

DR. ATUL SAINI



CONTACT DETAIL

Department of Geography, Hemvati Nandan Bahuguna Garhwal University (Central University), BGR Campus, Pauri - 26001, Uttarakhand, India

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Scopus Author ID: [57216493205](#)

Cumulative Impact Factor: 74.0

H-Index (Scopus): 9

Mean Impact Factor: 3.89

H-Index (Google Scholar): 9

i10-index: 8

Citations (Scopus): 215

Citations (Google Scholar): 277

Research Articles

[International Journals]: 19

Book Chapters: 3

Research Experience: 2.4 Years

Verified Peer Reviews: 36

Research Articles

[National Journals]: 7

Invited Lectures/Talks: 3

Total Research Articles: 25

Web of Science ResearcherID: [ABE-7114-2020](#)

Research Articles

Under Review: 4

Paper Presented in Conferences: 13

Total Book Chapters: 3

EDUCATIONAL QUALIFICATION

❖ Ph.D. (Geography)

Department of Geography, University of Delhi, India

Mar 2016 to Nov 2021

Title: “Shifting of Monsoon Onset and Its Impact on Environment in India”

❖ Post Graduate Diploma in Rural Development

Indira Gandhi National Open University (IGNOU)

February 2016

❖ UGC-NET (JRF)

September 2015

❖ B.Ed.

Guru Gobind Singh Indraprastha University

Jul 2013 to Jul 2014

❖ M.A. (Geography)

Delhi School of Economics (University of Delhi)

Jul 2010 to Dec 2012

❖ B.A. (H) Geography

Swami Shraddhanand College (University of Delhi)

Jun 2007 to Jul 2010

RESEARCH INTEREST

Extreme Events, Climate Modelling, Climate Variability, Climate Change, Monsoon Dynamics, Monsoon Onset, South Asian Monsoon, Climate Teleconnection, Climate and Agriculture, Seasonal Shifting

COMMAND ON SOFTWARE/PROGRAMMING LANGUAGES

NCL (NCAR Command Language), R- Programming, Python, GrADS (Grid Analysis and Display System), ArcGIS, SPSS, LateX, MS-Office and Adobe Photoshop

ACADEMIC/TEACHING EXPERIENCE

- ❖ Assistant Professor at Department of Geography, Hemvati Nandan Bahuguna Garhwal

University (Central University), Uttarakhand, India (March 2024- Present)

- ❖ **Assistant Professor** at Department of Geography, Kalindi College, University of Delhi, Delhi 10008, India (October 2024 - March 2024)

RESEARCH EXPERIENCE

- ❖ **Post-Doctoral Fellow** at Delhi School of Climate Change & Sustainability, Institution of Eminence, University of Delhi, India (January 2022- December 2023)
- ❖ **Research Associate** at the DST Center of Excellence in Climate Modelling, Center for Atmospheric Sciences, IIT Delhi, India (April 2021- December 2021).

PUBLICATION

RESEARCH ARTICLES [International Journals - SCOPUS Indexed]:

Under Review:

1. Sahu, N., Mallick, S.K., Das, P., **Saini, A.**, Sayama, T., Varun, A., Pani, B., Kumar, A., Kesharwani, R. [Manuscript No. 2023EF003969]. Spring Disappearance in the Indian Himalayas: A Geo-physical Appraisal *Earth's Future*. (IF: 8.852)
2. Thakur, P. K., **Saini, A.**, Pandey, R. [Manuscript No. UCLIM-D- 23-00984]. Spatiotemporal Assessment of Land Surface Temperature Variation under Land Use Land Cover Changes in a Crowded and Polluted City, India *Urban Climate*. (IF:6.663)
3. Sahu, N., Mallick, S.K., Das, P., Maity, B., Varun, A., Kumar, A., Kesharwani, R., **Saini, A.**, Rura, S. [Manuscript No. UCLIM-D-23-00295]. Impact of Urban Growth in Delhi and Its Peri-urban Environment on Urban Heat Exposure *Urban Climate*. (IF:6.663)
4. Sahu, N., Das, P., Ratna, S.B., **Saini, A.**, Mallick, S.K., Kumar, A., Mohapatra, M. [Manuscript No. JOC-23-0078] Indian Summer Monsoon Variability Studies in India: A Review *International Journal of Climatology*. (IF:3.609)

