



Dr Shakeel Mahmood

Chairperson /Associate Professor

Master Trainer

IRDR Young Scientist

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<https://gcu.edu.pk/faculty-profile.php?id=1068>

<https://scholar.google.com/citations?user=bdE80HMAAAAJ&hl=en&authuser=2>

Impact Factor: 120

Citations: 1749

“Disaster Risk Reduction is the Business of Everyone”

Profile	Year	Degree
Academic Qualification	2019	Ph.D University of Peshawar, Pakistan
	2012	M. Phil GC University, Lahore
	2009	M.Sc. GIS University of the Punjab
	2005	M.Sc. Geography (Gold Medal) University of Peshawar
International Certifications	2014	Natural Disasters McGill University, Canada through edX. (online)
	2020	Bushfires: Response, Relief and Resilience The University of Newcastle, Australia and Cifal Newcastle through Future Learn (online)
IRDR Young Scientist	2019	IRDR Young Scientist Integrated Research on Disaster Risk, Chinese Academy of Sciences (CAS), Beijing, China
Editor-in-Chief (Founder)	2025	Climate Change and Disaster Publisher: GCU Press, GC University Lahore
Editor (Academic Journal)	Jan. 2024 Jan, 2023 Jan, 2023 2023 2021	- Discover Geosciences - Advanced GIS - Advanced Geomatics - Applied and Environmental Soil Science - Journal of Wildlife and Ecology
Editor (Edited Volume)	March, 2026	Flood Risk Reduction: Cutting Edge Strategies and Innovative Technologies Publisher: Springer Nature
	March, 2024	Soil Erosion: Risk Modelling and Management Publisher: IntechOpen

Professional Trainings (National & International)	20 October 2011 – 04 December 2011	16th Master Training Professional Development Program (MT-FPDP) Learning Innovation Division (LID) , Higher Education Commission (HEC), Islamabad, Pakistan
	26 November 2012 – 14 December 2012	Advance Faculty Professional Development Program on Ensuring Training Effectiveness Asian Institute of Technology (AIT), Bangkok, Thailand.
	18 October 2025 – 04 November 2025	International Training on Silk Road Disaster Risk Reduction and Sustainable Development Institute of Mountain Hazards and Environment Chinese Academy of Sciences, China
	11 June 2026 – 15 June 2026	International Training on Satellite Emergency Response System for Typical Major Natural Disasters School of Geosciences and Info-Physics Central South University Changsha, China
Academic Programs (Initiated)	2023	BS Disaster Management
	2023	MS Disaster Management
	2024	PGD Disaster Management
	2023	BS Remote Sensing and GIS
Professional Experience	2023	PGD Remote Sensing and GIS
	2024	PGD Tourism and Recreation
	06 February 2020 – Present	Chairperson Department of Geography, GC University, Lahore
	23 August 2019 – Present	Associate Professor Department of Geography, GC University, Lahore
	13 February 2019 – 23 August 2019	Assistant Professor Department of Geography, GC University, Lahore
	13 October 2008 – 13 February 2019	Lecturer Department of Geography, GC University, Lahore
	October 2014 – October 2015	Assistant Superintendent New Hostel, Govt. College University, Lahore
	2005 – 2007	O'Level Geography Teacher Beaconhouse School System, Frontier Campus, Peshawar KP.
	2004 - 2005	Surveyor CIET (Community Information Epidemiological Technology) NRB (National Reconstruction Bureau), Base Level Survey of Pakistan
	2009 to 2015	Secretary Board of Studies, Department of Geography, GC University, Lahore.
	2009 to 2014	Time Table In-Charge Department of Geography, GC University, Lahore.
	06/04/2020 to date	Advisor Disaster Risk Management Society (DRMS) GC University, Lahore.
	June, 2010 to June, 2011, 2012 to 2014	Advisor Garrett Geographical Society Department of Geography, GC University, Lahore.
	Since 2010	Member of the Sports Board GC University, Lahore.
	2014 to 2015	Co-Advisor Disaster Risk Management Society (DRMS)

		GC University, Lahore.
	December 2021 to date	Co-Advisor Hiking and Mountaineering Club (HMC) GC University, Lahore.
	2020 to 2023	Member of the Admission Committee GC University, Lahore.
	2020 to 2024	Member of the Re-checking Committee GC University, Lahore.
	2020 to date	Member of the Academic Council GC University, Lahore.
	2020 to date	Member of the Board of Faculty of Physical and Mathematical Sciences GC University, Lahore.
	2021 to date	Member of the Review Committee of the Punjab Curriculum and Textbook Board, Lahore
Member of NCRC HEC, Pakistan	2018 to date	National Curriculum Review Committee (NCRC) of Disaster Management Higher Education Commission (HEC), Pakistan
	Feb, 2025 to date	National Curriculum Review Committee (NCRC) of Remote Sensing and GIS Higher Education Commission (HEC), Pakistan
	December, 2025 to date	National Curriculum Review Committee (NCRC) of Geography Higher Education Commission (HEC), Pakistan
Conferences Organized (International)	March 2023 October 2023 June 2025	1. Applications of Hybrid Modelling in Geographical Research 2. Climate Change and Disasters 3. Emerging Research Trends in Geography
Symposiums Organized	April 2023 October, 2024	1. International Symposium on “ Mineral Resources of Pakistan, 2022 ” 2. International Symposium on “ Contemporary Urban Issues ” on National Resilience Day, 2024
Geography Week Organized	November, 2023	The first-ever Geography Week , 2023, was organised and convened Day 1: Opening Ceremony, Seminar on International Scholarships Opportunities Day 2: Seminar on Disaster Risk Reduction Day 3: Seminar on Applications of GIS and RS Day 4: Panel Discussion on the Scope of Geography

Research Thesis	MSc. Geography: Post-construction Environmental Impacts of Ghazi Barotha Hydro-Power Project on Ghazi Tehsil.
	MSc GIS: Development of Web-Based Mobile Call Data Record Analyst
	MPhil: Monitoring and Assessment of the 2010 flood Disaster: Causes and Damages in Upper Dir, Pakistan
	PhD: Flood Risk Modelling and Management in Panjkora Basin, Eastern Hindu Kush, Pakistan

Publications

2016

1. **Mahmood, S.**, Khan, A. H., & Mayo, S. M. (2016). Exploring underlying causes and assessing damages of the 2010 flash flood in the upper zone of the Panjkora River. *Natural Hazards*, 83(2), 1213-1227.
2. **Mahmood, S.**, Khan, A. H., & Ullah, S. (2016). Assessment of 2010 flash flood causes and associated damages in Dir Valley, Khyber Pakhtunkhwa, Pakistan. *International Journal of Disaster Risk Reduction*, 16, 215-223.
3. Nasir, M. J., & **Mahmood, S.** (2016). Spatiotemporal Analysis of Crimes: A Case Study of Mardan City. *Pakistan Journal of Criminology*, 8(1), 107.
4. Atta-ur-Rahman, Khan A.N, Samiullah, Gul, S & **Mahmood S.** (2016). Impact Evaluation of the Chashma Right Bank Canal on the Water Table of District Dera Ismail Khan, Pakistan. *Journal of Basic & Applied Sciences*, 2016, 12, 281-288.

2017

5. Dawood, M., **Mahmood, S.**, Rahman. G. & Rahman. A. (2017). Impact of Rainfall Fluctuation on River Discharge in the Hindu Kush Region, Pakistan. *Abasyn Journal of Social Sciences* 10: 246-259.
6. Samiullah, Rahman, G., Gul, S. & **Mahmood, S.** (2017). Impacts of Operation Zarb-e-Azb on Spatio-temporal Distribution of Terrorist Incidents in Khyber Pakhtunkhwa. *Abasyn Journal of Social Sciences*. 10: 137-148.
7. Farooqi, S.H, Ijaz M, Saleem M.H, Rashid M.I., & **Mahmood S.** (2017). Distribution of Ixodid Tick Species and Associated Risk Factors in Temporal Zones of Khyber Pakhtunkhwa Province, Pakistan. *Pakistan Journal of Zoology*. 49(6), 2011-2017.

2018

8. **Mahmood, S.**, Sharif, F., Rahman, A. & Khan, A. (2018). Analysis and Forecasting of Municipal Solid Waste in Nankana City using Geo-Spatial Techniques. *Environmental Monitoring Assessment* 190:275-296.
9. **Mahmood, S** & Rani, R. (2018). Extent of flood damages in Chenab Basin, Upper Indus Plain" In "Natural Hazards - Risk Assessment and Vulnerability Reduction", DOI: 10.5772/intechopen.79687, ISBN 978-953-51-6297-1.
10. Islam, S., Aqib, A. I., **Mahmood, S.** & Mehmood, K. (2018). Molecular epidemiology of bovine anaplasmosis in Khyber Pakhtunkhwa, Pakistan. *Tropical animal health and production*, 50(7), 1591-1598.

2019

11. **Mahmood, S.** (2019). Flood Risk Modelling and Management in Panjkora Basin, Eastern Hindu Kush, Pakistan (Doctoral dissertation, University of Peshawar, Peshawar.).

12. **Mahmood, S** & Rahman, A. (2019). Flash Flood Susceptibility Modelling using Geomorphometric and Hydrological Approaches in Panjkora Basin, Eastern Hindu Kush, Pakistan. *Environmental Earth Sciences*, 78,(1) 43-58.
13. **Mahmood, S.**, Rahman, A & Sajjad, A. (2019). Assessment of 2010 flood disaster causes and damages in district Muzaffargarh, Central Indus Basin, Pakistan. *Environmental Earth Sciences*. 78, (3) 1-11.
14. **Mahmood, S.**, Irshad, A., Nasir, J. M., Sharif, F., & Farooqi, S. H. (2019). Spatiotemporal analysis of dengue outbreaks in Samanabad town, Lahore metropolitan area, using geospatial techniques. *Environmental Monitoring and Assessment*, 191(2), 55-69.
15. **Mahmood, S.**, Rahman, A. U., & Shaw, R. (2019). Spatial appraisal of flood risk assessment and evaluation using integrated hydro-probabilistic approach in Panjkora River Basin, Pakistan. *Environmental monitoring and assessment*, 191(9), 573.
16. **Mahmood, S** & Rahman, A. (2019). Flash Flood Susceptibility Modelling using Geomorphometric Approach in Ushairy Basin, Eastern Hindu Kush. *Journal of Earth System Science*, 128,(4) 97-111.
17. Samiullah, Khan, M., A., Rahman, A & **Mahmood, S.** (2019). Evaluation of Urban Encroachment on Farmland: A Threat to Urban Agriculture in Peshawar City District, Pakistan. *Erdkunde*, 73 (2), 127–142.
18. Sajjad, A., Lu, J., Chen, X., Chisenga, C., & **Mahmood, S.** (2019). The riverine flood catastrophe in august 2010 in south Punjab, Pakistan: potential causes, extent and damage assessment. *Applied Ecology and Environmental Research*, 17(6), 14121-14142.
19. Rahman, A. U., **Mahmood, S.**, Dawood, M., Rahman, G., & Chen, F. (2019). Impact of Climate Change on Flood Factors and Extent of Damages in the Hindu Kush Region. In *Oxford Research Encyclopedia of Natural Hazard Science*.

