Curriculum Vitae

Dr. MD MASROOR

PERSONAL INFORMATION

Name: Md Masroor

Affiliation: Assistant Professor, Centre for Distance and Online Education (CDOE)

Jamia Millia Islamia, A Central University, New Delhi 110032 (India)

Expertise: Climate Change; Natural Hazards and Disaster Management; Drought Assessment and Monitoring; Integration and Application of Machine Learning Models in Geographical Analysis Using Remote Sensing and GIS; Natural Resource Management and Spatial Analysis.

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Address: Room No.305, Centre for Distance and Online Education, Jamia Millia Islamia, New Delhi 110032 (India)

Nationality: Indian

Language: English, Hindi, Urdu

Technical skills: Can work on **ArcGIS, QGIS, Erdas, Google Earth Engine, Python, R, Microsoft office, Excel, and SPSS,**

Qualifications

Class/Degree	Board	Year of Passing
Secondary	UP Board, Government of India	2010
Senior Secondary	CBSE Government of India	2012
B.A (H) Geography	University of Delhi, New Delhi, India	2015
PG Diploma in Urban Planning	Indira Gandhi National Open University, New Delhi, India	2016
M.A/M.Sc. Geography	Jamia Millia Islamia University, New Delhi, India	2018
Ph.D.	Jamia Millia Islamia University, New Delhi, India	2023

Paper Published

1. **Masroor, M.,** & Sajjad, H. (2024). Understanding Climate Change Dynamics in the Godavari Middle Sub-basin Using Parametric and Non-parametric Models. Geosystems and Geoenvironment, 100269. https://doi.org/10.1016/j.geogeo.2024.100269
2. **Masroor, M.,** Rehman, S., Avtar, R., Sahana, M., Ahmed, R., & Sajjad, H. (2020). Exploring climate variability and its im pact on drought occurrence: Evidence from

Godavari Middle sub-basin, India. Weather and Climate Extremes, 30, 100277. https://doi.org/10.1016/j.wace.2020.100277

3. **Masroor, M.,** Sajjad, H., Rehman, S., Singh, R., Rahaman, M. H., Sahana, M., ... & Avtar, R. (2022). Analysing the relationship between drought and soil erosion using vegetation health index and RUSLE models in Godavari middle sub-basin, India. Geoscience Frontiers, 13(2), 101312.https://doi.org/10.1016/j.gsf.2021.101312
4. **Masroor, M.,** Rehman, S., Sajjad, H., Rahaman, M. H., Sahana, M., Ahmed, R., & Singh, R. (2021). Assessing the impact of drought conditions on groundwater potential in Godavari Middle Sub-Basin, India using analytical hierarchy process and random forest machine learning algorithm. Groundwater for Sustainable Development, 13, 100554. https://doi.org/10.1016/j.gsd.2021.100554
5. **Masroor, M.,** Rahaman, M. H., & Sajjad, H. (2023). Assessing farmers' perception based composite drought vulnerability in Godavari Middle Sub-basin, India. International Journal of Disaster Risk Reduction, 92, 103747.
6. **Masroor, M.,** Razavi-Termeh, S. V., Rahaman, M. H., Choudhari, P., Kulimushi, L. C., & Sajjad, H. (2023). Adaptive neuro fuzzy inference system (ANFIS) machine learning algorithm for assessing environmental and socio-economic vulnerability to drought: A study in Godavari middle sub-basin, India. Stochastic Environmental Research and Risk Assessment, 37(1), 233-259.
7. **Masroor, M.,** Sajjad, H., Kumar, P., Saha, T. K., Rahaman, M. H., Choudhari, P., ... & Saito, O. (2023). Novel Ensemble Machine Learning Modeling Approach for Groundwater Potential Mapping in Parbhani District of Maharashtra, India. Water, 15(3), 419.
8. **Masroor, M.,** Avtar, R., Sajjad, H., Choudhari, P., Kulimushi, L. C., Khedher, K. M., ... & Sahu, N. (2022). Assessing the Influence of Land Use/Land Cover Alteration on Climate Variability: An Analysis in the Aurangabad District of Maharashtra State, India. Sustainability, 14(2), 642.
9. Sahana, M., Areendran, G., Sivadas, A., **Masroor, M.,** Abhijita, C. S., Raj, K., ... & Imdad, K. (2025). A mixed-methods approach for identifying high conservation value areas in the high-altitude landscapes of the Indian Himalayan region. *Geo: Geography and Environment*, *12*(1), e70002.
10. Rahaman, M. H., Saha, T. K., **Masroor, M.,** Roshani, & Sajjad, H. (2023). Trend analysis and forecasting of meteorological variables in the lower Thoubal river watershed, India using non-parametrical approach and machine learning models. Modeling Earth Systems and Environment, 1-27.
11. Rehman, S., Sajjad, H., **Masroor, M.,** Rahaman, M. H., Ahmed, R., & Sahana, M. (2022). Assessment of evidence-based climate variability in Bhagirathi sub-basin of India: a geostatistical analysis. Acta Geophysica, 1-19. https://doi.org/10.1007/s11600-022-00726-6