Published:

1. Thakur, P.K.; Samant, S.S.; Verma, R.K.; **Saini, A.**; Chauhab, M. (2024) Monitoring forest cover changes and its impact on land surface temperature using geospatial technique in Talra Wildlife Sanctuary, Shimla, India. *Environment Development and Sustainability*. <https://doi.org/10.1007/s10668-023-04347-x> (IF:4.9, Scopus/WoS), Journal Rank: Q1 (Geography, Planning and Development).
2. **Saini, A.**; Sahu, N.; Nayak, S. (2023) Determination of Grid-Wise Monsoon Onset and Its Spatial Analysis for India (1901-2019). *Atmosphere (Basel)*. 14, <https://doi.org/10.3390/atmos14091424>. (IF:2.9, Scopus/WoS), Journal Rank: Q2 (Atmospheric Science, Environmental Science (miscellaneous)).
3. Pandit, P., **Saini, A.**, Sahu, N., Mehra, R. (2023) Geochemical Evaluation and Environmental Risk Assessment of Heavy Metals: A case study from Ireland using Tellus stream sediment data (2011-2017) *Groundwater for Sustainable Development*. 23, 100974, doi:10.1016/j.gsd.2023.100974. ((IF:5.9, Scopus/WoS), Journal Rank: Q1 (Environmental Chemistry).
4. Sahu, N., Das, P., **Saini, A.**, Varun, A., Mallick, S.K., Nayan, R., Aggarwal, S.P., Pani, Kesharwani, R., Kumar, A. (2023) Analysis of Tea Plantation Suitability Mapping in Darjeeling Himalaya Using Geostatistical and Machine Learning Techniques *Sustainability* (IF:3.9, Scopus/ WoS), Journal Rank: Q1(Geography, Planning and Development), Q2 (Energy Engineering and Power Technology, Environmental Science, Management, Monitoring, Policy and Law, Renewable Energy, Sustainability and the Environment).
5. Nirbhav, Malik, A., Maheshwar, Prasad M., **Saini A.**, Thanh Long N. (2023). A comparative study of different machine learning models for landslide susceptibility prediction: a case study of Kullu-to-

