



Dr. Shakeel Mahmood

Chairperson /Associate Professor

Master Trainer

IRDR Young Scientist

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DoB: 25/03/1981

Impact Factor: 120

Citations: 1300

“Disaster Risk Reduction is the Business of Everyone”

	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
International Training	2025	Silk Road Disaster Risk Reduction and Sustainable Development Chinese Academy of Sciences (CAS), Beijing, China
Editor (Academic Journal)	Jan. 2024	➤ Discover Geosciences
	Jan, 2023	➤ Advanced GIS
	Jan, 2023	➤ Advanced Geomatics
	2023	➤ Applied and Environmental Soil Science
	2021	➤ Journal of Wildlife and Ecology
Editor (Edited Volume)	June, 2025	➤ Flood Risk Reduction: Cutting Edge Strategies and Innovative Technologies (Accepted) Publisher: Springer Nature
	March, 2024	➤ Soil Erosion: Risk Modelling and Management Publisher: IntechOpen

Professional Courses (National & International)	20/10/2011 to 04/12/2011	16th Master Training Professional Development Program (MT-FPDP) Learning Innovation Division (LID), Higher Education Commission (HEC), Islamabad, Pakistan.
	26/11/2012-14/12/2012	Advance Faculty Professional Development Program on Ensuring Training Effectiveness Asian Institute of Technology (AIT), Bangkok, Thailand.
Academic Programs (Initiated)	2023 2023 2024	BS Disaster Management MS Disaster Management PGD Disaster Management
	2023 2023	BS Remote Sensing and GIS PGD Remote Sensing and GIS
	2024	PGD Tourism and Recreation
Professional Experience	Year	Description
	06/02/2020 to date	Chairperson Department of Geography, GC University, Lahore
	23/08/2019 to date	Associate Professor Department of Geography, GC University, Lahore
	13/02/2019 to 23/08/1019	Assistant Professor Department of Geography, GC University, Lahore
	13/10/2008 to 13/02/2019	Lecturer Department of Geography, GC University, Lahore
	Oct. 2014 to Oct. 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 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 Admission Committee GC University, Lahore.
	2020 to 2024	Member of Re-checking Committee GC University, Lahore.
	2020 to data	Member of Academic Council GC University, Lahore.
	2020 to data	Member of Board of Faculty Faculty of Physical and Mathematical Sciences GC University, Lahore.
Member of NCRC HEC, Pakistan	2018 to date	National Curriculum Review Committee (NCRC) of Disaster Management Higher Education Commission (HEC), Pakistan
	2025 to date	National Curriculum Review Committee (NCRC) of Remote Sensing and GIS Higher Education Commission (HEC), Pakistan
Conferences Organized (International)	March 2023	1. Applications of Hybrid Modelling in Geographical Research
	October 2023	2. Climate Change and Disasters
	June 2025	3. Emerging Research Trends in Geography
Symposiums Organized	April 2023	1. International Symposium on “ <i>Mineral Recourses of Pakistan, 2022</i> ”
	October, 2024	2. International Symposium on “ <i>Contemporary Urban Issues</i> ” on National Resilience Day, 2024
Geography Week Organized	November, 2023	The first ever Geography Week , 2023, organized 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 Scope of Geography

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

2016

1. **Mahmood, S.**, Khan, A. H., & Mayo, S. M. (2016). Exploring underlying causes and assessing damages of 2010 flash flood in the upper zone of 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). Impacts Evaluation of 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 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 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 Metropolitan area of Pakistan using 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 2014 flood in 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 2014 flood in lower Chenab Basin, 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
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. Shoaib, M., Rashid, I., Akbar, H., Sheikh, A. A., Farooqi, S. H., Khan, M. A., ... & Khan, F. A. (2022). Prevalence Of Ixodidae Ticks And Their Association With Different Risk Factors In Khyber Pakhtunkhwa, Pakistan. *JAPS: Journal of Animal & Plant Sciences*, 32(2).
39. Yasar, A., Basit, S., Tabinda, Au.B., **Mahmood, S.**, et al. (2022). Evaluation of operational and financial viability models of combined landfill site for intermediate cities in Pakistan. *Environ Sci Pollut Res*. <https://doi.org/10.1007/s11356-022-22240-4>.