2020

20. Dawood, M., Rahman, A. U., Ullah, S., **Mahmood, S.**, Rahman, G., & Azam, K. (2020). Spatio-statistical analysis of rainfall fluctuation, anomaly and trend in the Hindu Kush region using ARIMA approach. *Natural Hazards*, 101, 449–464.
21. Shao, Z., Jahangir, Z., Muhammad Yasir, Q., & **Mahmood, S.** (2020). Identification of Potential Sites for a Multi-Purpose Dam Using a Dam Suitability Stream Model. *Water*, 12(11), 3249.
22. Shoaib, M., Rashid, I., Akbar, H., **Mahmood, S.**, & Khan, F.A. (2020). Prevalence of Rhipicephalus and Hyalomma Ticks in Cattle and Associated Risk Factors in Three Districts of Khyber Pakhtunkhwa, Pakistan. *Pakistan Journal of Zoology*, 52. DOI: <http://dx.doi.org/10.17582/journal.pjz/2020.52>

2021

23. **Mahmood, S.**, & Hamayon, K. (2021). Geo-spatial assessment of community vulnerability to flood along the Ravi River, Ravi Town, Lahore, Pakistan. *Natural Hazards*, 1-20.
24. **Mahmood, S.**, Sajjad, A., & Rahman, A. (2021). Cause and damage analysis of 2010 flood disaster in district Muzaffar Garh, Pakistan. *Natural Hazards*, 1-12.
25. **Mahmood, S.**, Mayo, S. M., & Mahmood, I. (2020). Spatial Quantification of Domestic Water Consumption in Rehankot, Dir Town, Khyber Pakhtunkhwa Province-Pakistan. *Proceedings of the Pakistan Academy of Sciences: A. Physical and Computational Sciences*, 57(3), 77-85.
26. **Mahmood, S.**, & Irshad, A. (2021). Employing Geographic Information System and Spatiotemporal Analysis of Dengue Outbreaks in a Metropolitan Area in Pakistan. In *Human Viruses: Diseases, Treatments and Vaccines* (pp. 81-91). Springer, Cham.

27. **Mahmood, S. (2021).** Analysis of Municipal Solid Waste Generation in Dir City. In book: *Environmental Issues and Sustainable Development* (pp. 64-72). Intechopen, UK. DOI: [10.5772/intechopen.95557](https://doi.org/10.5772/intechopen.95557)

2022

28. Atiq, A., & **Mahmood, S. (2022).** Debris Flow Hazard Assessment in District Chitral, Eastern Hindu Kush, Pakistan. *Prevention and Treatment of Natural Disasters*, 1(2), 20-29.
29. Bayo, B., Habib, W., & **Mahmood, S. (2022).** Spatio-temporal assessment of mangrove cover in the Gambia using a combined mangrove recognition index. *Advanced Remote Sensing*, 2(2), 74-84.
30. Gull, A., & **Mahmood, S. (2022).** Spatio-Temporal Analysis and Trend Prediction of Land Cover Changes using Markov Chain Model in Islamabad, Pakistan. *Advanced GIS*, 2(2), 52-62.
31. **Mahmood, S. (2022).** Exploring COVID-19 incidence hotspot in the metropolitan area of Pakistan using a geo-statistical approach: a study of Lahore city. *Spatial Information Research*, 1-8.
32. **Mahmood, S., & Rani, R. (2022).** People-centric geo-spatial exposure and damage assessment of the 2014 flood in the lower Chenab Basin, upper Indus Plain in Pakistan. *Natural Hazards*, 111(3), 3053-3069.
33. **Mahmood, S., & Rani, R. (2022).** People-centric geo-spatial exposure and damage assessment of the 2014 flood in the lower Chenab Basin, the upper Indus Plain in Pakistan. *Natural Hazards*, 111(3), 3053-3069.
34. **Mahmood, S., Ghulam, R., & Mayo, S. M. (2022).** Hotspot analysis of urban crimes in Data Ganj Bakhsh Town, Lahore, Pakistan. *Crime Prevention and Community Safety*, 24(4), 342-357.
35. Rahman, G., Bacha, A. S., **Mahmood, S.,** Almohamad, H., ... & Abdo, H. G. (2022). Assessment of Landslide Susceptibility, Exposure, Vulnerability and Risk in Shahpur Valley, Eastern Hindu Kush. *Frontiers in Earth Science*, 1348. DOI: [10.3389/feart.2022.953627](https://doi.org/10.3389/feart.2022.953627)
36. Rehman, A., Song, J., Haq, F., **Mahmood, S.,** Ahamad, M. I., Basharat, M., ... & Mehmood, M. S. (2022). Multi-Hazard Susceptibility Assessment Using the Analytical Hierarchy Process and Frequency Ratio Techniques in the Northwest Himalayas, Pakistan. *Remote Sensing*, 14(3), 554.
37. Shafiq, M., & **Mahmood, S. (2022).** Spatial Assessment of Forest Cover Change in Azad Kashmir, Pakistan. *Advanced GIS*, 2(2), 63-70.
38. Yasar, A., Basit, S., Tabinda, Au.B., **Mahmood, S.,** et al. (2022). Evaluation of operational and financial viability models of a combined landfill site for intermediate cities in Pakistan. *Environ Sci Pollut Res.* <https://doi.org/10.1007/s11356-022-22240-4>.

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39. Bayo, B., & **Mahmood, S. (2023).** Geo-spatial analysis of drought in The Gambia using multiple models. *Natural Hazards*, 117(3), 2751-2770.
40. Huda, N. U., **Mahmood, S.,** Sajjid, R., & Ahamad, M. I. (2023). Spatio-temporal analysis of river channel pattern in lower course of River Ravi using GIS and remote sensing. *Applied Geomatics*, 15(3), 759-772.
41. Alishba, A., & **Mahmood, S. (2023).** Risk Assessment of Rawal Dam Outburst Flood Using Integrated Hydrological and Geo-Spatial Approaches. *Advanced Remote Sensing*, 2(3), 64-74.
42. Arif, N., & **Mahmood, S. (2023).** Temporal and spatial analysis of COVID-19 incidence hotspots in Pakistan: A spatio-statistical approach. *Spatial and Spatio-temporal Epidemiology*, 47, 100603.

43. Jumaah, H. J., Ameen, M. H., **Mahmood, S.**, & Jumaah, S. J. (2023). Study of Air Contamination in Iraq Using Remotely Sensed Data and GIS. *Geocarto International*, (just-accepted), 1-18. <https://doi.org/10.1080/10106049.2023.2178518>
44. Khan, A., Rahman, A. U., & **Mahmood, S.** (2023). Spatial estimation of soil erosion risk using the RUSLE model in District Swat, Eastern Hindu Kush, Pakistan. *Journal of Water and Climate Change*, 14(6), 1881-1899.
45. **Mahmood, S.**, Atiq, A., & Khan, A. R. (2023). Socio-Economic Effects of War Against Terror-Induced Displacement on Host Communities in District Kohat, Pakistan. In *Rebuilding Communities After Displacement: Sustainable and Resilience Approaches* (pp. 365-378). Cham: Springer International Publishing.
46. Saleem, A., & **Mahmood, S.** (2023). Spatio-temporal assessment of urban growth using multi-stage satellite imageries in Faisalabad, Pakistan. *Advanced Remote Sensing*, 3(1), 10-18.
47. Siraj, M., **Mahmood, S.**, & Habib, W. (2023). Geo-spatial assessment of land cover change in District Dera Ismail Khan, Khyber Pakhtunkhwa, Pakistan. *Advanced Remote Sensing*, 3(1), 1-9.
48. Tahir, F., Rasheed, R., **Mahmood, S.**, Chohan, K., & Ahmad, S. R. (2023). REDD+ framework and forest sustainability in Pakistan versus other South Asian countries: a multi-criteria-based analysis. *Environment, Development and Sustainability*, 1-22.
49. Yasar, A., Basit, S., Tabinda, A. U. B., Ali, A., **Mahmood, S.**, ... & Tanveer, R. (2023). Evaluation of operational and financial viability models of a combined landfill site for intermediate cities in Pakistan. *Environmental Science and Pollution Research*, 30(1), 1825-1840.

2024

50. Yousaf, B., Javid, K., **Mahmood, S.**, Habib, W., & Hussain, S. (2024). Delineating groundwater potential zones using integrated remote sensing and GIS in Lahore, Pakistan. *Environmental Monitoring and Assessment*, 196(10), 884.
51. **Mahmood, S.**, Atique, F., Rehman, A., Mayo, S. M., & Ahamad, M. I. (2024). Rockfall susceptibility assessment along M-2 Motorway in Salt Range, Pakistan. *Journal of Applied Geophysics*, 222, 105312.
52. **Mahmood, S.**, Ali, A., & Jumaah, H. J. (2024). Geo-visualising the hotspots of smog-induced health effects in district Gujranwala, Pakistan: a community perspective. *Environmental Monitoring and Assessment*, 196(5), 1-14.
53. Jamil, M., & **Mahmood, S.** (2024). Detection and prediction of drought by utilizing integrated geo-spatial and Markov approach in Balochistan, Pakistan. *International Journal of Environmental Science and Technology*, 21(11), 7681-7700.
54. Ali, M., & **Mahmood, S.** (2024). Geo-spatial assessment of pluvial floods in city district Lahore, Pakistan. *Environmental monitoring and assessment*, 196(2), 189.
55. Ahmad, A., & **Mahmood, S.** (2024). Change Detection of Land Cover Using Geo-Spatial Techniques in District Hyderabad, Sindh, Pakistan. *International Journal of Innovations in Science & Technology*, 6(6), 615–627. Retrieved from <https://journal.50sea.com/index.php/IJIST/article/view/964>
56. Ahmad, M., & **Mahmood, S.** (2024). Exploring the Impact of Land Cover Changes on the Genesis of Smog in District Lahore, Pakistan. *International Journal of Innovations in Science & Technology*, 6(6), 577–589. Retrieved from <https://journal.50sea.com/index.php/IJIST/article/view/936>

57. Ayub, M., **Mahmood, S.**, & Sarwar, M. (2024). Analysing the Contribution of Transportation in the Formation of Smog in District Lahore, Pakistan. *International Journal of Innovations in Science & Technology*, 6(6), 628–636. Retrieved from <https://journal.50sea.com/index.php/IJIST/article/view/965>
58. Javed, W., & **Mahmood, S.** (2024). Designing a Flood Risk Reduction Plan for Kalat Division, Balochistan. *International Journal of Innovations in Science & Technology*, 6(6), 509–526. Retrieved from <https://journal.50sea.com/index.php/IJIST/article/view/909>
59. **Mahmood, S.**, Abbas, F., & Hussain, S. (2024). Cause and Damage Assessment of 2022-Flood in Khyber Pakhtunkhwa, Pakistan. *International Journal of Innovations in Science & Technology*, 6(6), 637–651. Retrieved from <https://journal.50sea.com/index.php/IJIST/article/view/907>
60. Mushtaq, A., & **Mahmood, S.** (2024). Analysing the Impact of Smog on Human Health in District Lahore, Pakistan. *International Journal of Innovations in Science & Technology*, 6(6), 565–576. Retrieved from <https://journal.50sea.com/index.php/IJIST/article/view/947>
61. Noor, S., **Mahmood, S.**, & Habib, W. (2024). Site Suitability Analysis of Smog Cutting Towers in District Lahore, Pakistan. *International Journal of Innovations in Science & Technology*, 6(6), 701–713. Retrieved from <https://journal.50sea.com/index.php/IJIST/article/view/997>
62. Saeed, M. F., & **Mahmood, S.** (2024). Eco-Mobility in Lahore, Pakistan: Assessing the Role of Electric Vehicles in Air Pollution Mitigation. *International Journal of Innovations in Science & Technology*, 6(6), 527–539. Retrieved from <https://journal.50sea.com/index.php/IJIST/article/view/910>
63. Sarwar, M., **Mahmood, S.**, & Saeed, F. (2024). Geo-visualisation of Debris Flow Susceptibility in District Chitral, North-West of Pakistan. *International Journal of Innovations in Science & Technology*, 6(6), 661–673. Retrieved from <https://journal.50sea.com/index.php/IJIST/article/view/992>
64. Uzair-Bin-Fazal, **Mahmood, S.**, & Aqsa Shahid. (2024). Analysing Government Policies Causing Smog: An Evaluation. *International Journal of Innovations in Science & Technology*, 6(6), 540–549. Retrieved from <https://journal.50sea.com/index.php/IJIST/article/view/957>
65. Gull, A., Mahmood, S., Ahamad, M. I., Rehman, A., & Purohit, S. (2024). Comparative Assessment of Rockfall Susceptibility in the Potohar Plateau Using Frequency Ratio, Analytical Hierarchy Process, and Weights of Evidence Models. *Earth Systems and Environment*, 1-20.
66. Mahmood, S., Naeem, N., Ahamad, M. I., Tariq, Z., & Song, J. (2024). Spatial modeling of soil erosion potential in the Panjkora Basin, Eastern Hindu Kush: integrated RUSLE and geospatial approaches. *Environment, Development and Sustainability*, 1-22.