- Rohtang pass transport corridor, India. *Environmental Earth Science*, 82(7). <https://doi.org/10.1007/s12665-023-10846-x> (IF:2.8, Scopus/WoS), Journal Rank: Q2 (Earth Surface Processes).
6. Saini, A., Sahu, N., Mishra, S. K., Jain, S., Behera, S., Dash, S. K. (2022). The Spatio-Temporal Onset Characteristics of Indian Summer Monsoon Rainfall and Their Relationship with Climate Indices. *Atmosphere*, 13(10), p. 1581. doi:10.3390/atmos13101581. (IF:2.9, Scopus/WoS), Journal Rank: Q2 (Atmospheric Science, Environmental Science (miscellaneous)).
 7. Tyagi, N., Jayal, T., Singh, M., Mandwal, V., Saini, A., Nirbhav, Sahu, N., Nayak, S. (2022) Evaluation of Observed and Future Climate Change Projection for Uttarakhand, India Using CORDEX-SA. *Atmosphere*, 11(2), 1-19, doi: 10.3390/atmos13060947. (IF:2.9, Scopus/WoS), Journal Rank: Q2 (Atmospheric Science, Environmental Science (miscellaneous)).
 8. Pandit, P., Saini, A., Chidambaram, S., Kumar, V., Panda, B., Ramanathan, A.L., Sahu, N., Singh, A.K., Mehra, R. (2022). Tracing Geochemical Sources and Health Risk Assessment of Uranium in Groundwater of Arid Zone of India. *Scientific Reports*, 12, 2286, doi:10.1038/s41598-022-05770-2. (IF:4.6, Scopus/WoS), Journal Rank: Q1 (Multidisciplinary)
 9. Parihar, R.S., Bal, P.K., Saini, A., Mishra, S.K., Thapliyal, A. (2022). Potential Future Malaria Transmission in Odisha Due to Climate Change. *Scientific Reports*, 12, 9048, doi:10.1038/s41598-022-13166-5. (IF:4.6, Scopus/WoS), Journal Rank: Q1 (Multidisciplinary)
 10. Parihar, R.S., Bal, P.K., Thapliyal, A., Saini, A. (2022). Climate Change Projections and Its Impacts on Potential Malaria Transmission Dynamics in Uttarakhand. *Journal of Communicable Diseases*, 54, 47–53, doi:10.24321/0019.5138.202249. [Scopus], Journal Rank: Q4 (Infectious Diseases).
 11. Saini, A., Sahu, N., Duan, W., Kumar, M., Avtar, R., Kumar, P., Pandey, R., Behera, S. (2022). Unraveling Intricacies of Monsoon Attributes in Homogenous Monsoon Regions of India. *Frontiers in Earth Science*, 10(March), 94. <https://doi.org/10.3389/feart.2022.794634>. (IF:2.9, Scopus/ WoS), Journal Rank: Q1 (Multidisciplinary).
 12. Nayak, S., Maity, S., Sahu, N., Saini, A., Singh, K. S., Nayak, H. P., Dutta, S. (2022). Application of “Observation Minus Reanalysis” Method towards LULC Change Impact over Southern India. *ISPRS International Journal of Geo-Information*, 11(2), 94. <https://doi.org/10.3390/ijgi11020094>. (IF:3.4, Scopus/WoS), Journal Rank: Q1 (Earth and Planetary Sciences (miscellaneous) Geography, Planning and Development), Q2 (Computers in Earth Sciences).
 13. Saini, A., & Sahu, N. (2021). Decoding Trend of Indian Summer Monsoon Rainfall Using Multimethod Approach. *Stochastic Environmental Research and Risk Assessment*. <https://doi.org/10.1007/s00477-021-02030-z>. (IF:4.2, Scopus/WoS), Rank 18/50 (Environmental Engineering), Journal Rank: Q1 (Environmental Science (miscellaneous), Safety, Risk, Reliability and Quality, Water Science and Technology), Q2 (Environmental Chemistry, Environmental Engineering).
 14. Saini, A., Sahu, N., Sayama, T., Nayak, S., Duan, W., Avtar, R., Behera, S.K. (2020). Advanced rainfall trend analysis of 117 years over West Coast Plain and Hill Agro-Climatic region of India. *Atmosphere*, 11(11). <https://doi.org/10.3390/atmos11111225>. (IF:2.9, Scopus/WoS), Journal Rank: Q2 (Atmospheric Science, Environmental Science (miscellaneous)).
 15. Sahu, N., Sayama, T., Saini, A., Panda, Takara, K. (2020). Understanding the Hydropower and Potential Climate Change Impact on the Himalayan River Regimes—A Study of Local Perceptions and Responses from Himachal Pradesh, India. *Water*, 12(10). <https://doi.org/10.3390/w12102739>. (IF:3.4, Scopus/ WoS), Journal Rank: Q1 (Geography, Planning and Development), Q2 (Water Resources).
 16. Sahu, N., Saini, A., Behera, S.K., Sayama, T., Sahu, L., Avtar, R., Yamada, M., Singh, R.B., Takara, K. (2020). Impact of Indo-Pacific Climate Variability on Rice Productivity in Bihar, India. *Sustainability*, 12(17). <https://doi.org/10.3390/su12177023>. (IF:3.9, Scopus/ WoS), Journal Rank: Q1(Geography,