12. Rahaman, M., **Masroor, M.,** Rehman, S. et al. State of Art of Review on Climate Variability and Water Resources: Bridging Knowledge Gaps and the Way Forward. Water Resour 49, 699–710 (2022). https://doi.org/10.1134/S009780782204016
13. Rahaman, M. H., **Masroor, M.,** & Sajjad, H. (2023). Integrating remote sensing derived indices and machine learning algorithms for precise extraction of small surface water bodies in the lower Thoubal river watershed, India. Journal of Cleaner Production, 422, 138563.http://dx.doi.org/10.1016/j.jclepro.2023.138563
14. Rehman, S., Rahaman, M. H., **Masroor, M.,** Roshani, Sajjad, H., Ahmed, R., ... & Sahana, M. (2023). Analyzing vulnerability of communities to flood using composite vulnerability index: evidence from Bhagirathi Sub-basin, India. Natural Hazards, 119(3), 1341-1377.http://dx.doi.org/10.1007/s11069-023-06170-z
15. Kulimushi, L. C., Bigabwa, J. B., Choudhari, P., **Masroor, M.,** & Sajjad, H. (2021). Novel combination of analytical hierarchy process and weighted sum analysis for watersheds prioritization. A study of Ulindi catchment, Congo River Basin. Geocarto International, 1-37. https://doi.org/10.1080/10106049.2021.2002426
16. Sahana, M., Patel, P. P., Rehman, S., Rahaman, H., **Masroor, M.,** Imdad, K., & Sajjad, H. (2023). Assessing the effectiveness of existing early warning systems and emergency preparedness towards reducing cyclone-induced losses in the Sundarban Biosphere Region, India. International Journal of Disaster Risk Reduction, 103645.
17. Pham, Binh Thai, Abolfazl Jaafari, Trung Nguyen-Thoi, Tran Van Phong, Huu Duy Nguyen, Neelima Satyam, **Md Masroor** et al. "Ensemble machine learning models based on Reduced Error Pruning Tree for prediction of rainfall-induced landslides." International Journal of Digital Earth (2020): 1-22. https://doi.org/10.1080/17538947.2020.1860145
18. Ali, R., Sajjad, H., Saha, T. K., Rahaman, M. H., **Masroor, M.**, Roshani, & Sharma, A. (2025). Assessment of climate change in Upper Jhelum Sub-catchment, India, using nonparametric methods and random forest model. *Acta Geophysica*, *73*(3), 2987-3006.
19. Sharma, A., Sajjad, H., Saha, T. K., **Masroor, M.,** Sharma, Y., & Kumari, G. (2024). Analyzing trend and forecasting of temperature and rainfall in Shimla district of Himachal Pradesh, India using non-parametric and bagging REPTree machine learning approaches. *Journal of Atmospheric and Solar-Terrestrial Physics*, *265*, 106352.
20. Roshani., Sajjad, H., Rahaman, M. H., **Masroor, M.,** Sharma, Y., Sharma, A., & Saha, T. K. (2024). Vulnerability assessment of forest ecosystem based on exposure, sensitivity and adaptive capacity in the Valmiki Tiger Reserve, India: A geospatial analysis. *Ecological Informatics*, *80*, 102494.
21. Rahaman, M. H., Sajjad, H., Hussain, S., **Masroor, M.,** & Sharma, A. (2024). Surface water quality prediction in the lower Thoubal river watershed, India: A hyper-tuned machine learning approach and DNN-based sensitivity analysis. *Journal of Environmental Chemical Engineering*, *12*(3), 112915.
22. Roshani, Rahaman, M. H., **Masroor, M.,** Sajjad, H., & Saha, T. K. (2024). Assessment of habitat suitability and potential corridors for Bengal tiger (Panthera tigris tigris) in Valmiki

Tiger Reserve, India, using MaxEnt model and Least-cost modeling approach. *Environmental Modeling & Assessment*, *29*(2), 405-422.