2025

67. Habib, W., & **Mahmood, S.** (2025). Spatial Assessment of Urban Resilience in the City District of Lahore Using GIS and Multicriteria Decision-Making Tools. In *Progress in Multicriteria Decision Making Models: A New Paradigm to Monitor Hazards* (pp. 171-186). Cham: Springer Nature Switzerland.
68. Ashraf, T., Ahamad, M. I., **Mahmood, S.**, Fu, J., Mehmood, M. S., Rehman, A., ... & Zulfarnain, R. M. (2025). Exploring hotspots of traffic accidents in Chiniot-Sargodha Road, Punjab, Pakistan. *Environment, Development and Sustainability*, 1-21.
69. Chaudhary, H & **Mahmood, S.** (2025). Urban Walkability Assessment: Methods and Implications for City Planning. *Environment, Development and Sustainability* (Accepted).

70. Hamid, S. & **Mahmood, S.** (2025). Analysing the Predictors of Mortality Among Asphyxiated Neonates. *International Journal of Innovations in Science & Technology*, 7(9), 142-156.
71. Sarwar, M., **Mahmood, S.** & Habib, W. (2025). Assessing Urban Expansion and Land Cover Change in City District Lahore using Multi-Stage Satellite Data. *International Journal of Innovations in Science & Technology*, 7(9), 94-107.
72. Tahir, F., Ali Iqtadar Mirza, Mariam Sarwar, & **Shakeel Mahmood.** (2025). Spatial Analysis of Land Use and Land Cover of Gujranwala District Using Remotely Sensed Data. *International Journal of Innovations in Science & Technology*, 7(9), 258–265. Retrieved from <https://journal.50sea.com/index.php/IJIST/article/view/1509>
73. Shahbaz, H., **Mahmood, S.,** & Javid, K. (2025). An Integrated Geospatial Approach of GHG Emission Impact on Air Quality Due To Above-Ground Biomass in Rawalpindi Division, Punjab, Pakistan. *International Journal of Innovations in Science & Technology*, 7(9), 330–355.
74. **Mahmood, S.,** Salman, F., Sarwar, M., & Ahamad, M. I. (2025). Assessing debris-covered glaciers using geospatial techniques in the Hindu Kush region, Pakistan. *Cold Regions Science and Technology*, 224, 104700. <https://doi.org/10.1016/j.coldregions.2025.104700>

2026

75. Abid, Z., **Mahmood, S.,** & Shahbaz, H. (2026). Flood Hazard Assessment Using Integrated GIS and AHP Techniques: A Study of Bannu District, Khyber Pakhtunkhwa, Pakistan. In *Flood Risk Reduction* (pp. 1-25). Springer, Cham.
76. Shaukat, A., **Mahmood, S.,** & Hussain, S. (2026). Analysis and Forecasting of Flood Hazard in Lower Chenab Basin, Upper Indus Plain Using Hydro-Probabilistic Approach. In *Flood Risk Reduction* (pp. 27-43). Springer, Cham.
77. Shahbaz, H., & **Mahmood, S.** (2026). Geo-spatial Susceptibility Analysis of Glacial Lake Outburst Flood: A Study of Passu Glacier, Hunza Nagar District—Pakistan. In *Flood Risk Reduction* (pp. 45-71). Springer, Cham.
78. Naqvi, A. H., & **Mahmood, S.** (2026). Geospatial Investigation of the 2022-Flood Disaster in Sindh Province, Pakistan. In *Flood Risk Reduction* (pp. 149-168). Springer, Cham.
79. Safyan, A., & **Mahmood, S.** (2026). Flood Risk Assessment Using HEC-RAS Downstream Sukkur Barrage, Province Sindh, Pakistan. In *Flood Risk Reduction* (pp. 221-237). Springer, Cham.
80. Sohail, R., & **Mahmood, S.** (2026). Flood Risk Reduction: Cutting Edge Geospatial Approach. In *Flood Risk Reduction* (pp. 375-389). Springer, Cham.
81. Khanum, M., Su, Y., **Mahmood, S.** et al. Multi-index remote sensing and GIS-based assessment of Shisper Glacier surge dynamics and glacial lake outburst flood hazard in Hunza, Pakistan. *Environ Monit Assess* 198, 732 (2026). <https://doi.org/10.1007/s10661-026-15552-2>

Thesis Supervised

MS/MPhil Geography & Disaster Management

Sr. No	Roll No	Student's Name	Thesis Title
01	1002-MS-Geo-12	Farman Atique	Rockfall Risk Assessment along the Motorway in Salt Range using GIS and Remote Sensing
02	2012-MS -Geo-12	Rehana Ghulam Mehar Ali	GIS-Based Crime Analysis and Mapping from 2008 to 2012 of data Ganj Bakhsh Town, Lahore
03	1003-MGGEO-12	Kiran Butt	Flood Risk Assessment of Settlements along Ravi River, District Lahore

04	2012-MS-Geo-12	Asif Sajjad	Flood Risk Management in District Muzaffargarh using Geo Informatics
05	1002-MG-Geo-13	Ahtasham Irshad	Spatial Modelling of Vector-Borne Diseases based on Socio-Economical and Geographical Indicators in Samanabad Town, District Lahore
06	1007-MS-Geo-13	Razia Rani	Flood Risk Analysis and Community-based Management from Head Marala to Trimmu in Lower Chenab River, Pakistan
07	1011-MS-Geo-13	Atif Hussain	Multi-story Buildings Vulnerability Assessment to Earthquake Risk in Lahore Metropolitan Area
08	1011R-MS-Geo-13	Marriyum Nasir	Floodplain Modelling from Mangla Downstream to Head Trimmu using Geospatial Technique
09	0001-MSGEO-14	Zonish Javid	Role of Leaf Morphology in the Absorption of Smog-Causing Pollutants in the Lahore Metropolitan Area.
10	1501-MSGEO-14	Attia Atiqu	Debris Flow Risk Zonation in Hindukush Region, Pakistan
11	1004-MSGEO-18	Muhammad Jamil	Modelling Spatio-Temporal Pattern of Drought in Baluchistan using Markov Approach
12	1006-MSGEO-18	Saddam Hussain	Groundwater Assessment and Management using Geo-spatial Techniques in Wana, South Waziristan
13	1007-MSGEO-18	Sadaf Ali Abbas	Flood Hazard Assessment in Lower Chenab Basin using Hydro-Probabilistic Approach
14	1008-MSGEO-18	Isma Hafeez	Spatio-statistical analysis of temperature trend in Province Punjab, Pakistan
15	1001-MSGEO-19	Zara Tariq	Soil Erosion Risk Modelling using Multiple Approaches in Eastern Hindu Kush Region, Pakistan
16	1003-MSGEO-19	Ammara Khan	Urban Growth Modelling in Sahiwal Division, Punjab, Pakistan
17	1004-MSGEO-19	Mariam Sarwar	Spatial Assessment of GLOFs in Eastern Hindu Kush Region using Integrated Hydrological and GIS Techniques
18	1005-MSGEO-19	Shaher Bano	Geo-spatial Assessment of Urban Floods in District Lahore Using Multiple Models
19	1006-MSGEO-19	Ayeza Shaukat	Analysis and Forecasting of Flood Hazard in Lower Chenab Basin using Hydro-probabilistic Approach
20	1007-MSGEO-19	Rida Sajid	Geo-spatial Assessment of River Channel Pattern and Floodplain Dynamics in Lower Chenab Basin
21	1007-R-MSGEO-19	Ghulam Murtaza	Seismic Risk Zonation of Pakistan Using Geo-spatial Techniques
21	0419-MSGEO-20	Warda Habib	Geo-Spatial Assessment of Urban Resilience using Multi Criteria Approach in Lahore- Pakistan
23	1010-MSGEO-20	Aiman Nisar	Spatio-Temporal Appraisal of Glacial Extent in Karakoram Region, Gilgit Baltistan
24	1012-MSGEO-20	Anum Gull	Rockfall Susceptibility Modelling in Chakwal District, Salt Range
25	1013-MSGEO-20	Asma Javed	Assessing the Effect of Soil Salinity on Wheat Production in District Gujranwala Using Geospatial Technique
26	1014-MSGEO-20	Bambo Bayo	Analysis and Forecasting of Drought in the Gambia using Geospatial Techniques
27	1007-MSGEO-20	Mazhar Shakoor	Analysis and Forecasting of Coastline Morphology in Pakistan using Digital Shoreline Analysis
28	1001-MSGEO-21	Mahnoor Qadir	Spatial Assessment of Seismic Risk in Eastern Hindu Kush Region Using Multiple Models
30	1003-MSGEO-21	Ramsha Sohail	Flood Risk Reduction in Eastern Hindu Kush Region: An Integrated Approach
31	1004-MSGEO-21	Ahsan Iqbal	Spatio-Statistical Analysis of Temperature Variation in Khyber Pakhtunkhwa, Pakistan.
32	1005-MSGEO-21	K.K.Hansi Piyumi Nisansala	Flood Risk Reduction Using Integrated Community-Based Disaster Risk Management and Geo-Spatial Approaches in Gin River Basin, Sri Lanka
33	1006-MSGEO-21	Maryam Khurshid	Spatio- Temporal Analysis of Groundwater Level using Integrated Community Perception and Geo-Spatial Techniques
34	1004-MS-GEOG-22	Farheen Tahir	Geospatial Assessment of River Channel Morphology using Meander Migration Model in Lower Chenab Basin, Pakistan