- Planning and Development), **Q2** (Energy Engineering and Power Technology, Environmental Science, Management, Monitoring, Policy and Law, Renewable Energy, Sustainability and the Environment).
17. Sahu, N., Panda, A., Nayak, S., **Saini, A.**, Mishra, M., Sahu, L., Avtar, R., Behera, S.K. (2020). Impact of Indo-Pacific Climate Variability on High Streamflow Events in Mahanadi River Basin, India. *Water*, 12(7). <https://doi.org/10.3390/w12071952>. (IF:3.4, SC:4.8, Scopus/ WoS), **Journal Rank: Q1** (*Geography, Planning and Development*), **Q2** (*Water Resources*).
 18. Sahu, N., **Saini, A.**, Behera, S.K., Sayama, T., Sahu, L., Nguyen, V.T.V. (2020). Why Apple Orchards are Shifting to the Higher Altitudes of the Himalayas? *PLOS ONE*, 15(7): e0235041. <https://doi.org/10.1371/journal.pone.0235041>. (IF:3.7, Scopus), **Journal Rank: Q1** Multidisciplinary.
 19. Pandit, P., Mangala, P., **Saini, A.**, Bangotra, P., Kumar, V., Mehra, R., Ghosh, D. (2020). Radiological and Pollution Risk Assessments of Terrestrial Radionuclides and Heavy Metals in a Mineralized Zone of the Siwalik Region (India). *Chemosphere*, 254, 126857. doi:10.1016/j.chemosphere.2020.126857. (IF: 8.8, Scopus/WoS), **Journal Rank: Q1** (Chemistry (miscellaneous), Environmental Chemistry, Environmental Engineering, Health, Toxicology and Mutagenesis, Medicine (miscellaneous), Pollution, Public Health, Environment and Occupational Health), **Rank 19/98, (Environmental Chemistry)**.

RESEARCH ARTICLES [National Journals]:

1. **Saini, A.**, & Sahu, N. (2020). Shifting of Monsoon Onset and Understanding its Expected Impact on Environment in India. *Indian Geographical Journal*, 95(2), 292-302. [UGC-CARE List]
2. Jaiswal, S., Anand S., **Saini, A.** (2019). Analyzing the Soil Health of Yamuna Flood Plains, Delhi. *The Horizon*, 10(2), 1-10.
3. **Saini, A.**, Anand S., Singh A. (2018). Floriculture and Livelihood Security: A Case Study of Rural-Urban Fringe in North West Delhi, India. *Journal of Water and Land use Management*, 16(1).
4. Mishra, M. M., Prasad, S., **Saini, A.** (2018). Social Constraints and Vulnerabilities to Agricultural Practices in Ghazipur District: Case Study of Saidpur Block. *Social Work Chronicle*, 7(1), 1-14.
5. Nirbhav, Kumar, N., **Saini, A.** (2017). Dynamics of Climate Change and Food Security in India. *New Man International Journal of Multidisciplinary Studies*, 4(12), 42-49.
6. **Saini, A.** & Anand, S. (2013). Trend Analysis of Decadal Change in Minimum Temperature in 20th Century: Case of Delhi, India. *Indian Geographical Journal*, 88(2), 116-124. [UGC-CARE List]
7. Saroj, M.; **Saini, A.** (2012). Utilisation of Land Resources in City Systems : A Case of Mumbai and Delhi. *Indian Geographical Journal*, 87, 138–144. [UGC-CARE List]

BOOK CHAPTER:

1. **Saini, A.** (2019). Evolution of Temperature and Rainfall over India and South Korea: Analysis of Recent Period. In *Strengthening Special Strategic Partnership INDIA & SOUTH KOREA Prospects and Challenges* (1st ed., pp. 111-122). New Delhi, Delhi: Manak Publications Pvt.
2. **Saini, A.**, & Sahu, N. (2018). Climate Variability, Land-Use and Land-Cover Change (LULC) in Temperate River Basin: A Case from Han River Basin, South Korea. In *Act East: Transitions in India's Engagement with South Korea* (1st ed., pp. 84-95). New Delhi, Delhi: Manak Publications Pvt.
3. **Saini, A.**, & Sahu, N. (2017). Urbanization Induced Air Pollution and Its Impact: Cases of Delhi and Seoul. In *India Korea Relations Forging a Multidimensional Partnership in the 21st Century* (1st ed., pp. 123-143). New Delhi, Delhi: Manak Publications Pvt.

