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Showmitra Kumar Sarkar
Assistant Professor

Research Area

Education

Master of Urban and Regional Planning (MURP)

Khulna University of Engineering and Technology (KUET), Khulna, Bangladesh, (2017-2022)

Bachelor of Urban and Regional Planning (BURP)

Khulna University of Engineering and Technology (KUET), Khulna, Bangladesh, (2012-2016)

Higher Secondary Certificate (HSC) Examination

Singra Domdama Pilot School & College, Natore, Bangladesh, (2009-2011)

Secondary School Certificate (SSC) Examination

Singra Domdama Pilot School & College, Natore, Bangladesh, (2005-2009)

Service Records

- **Faculty Member (Lecture)**

Department/Section: Department of Urban and Regional Planning

Khulna University of Engineering and Technology (KUET) From 01-01-1970 to 01-01-1970

Research Interest

Publication

Books

Journals

29. Das, D., S., S., Sarkar, &, K., S. and (2023), " Spatio-temporal variability of vegetation and its relation to different hydroclimatic factors in Bangladesh," **Heliyon**, Elsevier, vol9, no.8, pp.e18412
28. (2023), " Navigating nature's toll: Assessing the ecological impact of the refugee crisis in Cox's Bazar, Bangladesh," **Heliyon**, Elsevier, vol9, no.7, pp.e18255
27. (2023), " Assessment of coastal vulnerability using integrated fuzzy analytical hierarchy process and geospatial technology for effective coastal management," **Environmental Science and Pollution Research**, Springer Nature
26. (2023), " Groundwater level fluctuations and associated influencing factors in Rangpur District, Bangladesh, using modified Mann-Kendall and GIS-based AHP technique," **Theoretical and Applied Climatology**, Springer Nature, vol153, pp.1323-1339
25. Rudra, R., R., R., Sarkar, &, K., S. and (2023), " Artificial neural network for flood susceptibility mapping in Bangladesh," **Heliyon**, Elsevier, pp.e16459
24. (2023), " Groundwater potential mapping in Jashore, Bangladesh," **Heliyon**, Elsevier, vol9, no.3, pp.e13966
23. (2022), " Investigating the spatial collision factors associated with bikeshare crashes at Washington, D.C.," **Spatial Information Research**, Springer Nature, vol31, pp.91-99
22. (2022), " Transformation towards a mega-regional formation of Khulna city, Bangladesh," **Spatial Information Research**, Springer Nature
21. Sarkar, S., K., S., Morshed, M., M., M., Chakraborty, & and T., T. (2022), " COVID-19 Vulnerability Mapping of Asian Countries," **Disaster Medicine and Public Health Preparedness**, Cambridge University Press, pp.1-8
20. Sarkar, S., K., S., Saroar, S., M., M., Chakraborty, & and T., T. (2022), " Cost of Ecosystem Service Value due to Rohingya Refugee Influx in Bangladesh," **Disaster Medicine and Public Health Preparedness**, Cambridge University Press, pp.1-8
19. (2022), " Sustainable Groundwater Potential Zoning with Integrating GIS, Remote Sensing, and AHP Model: A Case from North-Central Bangladesh," **Sustainability**, MDPI, vol14, no.9, pp.5640
18. (2022), " Assessing the spatial mapping of heat vulnerability to urban heat island (UHI) effect in the Dhaka Metropolitan Area," **Sustainability**, MDPI, vol14, no.9, pp.4945
17. (2022), " Developing robust flood susceptibility model with small numbers of parameters in highly fertile regions of Northwest Bangladesh for sustainable flood and agriculture management," **Sustainability**, MDPI, vol14, no.7, pp.3982
16. Chakraborty, C., T., T., Sarkar, S., K., S., Morshed, & and M., M. (2022), " Big Data and Remote Sensing for Multi-decadal Drought Impact Assessment on Shorea robusta," **Theoretical and Applied Climatology**, Springer Nature, pp.1-16
15. (2022), " Assessing the effect of future landslide on ecosystem services in Aqabat Al-Sulbat region, Saudi Arabia," **Natural Hazards**, Springer Nature
14. (2022), " Delineating the groundwater potential zones in Bangladesh," **Water Supply**, IWA Publishing
13. (2022), " Modelling and Mapping of Landslide Susceptibility Regulating Potential Ecosystem Service Loss: An Experimental Research in Saudi Arabia," **Geocarto International**, Taylor & Francis
12. (2022), " Novel hybrid models to enhance the efficiency of groundwater potentiality model," **Applied Water Science**, Springer Nature,