35	1005-MS-GEOG-22	Ayesha Khateeb Khan	Analysing Dam Breach Outflow and Inundation at the downstream Mangla Dam, Pakistan
36	1006-MS-GEOG-22	Abu Sufyan	Flood Risk Assessment Downstream Sukkur Barrage, Sindh Province, Pakistan
37	1009-MS-GEOG-22	Syeda Rubab Haider Kazmi	Assessing the impact of Climate Change on Glacial Mass Balance in the Karakorum Region using Geo-Spatial techniques
38	1010-MS-GEOG-22	Mujtaba Shafiq	Assessment of Forest Management Strategies in Azad Jammu & Kashmir, Pakistan
39	1011-MS-GEOG-22	Hafsa Noor	Geomorphic Dynamics of the Indus River: A Study of Channel Patterns in the Central Indus Basin, Pakistan
40	1012-MS-GEOG-22	Hazeema Mumtaz	Analysing and Forecasting the Impact of Land Cover Changes on Land Surface Temperature using Artificial Neural Network in Lahore Division, Pakistan
41	1013-MS-GEOG-22	Areeba Jamil	Geo-spatial Assessment and Prediction of Drought in Pakistan
42	1014-MS-GEOG-22	Shanzay Fatima	Spatial Investigation of Seismic Activity along the Salt Range Thrust Fault in Pakistan
43	1014-MS-GEOG-22	Mazhar Panah	Site Suitability Analysis of Groundwater Recharge Zones using Coupled Analytic Hierarchy Process and Geo-Spatial Approaches in Lahore Division, Pakistan
44	1007-MS-GEOG-22	Nida Shafqat	Dam Lake outburst flood risk assessment of Ranjit Sagar Dam in the downstream areas of Pakistan
45	1009 -MS-GEOG-22	Amna Naqvi	Geo-spatial Assessment of Humidity impact on human health: A study of District Lahore
46	1014-MSGEO-22	Farheen Tahir	Spatio-Temporal Analysis of the Chenab River Channel Pattern using Erosion Accretion Model, Pakistan
47	4001-Mphil-SP-GEO-23	Iqra Nawaz	Geospatial assessment of soil erosion and its intensity using the RUSLE Model in Potohar Plateau and Salt Range Region in Pakistan
48	4002-Mphil-SP-GEO-23	Aqsa Shahid	Spatial and Temporal assessment of Particulate matter: A study of Northern Districts of the Punjab – Pakistan
49	4003-Mphil-SP-GEO-23	Suleman Khan	Analysis and Forecasting of Ground Water Level using Geospatial Techniques in Zhob, Balochistan-Pakistan
50	4004-Mphil-SP-GEO-23	Nazish Nawaz	Assessing the Impact of climate change on rainfall variations in Pakistan
51	1003-MSGEO-23	M. Farhan Saeed	Geo-spatial Drought Modelling and Assessment in the Southern Divisions of Punjab Province, Pakistan
52	1001-MSGEO-20-R	Syed Yasir Usman	Flood Damage Assessment of Tourist Sites in Swat Valley Khyber Pakhtunkhwa, Pakistan: A Case Study of 2022 Floods
53	5077-MPHIL-DM-23	Ali Mushtaq	Assessing Air Pollution and its Health Impacts in City District Lahore, Pakistan
54	5078-MPHIL-DM-23	Uzair Bin Fazal	Analysis and Management of Motorcycle Accidents in District Gujranwala, Punjab Province, Pakistan
55	5076-MPHIL-DM-23	Sohail Khalid	Role of Emerging Information Technologies in Disaster Response and Recovery in Pakistan
56	5079-MPHIL-DM-23	Muhammad Ahmad	Spatial Detection and Analysis of Urban Heat Island in Districts Lahore and Faisalabad, Punjab, Pakistan
57	5082-MPHIL-DM-23	Maryam Ayub	Flood Risk Assessment and Management of River Swat Basin, Khyber Pakhtunkhwa, Pakistan

PGD GIS and Remote Sensing

Sr. No	Roll No	Student's Name	Thesis Titles
01	0001-PGD-GISRS-22	Mariam Sarwar	Geo-Visualisation of Debris Flow Susceptibility in District Chitral, Pakistan

02	0002-PGD-GISRS-22	Zarish Abid	Flood Hazard Assessment using Integrated GIS and AHP Approaches in District Bannu, Khyber Pakhtunkhwa, Pakistan
03	0003-PGD-GISRS-22	Rumana Siddiqui	GIS Analysis of Temperature Variability in District Skardu, Gilgit Baltistan, Pakistan
04	0004-PGD-GISRS-22	Muhammad Irfan Ahmad	Spatio and Temporal Analysis of Land Surface Temperature using GIS Technique: A Study of District Lahore, Pakistan
05	0003-PGD-GISRS-24	Hira Shahbaz	Geo-Visualisation of Air Quality Using Google Earth Engine: A Transboundary Study of Pakistan and India

BS Geography & Disaster Management

Sr. No	Roll No	Student's Name	Thesis Title
01	329-BH-GEOG-08	Asif Sajjad	Geographical impacts of flood 2010: A study of Dogar Kalasara and Sheiku Umer, District Muzaffargarh
02	432BH-GEOG-08	Usman Ghani	Exploring Health impact of chemical industries in the district Sheikhpura, Pakistan
03	437-BH-GEOG-08	Ain Ud Din	Study on coal mining hazards in Duki, Balochistan
04	441-BH-GEOG-08	Ahmad Sher Khan	Spatio-temporal analysis of seismic events in Pakistan (1935-2012)
05	444-BH-GEOG-08	Mohammad Bilal	Health impacts of 2010 flood: A study Dogar Kalasara and Sheiku Umer, District Muzaffargarh
06	974-BH-GEOG-08	Asmat Ullah	Monitoring the climate change of Lahore Metropolitan area
07	1176-BH-GEOG-08	Farman Atique	Traffic Accident Analysis in Lahore using GIS
08	408-BH-GEOG-09	Hazrat Wali	Hotspots Identification of Crime in District Quetta Balochistan
09	416-BH-GEOG-09	Soban Saleem	Risk assessment of Natural Hazards: A case study of District Gawadar
10	419-BH-GEOG-09	Syedc M Ameer Hamza	Flood risk assessments in Jhang: A case study of the Downstream Trimmu Barrage
11	429-BH-GEOG-09	Saleem Khan	Hazard of traditional coal mining in Balochistan: A study of Duki Tehsil, district Loralai
12	438-BH-GEOG-09	Akbar Dad Babar	Hydrometric analysis of the river Zhob using the float method
13	442-BH-GEOG-09	Jai Pakash Ahuja	Socio-economic impact of the 2010 flood in the Agra union and the Gambat District of Khairpur
14	465-BH-GEOG-09	Rai Asim Raza	Damage assessments of the flood in Hafizabad: A case study of Vaniki Tarar
15	704-BH-GEOG-09	Changaiz Essa	Flood disaster risk reduction: A case study of Turbat, Balochistan
16	1103-BH-GEOG-09	Ijaz Ahmad	Effects of electric shortfall on power loom industries: A case study of Union Council 3/20 district Hafiz Abad.
17	430-BH-GEOG-10	Fiaz Shaukat	Flash flood risk assessment and modelling using GIS in Neelum Valley District, Muzaffarabad
18	437-BH-GEOG-10	Hafiz Kamran Aman	Community-based flood risk assessment in Haweili Sheikh Raju, District Jhang, Punjab
19	1213-BH-GEOG-10	Ameer Bakjsh	Flood Damages Assessment in District Jaffar Abad
20	1216-BH-GEOG-10	Fakhar Ud Din	Causes of Deforestation in Ziarat Valley, Balochistan
21	410-BH-GEO-11	Abdul Razaq	Underground drinking water quality with reference to human health in Zhob city.
22	418-BH-GEO-11	Mohammad Ameer Nawaz Akram	Thalassemic Survivors: cluster identification of thalassemic disease in District Gujrat

23	429-BH-GEO-11	Sajjad Aslam	Seismic micro zonation of Balochistan, Pakistan
24	430-BH-GEO-11	Abdul Basit	Flood risk assessment in upstream areas of Mangla Dam
25	440-BH-GEO-11	Mohib Ullah Khan	Economic impact of internally displaced persons on District Bannu, Khyber Pakhtunkhwa,
26	0406-BH-GEOG-16	Siddra Noor	Risk assessment of Attabad Lake outburst Flooding using a hydro-probabilistic approach
27	0416-BH-GEOG-16	Muhammad Siraj	Land Cover Change Detection in District Dera Ismail Khan Using Multi-temporal imageries
28	1114-BH-GEOG-17	Mudassir Sohail	Spatio-Temporal assessment of rainfall variation and vegetation cover in Punjab, Pakistan
29	1116-BH-GEOG-17	Jafar Gulzarz Hashmi	Spatio-Temporal analysis of land Cover in district Pakpattan using Satellite Data
30	1118-BH-GEOG-17	Ahmad Furqan	Geo-spatial assessment of flash flood susceptibility modelling using geomorphometric and hydrological approaches in District Chitral, Pakistan
31	1124-BH-GEOG-17	Jamal-ud-din	Rainfall-runoff modelling using a hydrological approach in the Eastern Hindukush Region, Pakistan
32	1104-BH-GEOG-19	Muhammad Bilal	Assessing the Impact of Climate Change on the Discharge of the Chenab River
33	1108-BH-GEOG-19	Asad ul Rehman	Spatial Assessment of Urban Expansion on Agricultural Land in Chiniot City, Punjab, Pakistan
34	1111-BH-GEOG-19	Muhammad Hasnat Mustafa	Geo-Spatial Assessment of Particulate Matter in Lahore Division, Punjab, Pakistan
35	1119-BH-GEOG-19	Maryam Ayub	Geospatial Vulnerability Assessment of Earthquake in Mirpur City, Azad Jammu and Kashmir, Pakistan
36	112-BH-GEOG-19	Warda Javed	Designing Flood Risk Reduction Plan for Kalat Division, Balochistan, Pakistan
37	1132-BH-GEOG-19	Shahzeb Hussain	Impact of Built-up Environment on Land Surface Temperature in City District Lahore, Pakistan
38	1138-BH-GEOG-19	Abdullah	Hotspots Analysis of Air Pollution-Induced Diseases in City District Lahore, Pakistan
39	1139-R-BH-GEOG-19	Asfand Yar	Groundwater Table Modelling and Management in District Quetta, Balochistan, using Geospatial Analysis
40	1142-BH-GEOG-19	Kainat Claudia	Impact of Hydro-Politics on River Ravi Discharge: An Analysis
41	0911-BH(E)-GEOG-19	Zeeshan Akbar Khan	Exploring Water-Borne Diseases in Union Council 4, District Kasur, Punjab, Pakistan
42	0914-BH(E)-GEOG-19	Salal Qudoos	Cause and Damage Assessment of the 2022 Flood Disaster in Kalat Division, Balochistan, Pakistan
43	0921-BH(E)-GEOG-19	Fizza Ashfaq	Analysing the Impact of Urban Expansion on Agricultural Land in District Lahore, Pakistan
44	0923-BH(E)-GEOG-19	Zainab Zaid	Spatial Pattern of Municipal Solid Waste Generation in City District Lahore, Pakistan
45	0927-BH(E)-GEOG-19	Ayaz Haider Naqvi	Climate Change Detection in Pakistan using Multi-stage Satellite Data
46	0929-BH(E)-GEOG-19	Abdul Rehman	Exploring Spatial Patterns of Water-Borne Diseases in District Chiniot using Getis-Ord Gi* Statistics
47	0936-BH(E)-GEOG-19	Fakhar Abbas	Cause and Damage Assessment of 2022-Flood Disaster in Khyber Pakhtunkhwa, Pakistan
48	0950-BH(E)-GEOG-19	Ijlal Mehdi	Impact of Tourism on the Host Community in Skardu City, Gilgit Baltistan, Pakistan
49	1110-BH-GEOG-20	Qalb-e-Abbas	Exploring the Consequences of High Temperature on Human Behaviour in District Sibi, Balochistan, Pakistan: A Community Perspective
50	1113-BH-GEOG-20	Shahid Ur Rehman	Cause and Damage Analysis of the 2022 Flood in District Upper Chitral, Khyber Pakhtunkhwa, Pakistan
51	1123-BH-GEOG-20	Muhammad Fazil	Impact of Landcover Changes on Land Surface Temperature in Districts Hangu and Kohat, Khyber Pakhtunkhwa, Pakistan
52	1126-BH-GEOG-20	Zulqarnain Haider	Landslide Damage Assessment in Districts of Hunza and Nagar, Gilgit-Baltistan, Pakistan
53	1134-BH-GEOG-20	Sadi Ahmed	Exploring the Impact of Climate Change on Agricultural Productivity: A Farmer 's Perspective in Tehsil Chiniot, Punjab, Pakistan