PROJECTS COMPLETED/ONGOING

- Completed a project under “Faculty Research Programme Grant – IoE, DU” of Rs. 3,00,000/- on title “Impact Assessment of Climate Change and Sea Level Rise in Submergence of Munroe Island” during the year 2022-2023. [Co-PI]

- Completed a project under “Faculty Research Programme Grant – IoE, DU” of Rs. 3,00,000/- on title “Diyara Identification, Vulnerability Assessment, Climate Change Projections, and Climate-Resilient Solutions for the Bihar Gangetic Region” during the year 2023-2024. [Co-PI]

CONFERENCES/ SEMINAR/ WORKSHOPS ORGANISED

- Seminar Lecture by Prof. G.V.R. Prasad on the title “Climate Change and Deep Time Earth's History” on 23rd June 2023 at Department of Geology, University of Delhi.

PAPER PRESENTED

1. “*Shifting of Monsoon Onset in India and Its Expected Impact on Environment in India*” in International Conference (Online) organized by Department of Geography, Jamia Millia University, New Delhi-110025 on Building Resilient and Sustainable Societies: Emerging Social and Economic Challenges in the year 2020.
2. “*Climate Change Scenarios for Precipitation Extremes in South Korea*” in an International Seminar organized by Researchers’ Association for the Study of Korea (RASK) on Indo-Korea Relations under Act East Policy: Issues and Challenges in the year 2019.
3. “*Evolution of Temperature and Rainfall over India and South Korea: Analysis of Recent Period*” in International Seminar organized by Researchers’ Association for the Study of Korea (RASK) on Strengthening Special Strategic Partnership between India and South Korea: Prospects and Challenges in the year 2018.
4. “*Climate Dynamics Based Causes Enhancing Vulnerability of Apple in Himachal Himalaya*” in XIth International Geographical Union Commission Seminar organized by the Department of Geography, B. Borooah College, Guwahati, India on Environment and Sustainable Livelihood in year 2018.
5. “*Climate Variability Affecting Rice Productivity in Bihar*” in XIth International Geographical Union Commission Seminar organized by the Department of Geography, B. Borooah College, Guwahati, India on Environment and Sustainable Livelihood in year 2018.
6. “*Climate Variability Impacting Land Use and Land Cover Change in Semi Arid Region: The Case of Hadoti Region, Rajasthan*” in XIth International Geographical Union Commission Seminar organized by Department of Geography, B. Borooah College, Guwahati, India on Environment and Sustainable Livelihood in the year 2018.
7. “*The Way Out for Apple: Climatic Perception Versus Instrument Observation*” in UGC-SAP-DRS III National Seminar organized by Department of Geography, University of Delhi on Environment and Resource & Urban and Regional Planning in year 2017.
8. “*Climate Variability and Land-Use and Land-Cover Change in Temperate River Basin- A Case of Han River Basin, South Korea*” in an International Seminar organized by Researchers’ Association for the Study of Korea (RASK) on Act East: Transitions in India’s Engagement with South Korea in the year 2017.
9. “*Persistent Increase of Temperature and its Impact of Apple Cultivation: Study of Himachal Himalaya*” in Asia Oceania Geosciences Society’s 14th annual meeting in Singapore **in the year 2017**.
10. “*Impact of ENSO on Rice Yield in Bihar, India*” in Asia Oceania Geosciences Society’s 14th annual meeting in Singapore **in the year 2017**.
11. “*Ascension of Acclimating Agricultural Condition in Himachal Himalaya*” in International Geographical Union’s International Conference organized by Osmania University, Hyderabad on Urbanization, Health & Well Being and Sustainable Development Goals in year 2017.
12. “*Impact of Climate Change on Phenology of Temperate Wet and Dry Region: A Case of Himachal Himalaya*” in International Conference organized by Kalindi College, University of Delhi on Spatial Decision Support Systems for United Nations Sustainable Development Goals in year 2017.
13. “*Changing Pattern of Temperature & Rainfall and Shifting Apple Orchards to Higher Altitudes in*

Himachal Pradesh” in National Conference organized by Swami Sharaddhanand College, University of Delhi on Climate Change Adaptation & Sustainable Development in year 2016.