2023

40. Bayo, B., & **Mahmood, S.** (2023). Geo-spatial analysis of drought in The Gambia using multiple models. *Natural Hazards*, 117(3), 2751-2770.
41. 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.
42. 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.
43. 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.

44. 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>
45. Khan, A., Rahman, A. U., & **Mahmood, S.** (2023). Spatial estimation of soil erosion risk using RUSLE model in District Swat, Eastern Hindu Kush, Pakistan. *Journal of Water and Climate Change*, 14(6), 1881-1899.
46. **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.
47. 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.
48. 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.
49. 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.
50. Yasar, A., Basit, S., Tabinda, A. U. B., Ali, A., **Mahmood, S.**, ... & Tanveer, R. (2023). Evaluation of operational and financial viability models of combined landfill site for intermediate cities in Pakistan. *Environmental Science and Pollution Research*, 30(1), 1825-1840.

2024

51. 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.
52. **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.
53. **Mahmood, S.**, Ali, A., & Jumaah, H. J. (2024). Geo-visualizing the hotspots of smog-induced health effects in district Gujranwala, Pakistan: a community perspective. *Environmental Monitoring and Assessment*, 196(5), 1-14.
54. 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*, 1-20.
55. Ali, M., & **Mahmood, S.** (2024). Geo-spatial assessment of pluvial floods in city district Lahore, Pakistan. *Environmental monitoring and assessment*, 196(2), 189.
56. 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>
57. Ahmad, M., & **Mahmood, S.** (2024). Exploring the Impact of Land Cover Changes on 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>
58. Ayub, M., **Mahmood, S.**, & Sarwar, M. (2024). Analyzing the Contribution of Transportation in 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>

59. Javed, W., & **Mahmood, S.** (2024). Designing 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>
60. **Mahmood, S.**, Abbas, F., & Hussain, S. (2024). Cause and Damages 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>
61. Mushtaq, A., & **Mahmood, S.** (2024). Analyzing 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>
62. 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>
63. 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>
64. Sarwar, M., **Mahmood, S.**, & Saeed, F. (2024). Geo-visualization 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>
65. Uzair-Bin-Fazal, **Mahmood, S.**, & Aqsa Shahid. (2024). Analyzing 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>
66. 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.
67. 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

68. 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.
69. Ashraf, T., Ahamad, M. I., **Mahmood, S.**, Fu, J., Mehmood, M. S., Rehman, A., ... & Zulqarnain, R. M. (2025). Exploring hotspots of traffic accidents in Chiniot-Sargodha Road, Punjab, Pakistan. *Environment, Development and Sustainability*, 1-21.
70. Chaudhary, H & **Mahmood, S.** (2025). Urban Walkability Assessment: Methods and Implications for City Planning. *Environment, Development and Sustainability* (Accepted).
71. Hamid, S. & **Mahmood, S.** (2025). Analyzing the Predictors of Mortality Among Asphyxiated Neonates. *International Journal of Innovations in Science & Technology*, 7(9), 142-156.
72. 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.
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>

MS/MPhil Thesis Supervised

Sr.No	Roll No	Student's Name	Thesis Title
01	1002-MS-Geo-12	Farman Atique	Rockfall Risk Assessment along Motorway in Salt Range using GIS and Remote Sensing
02	2012-MS -Geo-12	Rehan 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 Muzaffar Garh using Geo Informatics
05	1002-MG-Geo-13	Ahtasham Irshad	Spatial Modeling 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	Mariyum Nasir	Floodplain Modeling from Mangla Downstream to Head Trimmu using Geospatial Technique
09	0001-MSGEO-14	Zonish Javid	Role of Leaf Morphology in Absorption of Smog causing Pollutants in Lahore Metropolitan.
10	1501-MSGEO-14	Attia Atiqu	Debris Flow Risk Zonation in Hindukush Region, Pakistan
11	1004-MSGEO-18	Muhammad Jamil	Modeling 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 Modeling 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-MSGEOG-19	Shaher Bano	Geo-spatial Assessment of Urban Floods in District Lahore Using Multiple Models
19	1006-MSGEOG-19	Ayeza Shaukat	Analysis and Forecasting of Flood Hazard in Lower Chenab Basin using Hydro-probabilistic Approach
20	1007-MSGEOG-19	Rida Sajid	Geo-spatial Assessment of River Channel Pattern and Floodplain Dynamics in Lower Chenab Basin
21	1007-R-MSGEOG-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 Geo Spatial 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-MS-GEOG-20	Syed Yasir Usman	Flood Damage Assessment of Tourist Sites in Swat Valley Khyber Pakhtunkhwa, Pakistan: A Case Study of 2022 Floods
29	1001-MSGEO-21	Mahnour 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	Analyzing Dam Breach Outflow and Inundation at 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 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	Analyzing 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 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 Chewnab 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 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