54	1141-BH-GEOG-20	Gul Ahmed	Spatial and Temporal Analysis of Groundwater Table District Nankana Sahib, Punjab, Pakistan
55	1006-BH(E)-GEOG-20	Saad Ullah	Assessing the Impact of Real Estate Bubble on Land Cover Changes in District Gujranwala, Punjab, Pakistan
56	1026-BH(E)-GEOG-20	Waseem Ahmad	Assessing Geo-political Significance of Energy and Mineral Reserves in Balochistan, Pakistan
57	2205-BS-GEO-21	Muhammad Khalid	Assessing Climate Change-Induced Health Vulnerabilities in District Kasur, Punjab- Pakistan: A Quantitative Analysis
58	2218-BS-GEO-21	Ruqia Ayub	Designing Smog Risk Reduction Plan: A Study of District Lahore, Punjab- Pakistan
59	5304-BS-DM-22	Saba Tariq	Beyond Physical Damages: A Study of Exploring Psychological Consequences of Smog among University Students in Lahore-Pakistan
60	2204-BS-GEO-22	Momina Zafar Malik	Geospatial Assessment of Population Pressure and Landcover Change in Lahore, Pakistan
61	2237-BS-GEO-22	Sumaira Bibi	Impact of Climate Change on Groundwater Resources in District Loralai, Balochistan: A Hydro-Climatic Assessment
62	2239-BS-GEO-22	Jahanzeb Khan	Geospatial Appraisal of Ground Water Dynamics in Pishin District, Balochistan: A Climate Change Perspective.
63	0210-BS-SP-GEO-22	Haiqa Farooq	Landcover Dynamics and Temperature Trends in District Lahore: An Urban Sprawl Perspective
64	0214-BS-SP-GEO-22	Sehar Akmal	Geo-Spatial Assessment of Urban Heat Stress in District Lahore, Pakistan
65	6124-BS-GEO-22	Areeba Maryam	An Assessment of Flood Risk along Bund Road to Kala Khatai Bund, Lahore-Pakistan
66	0202-BS-SP-GEO-22	Muhammad Usman Ali	Analysing the Impact of Soil Salinity on Agricultural Productivity in Pind Dadan Khan, District Jhelum, Pakistan
67	0208-BS-SP-GEO-22	Muhammad Aqib Munir	Damage Assessment of the 2025 Flood in District Chiniot, Punjab, Pakistan
68	2201-BS-GEO-22	Sanwal Javed	Flood Damage Assessment t in Tehsil Bhera, District Sargodha, Punjab, Pakistan
67	6125-BS-GEO-22	Muhammad Shaheer Hasan	Flood Damage Assessment of Tourist Sites in Swat Valley, Khyber Pakhtunkhwa: A Case Study of Flood in Pakistan

Technical Talks

Talks delivered in Seminars, National and International Conferences

1. GIS-Based Flash Flood Susceptibility Modelling using Geo-morphometric Ranking Approach in Panjkora Basin, Eastern Hindu Kush, Pakistan
2. Flood Risk Reduction using integrated Geo-spatial Techniques
3. Climate Change and Disasters
4. Impacts of Internally Displaced Persons on Host Communities in District Kohat, Pakistan
5. Flash Flood Susceptibility Analysis using Geo-morphometric Approach in Ushairy Basin, Eastern Hindu Kush, Pakistan
6. Exposure Analysis of Agricultural land to floods and Surface Runoff in Panjkora Basin
7. Spatio-Temporal analysis of street crimes in Data Ganj Bakhsh Town, District Lahore
8. Flood Risk Modelling: A study of highland rivers
9. Flood Risk Management using integrated Hydro-meteorological and Morphometric Approaches
10. Exposure Analysis of Agricultural Land to Hydro-meteorological Hazards in High-Land River Systems
11. Application of Hybrid Models in Geographical Research
12. Spatial Quantification of Domestic Water Consumption in Rehankot, Dir Town, Khyber Pakhtunkhwa Province-Pakistan
13. **Keynote Speaker**, "Geospatial Assessment of Smog-Induced Health Impacts: A Study of District Lahore, Pakistan." CIPH2022: International Conference on Climate Change Impact on Public Health. Organised by the Institute of Public Health (IPH) Lahore and SHC & ME

Department, 21-22 March 2022.

14. **Geo-Spatial Data Analysis for Disaster Management** at Government Queen Mary Graduate College on 23/01/2026
15. **A Way Forward 3.0” on "Climate Change and Disaster Management in Pakistan** at Alkhidmat Foundation Pakistan's Capacity Building Workshop, 2026
16. Delivered a keynote talk titled **“Flood Risk Modelling and Management Using Integrated Spatial Hydrological and Geo-Morphometric Approaches”** at the Conference on Modern Perspectives in Fluid Mechanics and Multiphase Flows, Department of Mathematics, Government College University (GCU) Lahore, held on 28 April 2026.
17. Delivered an invited lecture on "Climate Governance and Climate Finance in South Asia" at the Resilience Youth Network (RYN) South Asia Fellowship on 5 July 2026.

Seminars / Webinars Organised and Convened

1. Seminar on International Day for Disaster Risk Reduction and National Resilience Day, 2020
2. Seminar on World Ozone Day, 2020
3. Webinar World Ozone Day, 2022
4. Seminar on International Day for Disaster Risk Reduction and National Resilience Day, 2022
5. Seminar on Role of GIS in Disaster Risk Management, 2022
6. Seminar on Advanced Modelling in Disaster & Climate Change, 2022
7. Seminar on World Earth Day, 2023
8. Webinar on World Ozone Day, 2023
9. Seminar on International Day for Disaster Risk Reduction and National Resilience Day, 2023
10. Seminar on World GIS Day, 2023
11. Seminar on Road Safety, 2024
12. Seminar on World Earth Day, 2024
13. Seminar on Conserving Nature: A Pathway to Environmental and Human Well Being, 2024
14. Seminar on Silent Epidemic: Unveiling the Abuse of Drugs, 2024
15. Seminar on International Mountain Day, 2024
16. Seminar on World GIS Day, 2024
17. Seminar on Earth Day: Our Power Our Planet, 2025
18. Seminar on Use of Modern Techniques in Geography, 2025
19. Seminar on Environmental Hazards in Changing Climate: Risk, Vulnerability and Adaptation

Exhibitions Organised and Convened

1. 2022-Flood Disaster Project Exhibition, 23
2. Geographical Instruments Exhibition, 2024
3. Research Proposal Exhibition, 2025
4. National Exhibition on the 2025 Flood Disaster in Pakistan

International Symposium Organised and Convened

1. International Symposium on “Mineral Resources of Pakistan, 2022”
2. International Symposium on “Contemporary Urban Issues” on National Resilience Day, 2024

Training Workshops Organised and Convened

1. Search and utilisation of Library E-Resources
2. Citations and Referencing using EndNote
3. Basic First Aid Training – New Campus

4. Basic First Aid Training – Iqbal Hostel
5. Basic First Aid Training- Main Campus
6. Youth-Adapt Training (Y-ADAPT)
7. One-Day Training Workshop on the use of SPSS, Geographical Research, 2023
8. One-Day Training Workshop on the use of SPSS, Geographical Research, 2024
9. One-Day Training Workshop on Data Preparation for SPSS, 2025
10. One-Day Training Workshop on Watershed Modelling, 2023
11. 2-Day YABC Training, 2024
12. Rescue 1122 Training (First Aid & CPR Session), 2025
13. 2-Day YABC Learner Workshop, 2025
14. Training Workshop on Cadastral Mapping, 2025
15. Geo-spatial workshop (Virtual), 2026

Participation in National and International Conferences

1. 1st National Conference on **Institutionalising Criminology in Pakistan Issues and Challenges** Held on 26th - 28th December, 2018 at Sir Sahibzada Abdul Qayyum Museum of Archaeology and Ethnology, Organised by the Department of Criminology, University of Peshawar

Sr. No.	Presenter / Researcher	Title of the Paper Presented and Abstract Published
1	Shakeel Mahmood	Impact of War on Terror-Induced Displacement on Crime Rate in Host Communities of District Kohat, Pakistan

2. International Conference on “**Nexus of Climate Change, Hydro-Geography and Agriculture,**” organised by the Department of Geography, University of Peshawar (Baragali Summer Campus), in collaboration with the Directorate General of Soil and Water Conservation and the Higher Education Commission

Sr. No.	Presenter / Researcher	Title of the Paper Presented and Abstract Published
1.	Shakeel Mahmood	Flood Risk Reduction Planfor Highland River Systems
2.	Shakeel Mahmood Rehana Mehar	Spatio-Temporal Analysisof Urban Crimes in Data Ganj Bakhsh Town, DistrictLahore
3.	Shakeel Mahmood Attia Atiq	Socioeconomic Impacts of War on Terror-Induced Displacement on Host Communities of District Kohat, Pakistan
5.	Shakeel Mahmood Atta-ur-Rahman	Geo-spatial Assessment of Flood Risk in Panjkora River Basin Using Integrated HydroProbabilistic and Geo-Morphometric Models
6.	Muntaha Mohsin, Shakeel Mahmood, Asma Javed	Site Suitability for Urban Development Along River Jhelum Using Geospatial Techniques
7.	Bambo Bayo Shakeel Mahmood, Warda Habib	Monitoring Spatio-Temporal Change ofMangrove Cover in The Gambia Using GeospatialTechniques

8.	Mariam Sarwar Shakeel Mahmood	Spatial Analysis of Glacial Lakes using GIS and Remote Sensing in Eastern Hindu Kush Region, Pakistan
9.	Noor-ul-Huda Shakeel Mahmood, Rida Sajid	Spatio-Temporal Appraisal of River Channel Mitigation and Pattern: A study of the Ravi River along District Lahore, Pakistan
10	Saddam Hussain Shakeel Mahmood	Ground Water Assessment and Mapping using Community Perception and Geo-Spatial Techniques in Wana, South Waziristan
11	Zara Tariq Shakeel Mahmood	Spatial Estimation of Soil Erosion Risk in Eastern Hindu Kush Region, Pakistan
12	Fatima Salman Shakeel Mahmood	Geo-visualisation of Debris Covered Glaciers in Eastern Hindu Kush, Pakistan

3. International Conference on “Climate Change and Traditional Agriculture in Pakistan: Implications and Solutions” organised by Department of Geography, Shah Abdul Latif University, Khairpur, in Collaboration with Sindh Higher Education Commission, Pakistan, Fatima Fertilisers, and Roots for Equity (October 26-28, 2021)

