S M Samiul Islam

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EDUCATION

Master of Science: Urban and Regional Planning *Anticipated: May 2023*

Concentration: Lan Use and Environmental Planning; Transportation

The University of Iowa, Iowa City, IA

Bachelor of Urban and Regional Planning *December 2017*

Highest GPA in graduating class
Chittagong University of Engineering and Technology (CUET), Bangladesh

RELEVANT EXPERIENCE

Team Member *August 2022-Present*

Iowa Initiative for Sustainable Communities, "**Housing Needs and Strategies Plan in Clinton, Iowa**"
University of Iowa School of Planning and Public Affairs, University of Iowa, Iowa City, IA

- Collaborating with five graduate students in a yearlong capstone course partnership with the City of Clinton which culminated in a complete professional report for in May 2023
- Evaluating local housing and demographic conditions, identifying strategies and policies to meet housing and sustainability needs
- Gained experience with project management including, setting goals and responsibilities, managing timelines, and memorandum writing.

GIS Specialist at Community Development (Internship) *May 2022-June 2022*

City of Cedar Rapids

- Working in a collaboration study of the environmental sustainability team to finalize the city's environmental and transportation action plan.
- Help the team to identify the influencing factors of compact and complete community development

Graduate Research Assistant *Aug 2021-May 2022*

School of Planning and Public Affairs, The University of Iowa, Iowa, USA

- Assessing the impact of local public libraries on the most vulnerable populations will provide invaluable information on best resilience-building practices
- Independently analyzed survey data and prepared Spatial-temporal maps
- Prepare multivariant regression analysis between the libraries and other socio-economic variables.

Urban planner (GIS and CAD specialist) *July 2019- July 2021*

NewVision Solutions Limited (Research and Development team) Dhaka, Bangladesh

Completed Projects

i) *Master planning and Designing of Mirsharai Ocean-Front Economic Zone (MOFEZ) Plot #20 and Port, Bangladesh*

Client: Japan Development Institute (JDI)

Responsibility:

- Analyzed dredging and sedimentation from the proposed Sitakundu port to MOFEZ plot #20.
- Cost estimation of the project: Dredging of the channel, 500 Acre EZ and jetty area, plus the development of 500 Acre EZ infrastructure plus the jetty

- Prepared layouts of internal road, canal, water supply network, gas supply, telecommunication line, wastewater pipeline, and administrative building.
- Prepared detailed Topographic mapping and supervised the data collection team.

ii) *Assessment of Sustainability and Targeting of DFID's Water and Sanitation Portfolio, 2011-2015*
Client: IMC, UK (Funder by DFID)
Responsibility:

- Provide practical training for data enumerators and supervisors.
- Design necessary data collection forms, ensuring that the purpose and use of data collected are clear and that questions are simple, straightforward, and collectible.
- Provide practical training for data enumerators and supervisors.
- Performed advisory and technical assignments using Geographic Information Systems (GIS).
- Regularly map the project facilities and any other valuable facilities connected to the WSH sector as per the WASH sector.
- Work closely with the project manager to ensure consistency and accuracy of the information collected from the field
- Participate in Cluster and inter-cluster meetings representing the deploying organization, and provide the necessary support in presenting the relevant data and information
- Produce case studies, best practices, worst case, field experiences, newsletters, e-bulletins, and other advocacy materials.

iii) *Investigation of Logistics Network in Asian Region Using Offshore Floating Structure*
Client: Japan Offshore Design and Engineering Platform (J-DeEP)
Responsibility:

- Estimate the capability of the opening container near Chittagong Port
- Prepare the best route for container transportation from Chittagong to Dhaka or other locations.
- Analyze critical issues for inland river cargo transportation.
- Prepared a suitability map showing possible locations to install FCT (Channel, Island, water depth met ocean conditions).
- Analyzed the depth of water for various seasons on the proposed route.

iv) *A feasibility study on the MOFEZ economic zone access route.*
Client: Bangladesh Economic Zone Authority, Govt. of Bangladesh.
Responsibility:

- Found the best route through the analysis of Google earth images that accept the lowest number of settlements.
- Conducted and supervised field survey and topographic survey.
- Prepared report and presented to the ministry of Bangladesh.

v) *Gas Pipeline relocation of Japanese Economic Zone*
Client: Bangladesh Economic Zone Authority, Govt. of Bangladesh.
Responsibility:

- Conducted Environmental Impact Assessment on the gas pipeline relocation project.
- Prepared Resettlement Action Plan (RAP).
- Quantified the acquisition area of the new gas pipeline route.