PGD GIS and Remote Sensing Thesis Supervised

Sr. No	Roll No	Student's Name	Thesis Titles
01	0001-PGD-GISRS-22	Mariam Sarwar	Geo-Visualization 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-Visualization of Air Quality Using Google Earth Engine: A Transboundary Study of Pakistan and India

BS Geography Thesis Supervised

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 district Sheikhpura, Pakistan
03	437-BH-GEOG-08	Ain Ud Din	Study on coal mining hazards in duki Baluchistan
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 accidents 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 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 river Zhob using Float Method
13	442-BH-GEOG-09	Jai Pakash Ahuja	Socio-economics impact of 2010 flood in Agra union and Gambat Distract Khairpur
14	465-BH-GEOG-09	Rai Asim Raza	Damage assessments of 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 looms industries: A case study of Union Council 3/20 district Hafiz Abad.
17	430-BH-GEOG-10	Fiaz Shaukat	Flash flood risk assessment and modeling 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 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 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	1114-BH-GEOG-17	Mudassir Sohail	Spatio-Temporal assessment of rainfall variation and vegetation cover in Punjab, Pakistan
30	1116-BH-GEOG-17	Jafar Gulzarz Hashmi	Spatio-Temporal analysis of land Cover in district Pakpattan using Satellite Data
31	1118-BH-GEOG-17	Ahmad Furqan	Geo-spatial assessment of flash flood susceptibility modeling using geomorphometric and hydrological