Sr. No.	Presenter / Researcher	Title of the Paper Presented and Abstract Published
1	Dr. Shakeel Mahmood	Flash flood susceptibility Modelling using integrated Fluvio-morphological and Geo- hydrological approaches: A study of the Highland River System in the Hindu Kush Region
2	Muhammad Jamil, Shakeel Mahmood	Drought Analysis and Forecasting in Balochistan Using Integrated Markov Model and Geospatial Approach
3	Muhammad Ali, Shakeel Mahmood	Geo-Spatial Assessment of Pluvial Floods: Study of Data Gunj Bakhsh and Samnabad Towns in District Lahore, Pakistan
4	Ahmad Furqan, Shakeel Mahmood	Geo-spatial Assessment of Flash Flood Susceptibility using Geomorphometric and Spatial Hydrological Models in District Chitral, Pakistan
5	Asma Javed, Shakeel Mahmood	Assessing the Effect of Soil Salinity on Wheat Production in District Gujranwala Using Geospatial Technique
6	Mazhar Shakoar, Shakeel Mahmood	Analysis and Forecasting of Coastline Morphology in Pakistan using Digital Shoreline Analysis System
7	Ayeza Shaukat, Shakeel Mahmood	Analysis and Forecasting of Flood Hazard in Lower Chenab Basin using Hydro-probabilistic Approach
8	Ayesha Khateeb Khan, Shakeel Mahmood	Quantitative Analysis of Solid Waste Generation and Management: A study of Government College University Lahore, Pakistan
9	Abu Safyan, Shakeel Mahmood	Exploring Health Impacts of Smog on Old Age Persons in Gulberg Town, Lahore
10	Aqib Ali, Shakeel Mahmood Huda Jamal Jumaah	Exploring Health Impacts of Smog in District Gujranwala Using Community Perception
11	Nazish Nawaz, Shakeel Mahmood	Latitudinal Analysis of Rainfall Intensity and Mean Annual Precipitation over Pakistan
12	Shanzay Fatima, Shakeel Mahmood	Geo-statistical Analysis of COVID-19 Death Cases in Pakistan
13	Hazeema Mumtaz and Kanwal Javid	Analysing the Impact of COVID-19 on Climatic Conditions in Pakistan using a Geospatial Approach
14	Amna Naqvi, Shakeel Mahmood	Latitudinal analysis of Humidity using Satellite data in the Indus Plain, Pakistan
15	Zara Tariq, Shakeel Mahmood	Soil Erosion Risk Modelling Using Multiple Approaches in Eastern Hindu Kush Region, Pakistan

16	Mariam Sarwar, Shakeel Mahmood	Spatial Assessment of GLOF in Eastern Hindu Kush Region using integrated Hydrological and GIS Technique
17	Saddam Hussain, Shakeel Mahmood, Zara Tariq	Groundwater Assessment and Management using Integrated Community Perception and Geo-Spatial Techniques in Wana, South Waziristan
18	Muhammad Siraj, Shakeel Mahmood, Warda Habib	Geo-spatial assessment of land cover changes in District Dera Ismail Khan, Khyber Pakhtunkhwa, Pakistan
19	Mazhar Panah, Nasir	Assessment of groundwater recharge potential sites in Jhang and Toba Tek Singh using GIS
20	Maryam Ayub, Dr. Shakeel Mahmood	Geospatial Vulnerability Assessment to Earthquake in District Mirpur, Pakistan
21	Bambo Bayo and Shakeel Mahmood	Geo-spatial Analysis of Drought in The Gambia using Multiple Models
22	Hafsa Noor and Shakeel Mahmood	Latitudinal Analysis of Land Surface Temperature over the Indus Plain, Pakistan
23	Mahnoor Qadir, Shakeel Mahmood	Assessing Seismicity of Eastern Hindu Kush, Pakistan: A Geostatistical Approach
24	Aiman Nisar, Shakeel Mahmood	Spatio-Temporal Appraisal of Glacial Extent in Karakoram Region, Gilgit-Baltistan
25	Ahsan Iqbal, Shakeel Mahmood	Spatio-Statistical Analysis of Temperature Variations in Khyber Pakhtunkhwa, Pakistan
26	Zara Tariq, Shakeel Mahmood, Mariam Sarwar,	Soil Erosion Risk Modelling Using Multiple Approaches in Eastern Hindu Kush Region, Pakistan Spatial Assessment of GLOF in Eastern Hindu Kush Region Using Integrated Hydrological and GIS Technique
27	Fizza Ashfaq Dr. Shakeel Mahmood	Analyzing the impacts of Urban Expansion on Agricultural land in district Lahore, Pakistan
28	Abdul Rehman, Shakeel Mahmood	Exploring Spatial Patterns of Water Borne Diseases in District Chiniot using Getis-Ord Gi* Statistics
29	Asad ul Rehman, Shakeel Mahmood	Spatial Assessment of Urban Expansion on Agricultural Land in District Chiniot, Punjab, Pakistan

4. 16th All Pakistan Geographical Conference on “Globalisation, Environmental Challenges and Changing Paradigm of Geography in Pakistan” (March, 11-13, 2021)

Sr. No.	Presenter / Researcher	Title of the Paper Presented and Abstract Published
01	Shakeel Mahmood	Key Note Speaker
02	Warda Habib, Shakeel Mahmood	Assessing urban resilience in Lahore, Pakistan: a Geospatial Multi-criteria Detailed Detailed Approach
03	Saddam Hussain, Shakeel Mahmood	Impact of Climate Change on Groundwater Level in Wana, South Waziristan Using Integrated Community Perception and Geo-Spatial Techniques
04	Fizza Ashfaq, Shakeel Mahmood	Analysing the impact of urban expansion on agricultural land in the district of Lahore, Pakistan
05	Sidra Noor, Shakeel Mahmood	Assessing the weather warfare events and their impacts on the global weather pattern and policy recommendations (1967-2025)

5. International Symposium on Rebuilding Communities After Displacement at the virtual symposium held on 13th and 14th of December 2021, organised by Lund University, University of Huddersfield, University of Central Lancashire, TALTECH

Sr. No	Author's Name	Title of the Paper Presented
01	Shakeel Mahmood	Socio-economic Effects of War on Terror-Induced Displacement on Host Communities in District Kohat, Pakistan

6. Ciph2022 Conference Climate Change Impact on Public Health (21-22 March, 2022)

Sr. No	Author's Name	Title of the Paper Presented
01	Shakeel Mahmood	Geospatial Assessment of Smog-Induced Health Impacts: A Study of District Lahore, Pakistan

7. 17th International Geographical Conference on "Impact of Climate Change on Water and Agricultural Sustainability" (April 23-25, 2022)

Sr. No	Author's Name	Title of the Paper Presented and Abstract Published
01	Shakeel Mahmood	Flash Flood Susceptibility Modelling using Integrated Hydrological and Geomorphometric Approaches
02	Bambo Bayo and Shakeel Mahmood	Geo-Spatial Analysis of Drought in the Gambia Using Multiple Models
03	Mahnoor Qadir, Shakeel Mahmood	Seismic Risk Modelling and Management in the Eastern Hindukush Region, Pakistan
04	Mahnoor Qadir, Shakeel Mahmood	Geostatistical Modelling: A Non-Structural Earthquake Risk Reduction Strategy
05	Ahsan Iqbal, Shakeel Mahmood	Spatio-Statistical Analysis of Temperature Variations in Khyber Pakhtunkhwa, Pakistan
06	Maryam Ayub, Shakeel Mahmood	Analysing the Contribution of the Transportation Industry in Genesis in Distracted Lahore: A Multi-Pollutant Perspective
07	Farah, Shakeel Mahmood	Geo- Spatial Assessment of Smog in District Lahore, Pakistan
08	Abu Safyan, Shakeel Mahmood	Exploring Health Impacts of Smog on Old Age Persons in Gulberg Town, Lahore
09	Rida Asif, Shakeel Mahmood	Plantation: A nature-based solution to reduce the Risk of Smog
10	Anum Gull, Shakeel Mahmood	Rockfall Susceptibility Modelling in Chakwal District, Salt Range
11	Amina Ameen, Shakeel Mahmood	Geo- visualising the hotspots of health-induced impacts of Smog in District Lahore, Pakistan
12	Muhammad Bilal, Shakeel Mahmood	Evaluating the Impact of Climate Change on the Discharge Of Chenab River, Pakistan
13	Ali Mushtaq Umer, Shakeel Mahmood	Analysing the Impact of Smog on Human Health in District Lahore, Pakistan
14	Uzair Bin Fazal, Shakeel Mahmood	Smog intensification and Government policies: An Analysis
15	Aqsa Shahid, Shakeel Mahmood	The Impact of Government Policies on the Formation of Smog: An Evaluation
16	Zara Tariq, Shakeel Mahmood	Geo-Spatial Assessment of Soil Erosion Susceptibility in the North-Western Mountainous Region Of Pakistan
17	Zara Tariq, Shakeel Mahmood	Geo- Visualization of COVID-19 Death Cases in Pakistan
18	Mariam Sarwar, Shakeel Mahmood	Spatial Assessment of GLOF in Eastern Hindu Kush Region using an Integrated Hydrological and GIS Technique
19	Saddam Hussain, Shakeel Mahmood, Zara Tariq	Impact of Climate Change on Groundwater Level in Wana, South Waziristan Using Integrated Community Perception and Geo-Spatial Techniques

8. Rebuilding Communities after Displacement - Sustainable and Resilience Approaches (2022)

Sr. No	Author's Name	Title of the Paper Presented and Abstract Published
01	Shakeel Mahmood	Socio-economic impact of IDPs on host Communities of District Kohat, Khyber Pakhtunkhwa, Pakistan

9. Pakistan Expo on Disaster Risk Reduction (PEDRR-23) National Disaster Management Authority Pak China Friendship Centre Islamabad (16-18 August 2023)

Sr. No	Author's Name	Title of the Paper Presented
01	Ramsha Sohail, Shakeel Mahmood	Analysis of Snow Avalanche Causes and Damages in District Chitral, Pakistan
02	Ahsan Iqbal, Shakeel Mahmood	Spatio-Statistical Analysis of Temperature Variations in Khyber Pakhtunkhwa, Pakistan
03	Ramsha Sohail, Shakeel Mahmood	Geo-spatial Assessment of Urban Resilience: A study of City District Lahore, Pakistan

10. International Conference on Implications of Climate Change on Water and Agriculture, Baragali Summer Campus, University of Peshawar (June 16-19, 2023)