AWARDS / TRAVEL GRANTS

- ❖ UGC-NET (June 2015) Senior Research Fellowship in year 2018.
- ❖ Travel and other financial support by Research Council, University of Delhi in the year 2017 to attend AOGS 14th Meeting in Singapore.
- ❖ UGC-NET (June 2015) Junior Research Fellowship in year 2015.
- ❖ Merit Certificate from Academy of Geography Teachers, Delhi (Regd.) for securing 69% marks in the Geography Talent Search Examination, 2006-2007.

INVITED LECTURES/RESOURCE PERSON/TALKS

- ❖ Invited Talk: **Thermal Remote Sensing, and Estimation of Land Surface Temperature Through Satellite Imagery** in the DSKC workshop organized on July 13, 2022, by the Department of Geography, Miranda House College, University of Delhi, India.
- ❖ Invited Talk: **Climate Change in Cities and Modelling** in the workshop on Geospatial Analytics and Urban Planning on May 18, 2022, organized by Centre for Geographical Studies, Aryabhata Knowledge University, Patna, Bihar, India.
- ❖ Invited Talk: **Climate and Sensitivity of Agriculture in India** on January 29, 2021, organized by HARITHKRAM, Shaheed Bhagat Singh College, University of Delhi, India.

TRAINING

- ❖ Certificate Course (4 Weeks Online) on **‘Regional Climate Change Projection: Statistical Downscaling Through R’** organized by The Centre for Built Environment, South Asian Institute for Advanced Research & Development (SAIARD) in association with India Meteorological Department (IMD), Govt. of India, India from December 5-27, 2020.
- ❖ Certificate Course (30 Hours Online) on **‘Research & Data Analysis’** organized by Accounting & Finance Lab, Department of Commerce, Ramanujan College, University of Delhi, Delhi, India from June 15-21, 2020.
- ❖ Training Workshop on **‘Google Earth Engine’** organized by International Geographical Union at the Department of Geography, Delhi School of Economics, University of Delhi, Delhi, India from 14th-15th February 2019.
- ❖ The CODATA-RDA **‘Research Data Science Applied Workshop on Climate Data Sciences’** organized by the International Centre for Theoretical Physics (ICTP), Trieste, Italy from 20th-24th August 2018.
- ❖ The CODATA-RDA **‘Research Data Science Summer School’** organized by the International Centre for Theoretical Physics (ICTP), Trieste, Italy from 06th-17th August 2018.
- ❖ International Training Workshop on **‘Big Data for Science and Sustainability’** organized by Osmania University, Hyderabad, India from 17th-19th March 2017
- ❖ **Certificate Course in SPSS (University of Delhi, India)** **November 2016**
- ❖ **Certificate Course in C++ Programming (India)** **September 2016**
- ❖ **Diploma in Computer for Business Applications** **April 2007 — April 2008**
Delhi Institute for Computer Science (India)

ACHIEVEMENT

- ❖ **First Position in Inter College Quiz Competition** Event Organized by Awadh Centre of Education, Institute of Vocational Studies (Year 2014)
- ❖ **First Position in Debate** on “Metropolitan Cities of India and Disaster Management” organized by AIFPDM and Supported by The American Center, New Delhi. (Year 2010)
- ❖ **First Position in Inter-College Debate** on “Is Climate Change a Reality?” Organized by Environment Society of Swami Shraddhanand College (Year 2010)
- ❖ **Merit Certificate** for First Position in Group Discussion (2007-2008)
- ❖ **Merit Certificate** in Geography Talent Search Examination (2006-2007) from Academy of Geography Teachers, Delhi (Regd.)
- ❖ **UGC–NET (Qualified for JRF and Assistant Professor) September 2015**

I hereby declare that all the information furnished above is true to the best of my knowledge and belief.

Date: 12/04/2024

Place: New Delhi



(Atul Saini)