			approaches in District Chitral, Pakistan
32	1124-BH-GEOG-17	Jamal-ud-din	Rainfall-runoff modeling using hydrological approach in Eastern Hindukush Region, Pakistan
33	1104-BH-GEOG-19	Muhammad Bilal	Assessing the Impact of Climate Change on Discharge of Chenab River
34	1108-BH-GEOG-19	Asad ul Rehman	Spatial Assessment of Urban Expansion on Agricultural Land in Chiniot City, Punjab, Pakistan
35	1111-BH-GEOG-19	Muhammad Hasnat Mustafa	Geo-Spatial Assessment of Particulate Matter in Lahore Division, Punjab Pakistan
36	1119-BH-GEOG-19	Maryam Ayub	Geospatial Vulnerability Assessment of Earthquake in Mirpur City Azad Jammu and Kashmir, Pakistan
37	112-BH-GEOG-19	Warda Javed	Designing Flood Risk Reduction Plan for Kalat Division, Balochistan, Pakistan
38	1132-BH-GEOG-19	Shahzeb Hussain	Impact of Built-up Environment on Land Surface Temperature in City District Lahore, Pakistan
39	1138-BH-GEOG-19	Abdullah	Hotspots Analysis of Air Pollution induced Diseases in City District Lahore, Pakistan
40	1139-R-BH-GEOG-19	Asfand Yar	Ground Water Table modeling and Management in District Quetta, Balochistan using Geospatial Analysis
41	1142-BH-GEOG-19	Kainat Claudia	Impact of Hydro-Politics on River Ravi Discharge: An Analysis
42	0911-BH(E)-GEOG-19	Zeeshan Akbar Khan	Exploring Water Borne Diseases in Union Council 4 District Kasur, Punjab, Pakistan
43	0914-BH(E)-GEOG-19	Salal Qudoos	Cause and Damage Assessment of 2022 Flood Disaster in Kalat Division Baluchistan, Pakistan
44	0921-BH(E)-GEOG-19	Fizza Ashfaq	Analyzing the Impact of Urban Expansion on Agricultural Land in District Lahore, Pakistan
45	0923-BH(E)-GEOG-19	Zainab Zaid	Spatial Pattern of Municipal Solid Waste Generation in City District Lahore, Pakistan
46	0927-BH(E)-GEOG-19	Ayaz Haider Naqvi	Climate Change Detection in Pakistan using Multi-stage Satellite Data
47	0929-BH(E)-GEOG-19	Abdul Rehman	Exploring Spatial Patterns of Water Borne Diseases in District Chiniot using Getis-Ord G_i^* Statistics
48	0936-BH(E)-GEOG-19	Fakhar Abbas	Cause and Damage Assessment of 2022-Flood Disaster in Khyber Pakhtunkhwa, Pakistan
49	0950-BH(E)-GEOG-19	Ijlal Mehdi	Impact of Tourism on Host Community in Skardu City, Gilgit Baltistan, Pakistan
50	1110-BH-GEOG-20	Qalb-e-Abbas	Exploring the Consequences of High Temperature on Human Behavior in District Sibi, Balochistan, Pakistan: A Community Perspective
51	1113-BH-GEOG-20	Shahid Ur Rehman	Cause and Damage Analysis of 2022 Flood in District Upper Chitral, Khyber Pakhtunkhwa, Pakistan
52	1123-BH-GEOG-20	Muhammad Fazil	Impact of Landcover Changes on land Surface Temperature in Districts Hangu and Kohat, Khyber Pakhtunkhwa, Pakistan
53	1126-BH-GEOG-20	Zulqarnain Haider	Landslide Damage Assessment in Districts of Hunza and Nagar, Gilgit-Baltistan, Pakistan
54	1134-BH-GEOG-20	Sadi Ahmed	Exploring the impact of Climate Change on Agricultural Productivity: A Farmer 's Perspective in Tehsil Chiniot, Punjab, Pakistan
55	1141-BH-GEOG-20	Gul Ahmed	Spatial and Temporal Analysis of Groundwater Table District Nankana Sahib, Punjab, Pakistan
56	1006-BH(E)-GEOG-20	Saad Ullah	Assessing the Impact of Real Estate Bubble on Land Cover Changes in District Gujranwala, Punjab, Pakistan
57	1026-BH(E)-GEOG-20	Waseem Ahmad	Assessing Geo-political Significance of Energy and Mineral Reserves in Balochistan, Pakistan
58	2205-BS-GEO-21	Muhammad Khalid	Assessing Climate Change-Induced Health Vulnerabilities in District Kasur, Punjab- Pakistan: A Quantitative Analysis

59	2218-BS-GEO-21	Ruqia Ayub	Designing Smog Risk Reduction Plan: A Study of District Lahore, Punjab- Pakistan
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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 highlands 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. Flood Disaster Modelling and Community Risk Reduction Strategies for the Hindu Kush Region, Pakistan.

Seminars / Webinars Organized 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 Seminar on Role of GIS in Disaster Risk Management, 2022
6. Seminar on Advanced Modeling 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
20. Seminar on GIS Day, 2025

Exhibitions Organized and Convened

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

International Symposium Organized and Convened

3. International Symposium on “Mineral Recourses of Pakistan, 2022”
4. International Symposium on “Contemporary Urban Issues” on National Resilience Day, 2024

Training Workshops Organized and Convened

1. Search and utilization 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 use of SPSS, Geographical Research, 2023
8. One Day Training Workshop on 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

Participation in National and International Conferences

International Conference on “*Nexus of Climate Change, Hydro- Geography and Agriculture* ” organized by Department of Geography University of Peshawar, Baragali Summer Campus in Collaboration with Directorate General of Soil and Water Conservation, Peshawar and Higher Education Commission Pakistan