Sr. No	Author's Name	Title of the Paper Presented and Abstract Published
01	Asma Javed, Shakeel Mahmood	Assessing the Effect of Soil Salinity on Wheat Production in District Gujranwala Using Geospatial Technique
02	Mazhar Shakoor, Shakeel Mahmood	Analysis and Forecasting of Coastline Morphology in Pakistan using Digital Shoreline Analysis System
03	Ayeza Shaukat, Shakeel Mahmood	Analysis and Forecasting of Flood Hazard in Lower Chenab Basin using Hydro-probabilistic Approach
04	Ayesha Khateeb Khan, Shakeel Mahmood	Quantitative Analysis of Solid Waste Generation and Management: A study of Government College University Lahore, Pakistan
05	Abu Safyan, Shakeel Mahmood	Exploring Health Impacts of Smog on Old Age Persons in Gulberg Town, Lahore
06	Aqib Ali, Shakeel Mahmood	Exploring Health Impacts of Smog in District Gujranwala Using Community Perception
07	Anum Gull, Shakeel Mahmood	Rockfall Susceptibility Modelling in Chakwal District, Salt Range
08	Nazish Nawaz, Shakeel Mahmood	Latitudinal Analysis of Rainfall Intensity and Mean Annual Precipitation over Pakistan
09	Hansi Piyumi Nisansala K. K. H. P	An Investigation of The Impact Of Undergraduates' Perception of Online Learning Among Distance Learners: An Empirical Study For Undergraduates in GC University
10	Shanzay Fatima, Shakeel Mahmood	Mapping of COVID-19 Death Cases in Pakistan
11	Hazeema Mumtaz and Kanwal Javid	Analysing the Impact of COVID-19 on Climatic Conditions in Pakistan using a Geospatial Approach
12	Amna Naqvi, Shakeel Mahmood	Latitudinal analysis of Humidity using Satellite data in Indus Plain, Pakistan
13	Zara Tariq, Shakeel Mahmood	Soil Erosion Risk Modelling using Multiple Approaches in Eastern Hindu Kush Region, Pakistan
14	Mariam Sarwar, Shakeel Mahmood	Spatial Assessment of GLOF in Eastern Hindu Kush Region using integrated Hydrological and GIS Technique
15	Saddam Hussain, Shakeel Mahmood, Zara Tariq	Groundwater Assessment and Management using Integrated Community Perception and Geo-Spatial Techniques in Wana, South Waziristan
16	Muhammad Siraj, Shakeel Mahmood, Warda Habib	Geo-spatial assessment of land cover changes in District Dera Ismail Khan, Khyber Pakhtunkhwa, Pakistan

17	Bambo Bayo and Shakeel Mahmood	Geospatial analysis of drought in The Gambia using multiple models
18	Hafsa Noor and Shakeel Mahmood	Latitudinal Analysis of Land Surface Temperature Over the Indus Plain, Pakistan
19	Mahnour Qadir, Shakeel Mahmood	Assessing Seismicity of Eastern Hindu Kush, Pakistan: A Geostatistical Approach
20	Aiman Nisar, Shakeel Mahmood	Spatio-Temporal Appraisal of Glacial Extent in Karakoram Region, Gilgit-Baltistan
21	Ahsan Iqbal, Shakeel Mahmood	Spatio-Statistical Analysis of Temperature Variations in Khyber Pakhtunkhwa, Pakistan

11. 3rd International Conference on Statistical Sciences – 2023, with the theme **Data Analytics and Official Statistics for Good Governance, held on October 18, 2023, at the Department of Statistics, Government College University, Lahore**

Sr. No	Author's Name	Title of the Paper Presented and Abstract Published
1	Maryam Asif and Hina Khan	Moving Average- Exponentially Weighted Moving Average Control Charts for Rayleigh and Inverse Rayleigh Distributions under Time Truncated Life Test
2	Aiman Nisar and Shakeel Mahmood	Evaluating Climate Change Impact on Glacial Extent in the Karakoram Region, Pakistan
3	Ahsan Iqbal and Shakeel Mahmood	Climate Change Detection in Khyber Pakhtunkhwa using Geo-Statistical Approach
4	Mahnour Qadir and Shakeel Mahmood	Geostatistical Modelling: A Non-Structural Earthquake Risk Reduction Strategy
5	Shakeel Mehmood and Rehana Ghulam Mehar Ali	Spatio-Statistical Analysis of Urban Crimes in Data Ganj Bakhsh Town, District Lahore

12. 18th International Geography Conference on **Climate Change, Sustainability and Resilience, Baragali Summer Campus, University of Peshawar (7th to 9th June, 2024)**

Sr. No	Author's Name	Title of the Paper Presented and Abstract Published
01	Shakeel Mahmood	Flash Flood Susceptibility Modelling using Integrated Hydrological and Geomorphometric Approaches
02	Muhammad Farhan Saeed, Shakeel Mahmood	Analysing the impact of Electric Vehicles' introduction on air pollution reduction: A study of Lahore
03	Siddra Noor, Shakeel Mahmood	Site Suitability Analysis for Smog Cutting Towers in District Lahore, Pakistan
04	Ayeza Shaukat, Shakeel Mahmood	Analysis and Forecasting of Flood Hazard in Lower Chenab Basin using Hydro-probabilistic Approach
05	Ayesha Khateeb Khan, Shakeel Mahmood	Quantitative Analysis of Solid Waste Generation and Management: A study of Government College University Lahore, Pakistan
06	Maryam Ayub, Shakeel Mahmood	Analysing the Contribution of the Transportation Industry in Genesis in Distract Lahore: A Multi-Pollutant Perspective
07	Farah, Shakeel Mahmood	Geo- Spatial Assessment of Smog in District Lahore, Pakistan
08	Abu Safyan, Shakeel Mahmood	Exploring Health Impacts of Smog on Old Age Persons in Gulberg Town, Lahore
09	Rida Asif, Shakeel Mahmood	Plantation: A nature-based solution to reduce the Risk of Smog
10	Anum Gull, Shakeel Mahmood	Rockfall Susceptibility Modelling in Chakwal District, Salt Range
11	Amina Ameen, Shakeel Mahmood	Geo- visualising the hotspots of Health-Induced Impacts of Smog in District Lahore, Pakistan
12	Muhammad Bilal, Shakeel Mahmood	Evaluating the Impact of Climate Change On Discharge Of Chenab River, Pakistan

13	Ali Mushtaq Umer, Shakeel Mahmood	Analysing the Impact of Smog on Human Health in District Lahore, Pakistan
14	Uzair Bin Fazal, Shakeel Mahmood	Smog intensification and Government policies: An Analysis
15	Aqsa Shahid, Shakeel Mahmood	The Impact of Government Policies on the Formation of Smog: An Evaluation
16	Zara Tariq, Shakeel Mahmood	Geo-Spatial Assessment of Soil Erosion Susceptibility in North-Western Mountainous Region Of Pakistan
17	Zara Tariq, Shakeel Mahmood	Geo- Visualization of COVID-19 Death Cases in Pakistan
18	Mariam Sarwar, Shakeel Mahmood	Spatial Assessment of GLOF in Eastern Hindu Kush Region using integrated Hydrological and GIS Technique
19	Saddam Hussain, Shakeel Mahmood, Zara Tariq	Impact of Climate Change on Groundwater Level in Wana, South Waziristan Using Integrated Community Perception and Geo-Spatial Techniques
20	Warda Habib, Shakeel Mahmood	Assessing Urban Resilience In Lahore, Pakistan: A Geospatial Multi-Criteria Approach
21	Naveela Ruhi, Shakeel Mahmood	Assessing the Contribution of the Industrial Sector in formation of smog in Lahore
22	Mazhar Panah, Shakeel Mahmood	Flood Damage Assessment of Lower Indus Plain Area, Pakistan: Spatial-Hydrological Approach
23	Suleman Khan Niazi,	Impact of the Construction Industry on the Genesis of Smog in District Lahore
24	Bambo Bayo and Shakeel Mahmood	Geo-Spatial Analysis Of Drought in the Gambia Using Multiple Models
25	Mahnoor Qadir, Shakeel Mahmood	Seismic Risk Modelling and Management in Eastern Hindukush Region, Pakistan
26	Mahnoor Qadir, Shakeel Mahmood	Geostatistical Modelling: A Non-Structural Earthquake Risk Reduction Strategy
27	Ahsan Iqbal, Shakeel Mahmood	Spatio-Statistical Analysis of Temperature Variations in Khyber Pakhtunkhwa, Pakistan

13. 1st National Geography Conference on Sustainable Earth Resources and Planning Institute of Geography, University of Punjab, Pakistan (December 5-7, 2024)

Sr. No	Author's Name	Title of the Paper Presented
01	Warda Habib, Shakeel Mahmood	Resilience Assessment of Lahore using Multicriteria Decision Making Methods and GIS
02	Anum Gul, Shakeel Mahmood	Rockfall Susceptibility Modelling in Chakwal District, Salt Range, Pakistan
03	Nayab Arif, Shakeel Mahmood	Temporal and Spatial Analysis of Covid 19 Incidence Hotspots in Pakistan: A Spatio-statistical Analysis
04	Rubab Kazmi, Shakeel Mahmood	Assessing the Impact of Climate Change on Glacial Mass Balance in the Karakorum region using Geospatial Techniques
05	Uzair Bin Fazal, Shakeel Mahmood	Designing a Road Traffic Accidents Risk Reduction Plan: A Community Perspective

14. International Conference on Nexus of Climate Change and Disaster Risk Reduction at Baragali Summer Campus, University of Peshawar (August 1–3, 2025)

Sr. No	Author's Name	Title of the Paper Presented and Abstract Published
01	Shakeel Mahmood	Key Note Speaker
02	Zonish Javed	Role of Leaf Morphology in The Absorption of Fog-Forming Pollutants in Lahore Metropolitan Area
03	Saddam Hussain, Shakeel Mahmood	Impact of Climate Change on Groundwater Level in Wana, South Waziristan Using Integrated Community Perception and Geo-Spatial Techniques
04	Maryam Sarwar, Shakeel Mahmood	1-Spatial Assessment of GLOF in Eastern Hindu Kush Region using integrated Hydrological and GIS Technique,

		2- Geo-visualisation of Debris Flow Susceptibility in District Chitral, Pakistan
05	Farheen Tahir, Shakeel Mahmood	Geospatial Assessment of River Channel Morphology using Meander Migration Model in Lower Chenab Basin, Pakistan
06	Maryam Ayub, Shakeel Mahmood	Flood Risk Assessment and Management of the Swat River Basin in Pakistan
07	Uzair Bin Fazal, Shakeel Mahmood	Policy Evaluation in relation to Smog: A study of Urban Areas in Pakistan
08	Syeda Rubab Haider Kazmi	Assessing the impact of Climate change on Glacial mass balance in the Karakoram Region using geospatial techniques
09	Warda Habib, Shakeel Mahmood	Assessing urban resilience in Lahore, Pakistan: a Geospatial Multi-criteria Approach
10	Sidra Noor, Shakeel Mahmood	Assessing the weather warfare events and their impacts on the global weather pattern and policy recommendations (1967-2025)
11	Muhammad Farhan Saeed, Shakeel Mahmood	Environmental Impact Assessment of Drinkable Water, Through Geo-Spatial Techniques: A Case Study Of Khewra, District Jhelum
12	Mujtaba Shafiq, Shakeel Mahmood	Assessment of Forest Management Strategies in Azad Jammu and Kashmir
13	Fizza Ashfaq, Shakeel Mahmood	Analysing the impact of urban expansion on agricultural land in the district of Lahore, Pakistan
14	Fatima Yaqoob, Shakeel Mahmood	Glacial Lake Outburst Floods in Hunza Valley: A review of risk and adaptive responses
15	Maryam Zahra, Shakeel Mahmood	Assessing the Impact of Islamabad's Rapid Urban Growth on Deforestation: A Meta-Analysis
16	Farheen Arshad	Assessing the Impact of Urbanisation on Land Surface Temperature in Lahore, Pakistan: A Meta-Analysis
17	Sheeza Hamid, Shakeel Mahmood	1-Drought Vulnerability in Baluchistan and Sindh: A Review of Trends and Management Strategies 2- Analysing the Prediction of mortality among Asphyxiated neonates
18	Hira Shahbaz, Shakeel Mahmood	An Integrated Geospatial Approach of GHS Emission Impact on Air Quality due to above-ground biomass in Rawalpindi Division, Punjab, Pakistan

15. International Science Conference on Exploring Emerging Trends: Integrating Scientific Innovation for the Community Progress According to Sustainable Development Goals (Sdgs),
GGovt. Graduate College for Women, Gulberg, Lahore, Pakistan (6 November, 2025)