23. Ali, R., Sajjad, H., **Masroor, M.,** Saha, T. K., Roshani, & Rahaman, M. H. (2024). Morphometric parameters based prioritization of watersheds for soil erosion risk in Upper Jhelum Sub-catchment, India. *Environmental Monitoring and Assessment*, *196*(1), 82.
24. Ali, R., Sajjad, H., Saha, T. K., Roshani, **Masroor, M.,** & Rahaman, M. H. (2024). Effectiveness of machine learning ensemble models in assessing groundwater potential in Lidder watershed, India. *Acta Geophysica*, *72*(4), 2843-2856.
25. Bhuyan, N., Sajjad, H., Saha, T. K., Sharma, Y., **Masroor, M.,** Rahaman, M. H., & Ahmed, R. (2024). Assessing landscape ecological vulnerability to riverbank erosion in the Middle Brahmaputra floodplains of Assam, India using machine learning algorithms. *Catena*, *234*, 107581.
26. Roshani, Sajjad, H., Saha, T. K., Rahaman, M. H., **Masroor, M.,** Sharma, Y., & Pal, S. (2023). Analyzing trend and forecast of rainfall and temperature in Valmiki Tiger Reserve, India, using non-parametric test and random forest machine learning algorithm. *Acta Geophysica*, *71*(1), 531-552.
27. Roshani, Sajjad, H., Rahaman, M. H., Rehman, S., **Masroor, M.,** & Ahmed, R. (2023). Assessing forest health using remote sensing-based indicators and fuzzy analytic hierarchy process in Valmiki Tiger Reserve, India. *International Journal of Environmental Science and Technology*, *20*(8), 8579-8598.
28. Roshani, Rahaman, H., **Masroor**, Rehman, S., & Sajjad, H. (2022). Indicator-based inherent forest vulnerability using multicriteria decision-making analysis in the Darjeeling District of West Bengal. In *Towards Sustainable Natural Resources: Monitoring and Managing Ecosystem Biodiversity* (pp. 51-67). Cham: Springer International Publishing.
29. Kumari, G., Sajjad, H., Rahaman, M. H., **Masroor, M.**, Roshani, Ahmed, R., & Sahana, M. (2023). Climate variability induced livelihood vulnerability: A systematic review and future prospects. *Area*, *55*(1), 116-124.
30. Kulimushi, L. C., Bashagaluke, J. B., Prasad, P., Heri-Kazi, A. B., Kushwaha, N. L., **Masroor, M.** D., ... & Mohammed, S. (2023). Soil erosion susceptibility mapping using ensemble machine learning models: A case study of upper Congo river sub-basin. *Catena*, *222*, 106858.
31. Roshani, Sajjad, H., Kumar, P., **Masroor, M.,** Rahaman, M. H., Rehman, S., ... & Sahana, M. (2022). Forest vulnerability to climate change: A review for future research framework. *Forests*, *13*(6), 917.
32. Rahaman, M. H., Sajjad, H., Roshani, **Masroor, M.,** Bhuyan, N., & Rehman, S. (2022). Delineating groundwater potential zones using geospatial techniques and fuzzy analytical hierarchy process (FAHP) ensemble in the data-scarce region: evidence from the lower Thoubal river watershed of Manipur, India. *Arabian Journal of Geosciences*, *15*(8), 677.

33. Mandal, V. P., Rehman, S., Ahmed, R., **Masroor,** M. D., Kumar, P., & Sajjad, H. (2020). Land suitability assessment for optimal cropping sequences in Katihar district of Bihar, India using GIS and AHP. *Spatial Information Research*, *28*, 589-599.
34. Mandal, V. P., Ahmad, R., Rehman, S., **Masroor, M.,** & Sajjad, H. (2019). Exploring optimal cereal crop sequence using cultivated land utilization index and yield in Katihar district, India: a sub division level analysis. *Asian Journal of Agriculture and Rural Development*, *9*(1), 62-81.

