Four Days Training on **Remote Sensing-GIS with TNTmips Software for the Livelihood of Himachal Pradesh**, organized by the Department of Geography, Delhi School of Economics, University of Delhi, from **18-21 December 2013**.

Guest Editor: Special Issue

+2024 Sustainable and Regenerative Ecologies for the Management of Mountain Forestscapes, A special issue of *Sustainability* (ISSN 2071-1050) belongs to the section "[Environmental Sustainability and Applications](#)" guest edited by Prof. Dr. Fausto Sarmiento, Prof. Dr. Barbaros Gönençgil and Dr. Pankaj Kumar.

National Award & Recognition

+2025 'Research Publication Award Grant' from Institute of Eminence (IoE), University of Delhi (Ref. No./IoE/RPA/2025-26/05)

+2024 'National Geospatial Faculty Fellow Award 2024' from IIT Bombay, FOSSEE (GIS) under the aegis of the National Mission on Education through ICT (NMEICT), Ministry of Education, Government of India.

Publication Search Engines

Google Scholar: <https://scholar.google.com/citations?user=DH9zdXsAAAAJ&hl=en>

Scopus ID: <https://www.scopus.com/authid/detail.uri?authorId=57209001370>

Researchgate: <https://www.researchgate.net/profile/Pankaj-Kumar-74>

Personal Website: [Bharat Geo Lab](https://www.bharatgeolab.com/) <https://www.bharatgeolab.com/>

Personal Website QR Code

A handwritten signature in blue ink, reading 'Pankaj Kumar'.

Prof. Pankaj Kumar

New Delhi