Sr. No	Author's Name	Title of the Paper Presented and Abstract Published
01	Shakeel Mahmood	Key Note Speaker
02	Mariam Sarwar, Shakeel Mahmood	Spatial Assessment of GLOF in Eastern Hindu Kush Region Using Integrated Hydrological and GIS Technique
03	Hira Shahbaz, Shakeel Mahmood	Geo-Visualization of Air Quality Using Google Earth Engine: A Transboundary Study of Pakistan and India
04	Hira Shahbaz, Shakeel Mahmood	Geospatial Assessment of the May 2025 Dust Storm in Punjab, Pakistan: Causes, Impacts, and Vulnerability Analysis

05	Farheen Tahir and Shakeel Mahmood	Geospatial Assessment of River Channel Morphology using Meander Migration Model in Lower Chenab Basin, Pakistan
06	Noor-ul-Huda, Shakeel Mahmood and Rida Sajid	Change Detection of Ravi River's Channel Pattern Along District Lahore Using Remote Sensing
07	Maryam Ayub and Shakeel Mahmood	Flood Risk Assessment and Management of the Swat River Basin in Pakistan
08	Maryam Khalid Sheikh and Shakeel Mahmood	Geo-Statistical Analysis of Rainfall Pattern Variation in Indus Basin Using SPI Technique
09	Muhammad Ahmad and Shakeel Mahmood	Rainfall Patterns/Trends and Urban Flood in Lahore
10	Sohail Khalid and Shakeel Mahmood	Role of Emerging Information Technology in Disaster Response and Recovery in Pakistan
11	Muhammad Ahmad and Shakeel Mahmood	Rainfall Patterns/Trends and Urban Flood in Lahore

16. International Conference on Clean and Green Strategies for Environmental Remediation (CGSER 2025) December 2 2025, at Forman Christian College University, Lahore.

Sr. No	Author's Name	Title of the Paper Presented and Abstract Published
01	Hira Shahbaz, Shakeel Mahmood	Geo-Visualisation of Air Quality Using Google Earth Engine: A Transboundary Study of Pakistan and India
02	Saba Tariq, Shakeel Mahmood	Beyond physical damage: exploring psychological consequences of smog among university students in District Lahore

17. X International Annual Symposium 2026 held on Environmental Health & Biosecurity: Sciences, Engineering & Applications from 7th to 8th May, 2026 at Óbuda University, Hungary, Europe

Sr. No	Author's Name	Title of the Paper Presented
01	Hira Shahbaz, Shakeel Mahmood	Geo-Visualization of Air Quality Using Google Earth Engine: A Transboundary Study of Pakistan and India

18. International Conference on Modern Perspectives in Fluid Mechanics and Multiphase Flows, Organised by the Department of Mathematics, GC University Lahore, on April 28, 2026

Sr. No	Author's Name	Title of the Paper Presented and Abstract Published
01	Shakeel Mahmood	Keynote Speaker on "Flood Risk Modelling & Management in Highland River Systems"
01	Hira Shahbaz, Shakeel Mahmood	Integrating Atmospheric Fluid Dynamics with Geospatial Analytics for Transboundary Air Pollution Assessment Using Google Earth Engine
02	Saba Tariq, Shakeel Mahmood	From Flow to Feeling: Tracing the Psychological Turbulence of Smog Dynamics Among University Students in Lahore, Pakistan
03	Mearaj Ul Saliheen, Shakeel Mahmood	Rainfall Runoff Estimation Using the NRCS Model in the Zhob River Catchment, Pakistan.
04	Momina Zafar Malik, Shakeel Mahmood	Rainfall Run-off Modelling Setun River, Russia
05	Jahanzaib khan, Shakeel Mahmood	Geospatial Modelling of surface runoff depth in the Pishin Lora basin using SCS-CN method
06	Sehar Akmal, Shakeel Mahmood	Rainfall-Runoff Modelling for Watershed Management of the Thames River Basin Using GIS-Based Hydrological Model and SRTM DEM
07	Sumaira bibi, Shakeel Mahmood	Watershed modelling of River Loralai Basin, Balochistan, Pakistan

19. 3rd International Symposium on Geo-Hazards Perception, Cognition, and Prediction (ISGHPCP 2026) at Central South University, Changsha, China (June 18–20, 2026)

Sr. No	Author's Name	Title of the Paper Presented and Abstract Published
01	Shakeel Mahmood	Keynote Speaker on "Disaster Risk Reduction (DRR) and Flood Risk Modelling"
02	Anum Gull, Shakeel Mahmood, Muhammad Irfan Ahmad, Adnan ul Rehman, Sanju Purohit	Comparative Assessment of Rockfall Susceptibility in the Potohar Plateau Using Frequency Ratio, Analytical Hierarchy Process, and Weights of Evidence Models

Awards

Year	Honor / Award / Recognition
2004	Gold Medal in M.Sc. Geography, University of Peshawar, Pakistan.
2026	Recognised as Keynote Speaker , Capacity Building Workshop "A Way Forward 3.0", organised by Alkhidmat Foundation Pakistan, for delivering the keynote address " Climate Change and Disaster Management in Pakistan " (28 January 2026).
2026	Recognised as Keynote Speaker , National Conference on Modern Perspectives in Fluid Mechanics and Multiphase Flow, for delivering the keynote address " Flood Risk Modelling & Management in Highland River Systems " (28 April 2026).
2026	Recognised as Keynote Speaker , 3rd International Symposium on Geo-Hazards Perception, Cognition, and Prediction (ISGHPCP 2026), Central South University, Changsha, China for delivering the keynote address " Disaster Risk Reduction (DRR) and Flood Risk Modelling " (19 June 2026).

PhD Synopsis Evaluated

Year	Research Scholar	Research Title	Institution
2026	Hameed, L.	<i>Spatio-temporal Analysis of Air Quality Index (AQI) and its Association with Cardiovascular Morbidity in Pakistan</i>	Department of Geography & Geoinformatics, The Islamia University of Bahawalpur
	Bibi, H.	<i>Phytogeographic Assessment and Environmental Suitability Analysis of Selected Antidiabetic Medicinal Plants in Pakistan</i>	Department of Geography & Geomatics, The Islamia University of Bahawalpur

PhD Thesis Evaluated

Year	Research Scholar	Research Title	Institution
2022	Baseer, S.	<i>Assessing the Correlation Between Flood Damage Patterns and Humanitarian Response to the 2022 Floods in District Charsadda, Pakistan</i>	Centre for Disaster Preparedness and Management (CDPM), University of Peshawar
	Khan, S. M.	<i>Landslide Susceptibility Assessment, Pattern and Trend Prediction: A Comparative Analysis of Alpuri and Neelum Valleys, Pakistan</i>	Department of Geography and Geomatics, University of Peshawar
	Shah, M.	<i>Comparative Analysis of Multiple Drought Indices in Khyber Valley, Pakistan</i>	Centre for Disaster Preparedness and Management, University of Peshawar
2023	Saeed, M.	<i>Flood Risk Assessment Using Artificial Neural Network in Lower Kabul Basin, Pakistan</i>	Department of Geography and Geomatics, University of Peshawar
2024	Nadeem, B.	<i>Monitoring Hydro-Climatic Variability and Its Impact on Intensity, Pattern and Trend Prediction of Discharge in Jhelum River Basin, Western Himalaya</i>	Department of Geography and Geomatics, University of Peshawar
2025	Maroof Shah	<i>Comparative Analysis of Multiple Drought Indices in Khyber Valley, Pakistan.</i>	Centre for Disaster Preparedness and Management, University of Peshawar

MS/MPhil Theses Evaluated

Year	Research Scholar	Research Title	Institution
2017	Bibi, S.	<i>Appraisal of Landslide Susceptibility Using Frequency Ratio: A Study of Tehsil Balakot, Khyber Pakhtunkhwa</i>	Department of Geography, University of Peshawar
2018	Nayab, S.	<i>Assessment of Land Suitability for Major Crops in District Peshawar</i>	Department of Geography, University of Peshawar
2019	Gulzar, S.	<i>Application of ARIMA Model for the Comparative Analysis of Temperature and Rainfall Variability of Potwar Plateau and Peshawar Valley, Pakistan</i>	Department of Geography, University of Peshawar
	Khan, I.	<i>Groundwater Flow and Physical Properties Modelling Using GIS and Remote Sensing Techniques: A Case Study of Haripur Basin, Pakistan</i>	National Centre of Excellence in Geology, University of Peshawar
2020	Qazi, F.	<i>Application of GIS as a Tool for the Mitigation of Landslide Hazard: A Case Study of Murree, Pakistan</i>	Department of Geography, University of Peshawar
	Karim, A.	<i>Sub-seasonal Monsoon Precipitation Variability and Its Potential Drivers over Pakistan (1981–2018)</i>	Department of Geography, University of Peshawar
	Abiden, Z. U.	<i>Concentration of Toxic Gases in Major Traffic Junctions and Their Impact on Human Health in Faisalabad City</i>	Department of Geography, University of Gujrat
	Siddique, M.	<i>Evaluation of Pixel-Based Semi-Automatic Remote Sensing Techniques for Co-Seismic Landslide Detection</i>	National Centre of Excellence in Geology, University of Peshawar
	Gilani, S.	<i>Estimation of Revenue from Recyclable Municipal Solid Waste: A Case Study of Jinnahabad & Habibullah Colony, Abbottabad</i>	Department of Geography, University of Peshawar
2021	Rukh, G.	<i>Impacts of Militancy on Agriculture in Tehsil Upper Kurram, District Kurram, Pakistan (2005–2021)</i>	Department of Geography, University of Peshawar
	Benjamin, Z. P.	<i>The Effect of Vegetation on the Local Climate of an Arid Region</i>	Forman Christian College (A Chartered University), Lahore
	Khan, M.	<i>Flood Susceptibility Assessment and Mapping Using Integrated Bivariate and Multivariate Statistical Models in Dasht Basin, Pakistan</i>	Department of Geography, University of Peshawar
2022	Suliman, M.	<i>Utilization of Remote Sensing Techniques for Mapping Limestone in Kohat Area, Pakistan</i>	National Centre of Excellence in Geology, University of Peshawar
	Ali, M.	<i>Spatio-temporal Analysis and Trend Prediction of Urban Expansion Using the SLEUTH Model: A Study of Mingora City, Pakistan</i>	Department of Geography, University of Peshawar
	Khan, F.	<i>Analysis of Landslide Susceptibility, Causes and Extent of Damages in Neelum Valley, Azad Jammu and Kashmir</i>	Department of Geography, University of Peshawar

2023	Ali, S.	<i>Evaluation of Community Resilience to Floods Using a Composite Resilience Approach in Wari Subdivision, North Pakistan</i>	Department of Geography and Geomatics, University of Peshawar
	Bibi, A.	<i>Spatial Distribution of Dropout Rate at Primary Level Among Girls in District Malakand, Pakistan</i>	Department of Geography, University of Peshawar
2024	Iqbal, B.	<i>Estimation and Validation of Air Temperature from Satellite-Based Land Surface Temperature: A Case Study of District Peshawar (2004–2018)</i>	National Centre of Excellence in Geology, University of Peshawar
2025	Batool, S.	<i>WASH Factors Associated with Diarrhea Among Under-Five Children: A Case Study of Punjab, Pakistan</i>	Department of Geography and Geomatics, The Islamia University of Bahawalpur