Conference Papers

- **Md Masroor**, "**Monitoring of Spatio-temporal Pattern of Drought Conditions in Semi-arid Region of Deccan Plateau in India**" at 6th Oxford Inter-disciplinary Desert Conference, organized by School of Geography and the Environment, University of Oxford, United Kingdom from 16th-17th March 2023
- **Md Masroor**, "**Assessment of Climate Variability and Its Impact on Drought Conditions in Godavari Middle Sub-basin, India**" at World Congress on Disaster Management (WCDM) 2021 organized by Indian Institute of Technology (IIT) Delhi, India from 24th-27th November 2021.
- **Md Masroor**, "**Assessing the impact of drought conditions on ground water potential in Godavari middle sub basin**" at XVth DGSI International Geography Online Conference on the theme Sustainable Livelihood organized by Department of Geography, University of Allahabad, Prayagraj, India from 26th -28th November 2020.
- **Md Masroor**, **'Assessing the Impact of Drought Conditions on Soil Erosion in Godavari Middle Sub-Basin, India Using Vegetation Health Index and RUSLE model'**, in the International Conference on Building Resilient and Sustainable Societies: Emerging Social and Economic Challenges, organized by Department of Geography, Jamia Millia Islamia, New Delhi, India during November 25th-26th, 2020
- **Md Masroor**, Mehebub Sahana and Haroon Sajjad**, "Assessing the impact of weather variability on Drought in Godavari Middle Sub-basin using Geospatial techniques"** at 30th Conference of Indian Institutes of Geomorphologists (IGI) organized by Department of Geography, Jamia Millia Islamia, New Delhi, India 3rd-5th October 2018.
- **Md Masroor, "Assessment of agriculture biomass in Haryana"** at National conference on Environment challenges for 'New India' in 2-3rd June 2018 at Dr. Bhim Rao Ambedkar College, University of Delhi, India

Workshop and Seminar

- **Master in Data Science (R & Python)** from Madrid Software and Training Solutions, Saket New Delhi India
- **Certificate in Course on computer Concepts (CCC)** from National institute of information and technology, Ministry of Electronic & information technology, Government of India.

- **Certificate in Digital Image Processing (DIP)** from Birla Institute of Scientific Research, Jaipur, Rajasthan, India
- **Certificate in Geospatial Technologies for Climate Studies** from National Remote Sensing Centre Hyderabad, Indian Space Research Organization (ISRO), Department of Space, Government of India.
- Attended workshop on **"National Information System for Climate and Environment Studies (NICES) and its Activities"** on 29.1.2019 organized by the Department of Geography, Jamia Millia Islamia, New Delhi, in association with National Remote Sensing Centre (NRSC), Hyderabad, India

Honours and Awards

- **International Best Researcher Award** in the field of ***Climate Change and disaster Management*** organized by **IIRA 2022.**
- Got **First Rank** in Poster Presentation in Two-days online **"International Symposium on Valuing Water: Groundwater sustainability and Climate Change"** on 21-22 March 2021, Kurukshetra University, Haryana, India
- Won **Best** Oral Paper Presentation Award in **"International Conference on Sustainable Agriculture Production for Food, Nutrition and Livelihood Security: A Challenge for Asian Farmers"** on 25th-27th September 2019 Pattaya, Thailand
- Won **first prize** in quiz competition in Dr. Bhim Rao Ambedkar college, University of Delhi, India

Editorial Experiences: Member Editorial Board Forest and Geoscience Journal

Reviewer Experiences: Reviewed Paper for Natural Resources Research, Springer, Modeling Earth System and Environment, Advances in Environmental Technology Journal, Current Research in Geoscience, Plos One, Discover Sustainability, Springer, Geomatics, Natural Hazards and Risk, Tylor & Francis, Environmental Earth sciences, Springer, Discover Applied Science, Springer, Environmental Monitoring and Assessment, Springer, Journal of Environmental management, Elsevier, Physics and Chemistry of Earth, Elsevier,