vol12, no.62, pp.1-22

11. Sarkar,S , K.,S. , Morshed,&. and M.,M. (2021) , " Spatial Priority for COVID-19 Vaccine Rollout against Limited Supply," **Heliyon**, Elsevier, vol7, no.11, pp. e08419
10. (2021) , " Groundwater potentiality mapping using ensemble machine learning algorithms for sustainable groundwater management," **Frontiers in Engineering and Built Environment**, Emerald Publishing, pp.1-12
9. Morshed,M. , M.,M. , Sarkar,&. , K.,S. and ,(2021) , " Common Factors of COVID-19 Cases and Deaths among the Most Affected 50 Countries," **Diabetes & Metabolic Syndrome: Clinical Research & Reviews**, Elsevier
8. Sarkar,S , K.,S. , Khan,&. and M.,M. (2021) , " Impact of COVID-19 on PM2.5 Pollution in Fastest-growing Megacity Dhaka, Bangladesh," **Disaster Medicine and Public Health Preparedness**, Cambridge University Press, pp.1-4
7. Sarkar,S , K.,S. , Ekram,E. , M.,K. M. , Das,&. and C.,P. (2021) , " Spatial Modeling of COVID-19 Transmission in Bangladesh," **Spatial Information Research**, Springer Nature, pp.1-12
6. (2021) , " Application of Remote Sensing for Salinity Based Coastal Land Use Zoning in Bangladesh," **Spatial Information Research**, Springer Nature, vol29, pp.353â€"364
5. Sarkar,S. and K.,S. (2020) , " COVID-19 Susceptibility Mapping Using Multicriteria Evaluation," **Disaster Medicine and Public Health Preparedness**, Cambridge University Press, pp.1-17
4. (2020) , " Simulation based Modeling of Urban Waterlogging in Khulna City," **Journal of Water and Climate Change**, IWA Publishing, vol12, no.2, pp.566â€"579
3. Khan,K , M.,M. , Sarkar,&. and K.,S. (2019) , " Landslide Modelling and Risk Assessment: Evidence from Chattogram City of Bangladesh," **Journal of Engineering Science**, Faculty of Civil Engineering, Khulna University of Engineering & Technology, Khulna-9203, Bangladesh, vol10, no.2, pp.91-101
2. Sarkar,S , K.,S. , Esraz-Ul-Zannat,&. E. and M.,M. (2019) , " Managing Municipal Waste: Application of Spatial Tools and Techniques," **Journal of Engineering Science**, Faculty of Civil Engineering, Khulna University of Engineering & Technology, Khulna-9203, Bangladesh, vol10, no.1, pp.113-122
1. (2016 (Printed in April 2018)) , " Incorporating Drainage Modeling with Development Plan to Reduce Climate Change Induced Waterlogging in Urban Areas of Bangladesh: A Case Study of Khulna City," **Journal of Bangladesh Institute of Planners** , Bangladesh Institute of Planners (BIP), Dhaka, Bangladesh, vol9, pp.59-68

Conference

8. (2020) , "An Explorative Study on Students Using Bicycle in Khulna City," **5th International Conference on Civil Engineering for Sustainable Development (ICCESD-2020)** , Department of Civil Engineering, KUET, pp.57
7. Rahman,R. , M.,M. , Sarkar,&. and K.,S. (2020) , "Appraisal of Ecosystem Services and Disservices in Urban Areas," **International Conference on Earth and Environmental Sciences & Technology for Sustainable Development (ICEEST-2020)** , Faculty of Earth and Environmental Sciences, University of Dhaka, Bangladesh, pp.656
6. Khan,K , M.,M. , Sarkar,&. and K.,S. (2019) , "Landslides: An Inventory Analysis of Chattogram City," **International Conference on Disaster Risk Management** , BUET-Japan Institute of Disaster Prevention and Urban Safety (BUET-JIDPUS), pp.440-443
5. Khan,K , M.,M. , Tasnim,T. , S.,S. , Sarkar,&. and K.,S. (2017) , "A GIS Based Vulnerability and Risk Assessment of Flood Hazard in Coastal Area: A Case Study of Koyra Upazila, Khulna," **International Conference on Disaster Risk Mitigation** , BUET-JIDPUS and Civil Engineering Department, BUET
4. Hasan,H. , S.,S. , Hassan,H. , M.,K. , Sarkar,&. and K.,S. (2016) , "Environmental Assessment of Wastewater Disposal on Mouri River at Khulna: An Application of GIS," **3rd International Conference on Civil Engineering for Sustainable Development (ICCESD-2016)** , Department of Civil Engineering, KUET, pp.27-28
3. (2016) , "Trip Generation in Khulna City: A Household Based Analysis," **3rd International Conference on Civil Engineering for Sustainable Development (ICCESD-2016)** , Department of Civil Engineering, KUET, pp.261-262
2. (2015) , "Impact Assessment of Waste Discharge on Fish Production in Mouri River," **International Conference on Recent Innovation in Civil Engineering for Sustainable Development (IICSD-2015)** , Department of Civil Engineering, DUET, pp.56
1. Hasan,H. , S.,S. , Hassan,H. , M.,K. , Sarkar,&. and K.,S. (2015) , "Environmental Assessment of Wastewater Drains Outfalls Points into River Mouri at Khulna: An Application of GIS," **International Conference on Recent Innovation in Civil Engineering for Sustainable Development (IICSD-2015)** , Department of Civil Engineering, DUET, pp.55