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 Meher	Spatio-Temporal Analysis of Urban crimes in Data Ganj Bakhsh Town, District Lahore
3.	Shakeel Mahmood Attia Atiq	Socioeconomic Impacts of War on Terror induced Displacement on Host Communities of DistrictKohat, 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 of Mangrove Cover in The Gambia Using GeospatialTechniques
8.	Mariam Sarwar Shakeel Mahmood	Spatial Analysis of Glacial Lakes using GIS and RemoteSensing in Eastern Hindu Kush Region, Pakistan
9.	Noor-ul-Huda Shakeel Mahmood,Rida Sajid	Spatio-Temporal Appraisalof River Channel Mitigation and Pattern: A study of Ravi River along District Lahore, Pakistan
10	Saddam Hussain Shakeel Mahmood	Ground Water Assessment and Mapping using Community Perception and Geo-Spatial Techniques inWana, South Waziristan
11	Zara Tariq Shakeel Mahmood	Spatial Estimation of Soil Erosion Risk in EasternHindu Kush Region, Pakistan
12	Fatima Salman Shakeel Mahmood	Geo-visualization of DebrisCovered Glaciers in Eastern Hindukush, Pakistan

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

Sr. No	Author's Name	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 Highland River System in 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 Geo Spatial Technique
6	Mazhar Shakoor, 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 ¹ and Kanwal Javid	Analyzing the Impact of COVID-19 on Climatic Condition in Pakistan using Geospatial Approach
14	Amna Naqvi, Shakeel Mahmood	Latitudinal analysis of Humidity using Satellite data in 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 change in District Dera Ismail Khan, Khyber Pakhtunkhwa, Pakistan
19	Mazhar Panah, Nasir	Assessment of ground water recharges potential sites in Jhang and Toba Tek Singh Using GIS
20	MaryamAyub, 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	Mahnour 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 G_i^* Statistics
29	Asad ulRehman, Shakeel Mahmood	Spatial Assessment of Urban Expansion on Agricultural Land in District Chiniot, Punjab, Pakistan

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

Sr. No	Author’s Name	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 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	Analyzing the impact of urban expansion on agricultural land in district 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)

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	Mahnour Qadir, Shakeel Mahmood	Seismic Risk Modelling and Management in Eastern Hindukush Region, Pakistan
04	Mahnour 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	Analyzing the Contribution of 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 Modeling in Chakwal District, Salt Range
11	Amina Ameen, Shakeel Mahmood	Geo- visualizing the hotspots of Health induced Impacts of Smog in District

	Mahmood	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	Aanalyzing 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

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

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

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 Geo Spatial 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 Modeling in Chakwal District, Salt Range
08	Nazish Nawaz, Shakeel	Latitudinal Analysis of Rainfall Intensity and Mean Annual Precipitation

	Mahmood	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	Analyzing the Impact of COVID-19 on Climatic Condition in Pakistan using 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 Mutiple 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 change in District Dera Ismail Khan, Khyber Pakhtunkhwa, Pakistan
17	Aasma Ashraf, Sahar Zia	Assessment of Built-Up Area on Urban Flooding A Case Study of Sector E-11 Islamabad
18	Mazhar Panah, Nasir Abbas	Assessment of ground water recharges potential sites in Jhang and Toba Tek Singh Using GIS
19	Muntaha Mohsin, Sahar Zia	Site Suitability Analysis for Urban Settlements along River Jhelum, Pakistan using GIS and Remote Sensing Techniques
20	Suleman Khan Niazi, Nasir Abbas	Assessment of Groundwater Status in Zhob, Balochistan Using GIS
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	Mahnour 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

**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	Analyzing the impact of Electric Vehicles Introduction in 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	Analyzing the Contribution of 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
	Mahmood	

10	Anum Gull, Shakeel Mahmood	Rockfall Susceptibility Modeling in Chakwal District, Salt Range
11	Amina Ameen, Shakeel Mahmood	Geo- visualizing 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	Aanalyzing 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 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 Construction Industry on 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

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 Geo Spatial Techniques
05	Uzair Bin Fazal, Shakeel Mahmood	Designing a Road Traffic Accidents Risk Reduction Plan: A Community Perspective

Nexus of Climate Change and Disaster Risk Reduction 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

	Mahmood	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-visualization 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 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 geo- spatial 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	Analyzing the impact of urban expansion on agricultural land in district 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 Urbanization 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 neonate
18	Hira Shehbaz, Shakeel Mahmood	An Integrated Geospatial Approach of GHS Emission Impact on Air Quality due to above ground Biomass in Rawalpindi Division Punjab Pakistan

International Science Conference on Exploring Emerging Trends: Integrating Scientific Innovation for the Community Progress According to Sustainability 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 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

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-Visualization 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