Research Assistant *Sep 2018 - July 2019*

Dept. of Civil Engineering, Chittagong University of Engineering and Technology (CUET), Bangladesh

- Completed drought susceptibility mapping of Northern Bangladesh
- Collected the meteorological, satellite, and groundwater level historical dataset for 30 years over Northern Bangladesh.
- Adjusted and allocated data for the GIS environment to analyze drought susceptibility.
- Designed the Map layouts in the GIS platform.
- Analyzed the time gap of different droughts and established a relationship among them so that policymakers can take precautionary steps.

- Prepared a detailed report and a manuscript for journal paper publication.
- Published journal paper in ELSEVIER: https://doi.org/10.1016/j.envc.2021.100410

Research Assistant *Jan 2018 to Aug 2018*

Center for River, Harbor, and Landslide Research Center (CRHLSR), CUET, Bangladesh

Completed "Multi-criteria based coastal vulnerability analysis using the fuzzy geospatial technique

- Prepared data and setup factors for the physical, forcing, and socio-economic coastal vulnerability.
- Detected the wave height using the SWAN model and organized the data for the GIS environment.
- Prepared GIS map and analyzed the different responsible factors for coastal vulnerability
- Completed a detailed report and published papers in two international conferences and a renowned journal named ELSEVIER (https://doi.org/10.1016/j.ocecoaman.2019.03.010)

Professional Internship

Aug 2016 to Sep 2016

Center for Environmental and Geographical Information Services (CEGIS) under "Remote sensing division," Dhaka, Bangladesh

- Analyzed the Change of permanent water bodies and flood plain area within Dhaka metropolitan master plan area between 1989 and 2018 using Satellite images ERDAS imagine and classified into different land classes.
- Prepared the Map layouts and analyzed the land-use changes over the period.

ACHIEVEMENTS

- Awarded the summer fellowship at the University of Iowa.
- Awarded the Graduate Assistantship the at the University of Iowa based on exceptional GPA
- Achieved the highest Cumulative GPA in the ungraduated class.
- Dean's scholarship in all eight semesters at the undergraduate level.
- Achieved scholarship in both primary and junior level
- Earned board scholarship at Secondary School Certificate exam.

Experience as an instructor

- Trained the fundamental use of Geographic Information System (GIS) and Remote Sensing technique in professional life to the Govt. and non-govt. Professionals. *Aug 2018- Nov 2018*
- Provided basic knowledge of different statistical analyses to undergraduate students at multiple universities as a trainer.

RESEARCH AND PUBLICATIONS

Islam, S. S., Islam, K. A., & Mullick, M. R. A. (2021). *Drought hot spot analysis using local indicators of spatial autocorrelation: An experience from Bangladesh*. Environmental Challenges, 100410. Doi: https://doi.org/10.1016/j.envc.2021.100410

Islam, S. S., Tanim, A. H., & Mullick, M. R. A. (2020). *Vulnerability Assessment of Bangladesh Coastline Using Gornitz Method*. In Water, Flood Management and Water Security Under a Changing Climate (pp. 301-313). Springer, Cham. Doi: https://doi.org/10.1007/978-3-030-47786-8_21

Mullick, M. R. A., Tanim, A. H., & **Islam, S. S.** (2019). *Coastal vulnerability analysis of Bangladesh coast using fuzzy logic-based geospatial techniques*. Ocean & Coastal Management, 174, 154-169. https://doi.org/10.1016/j.ocecoaman.2019.03.010

Islam, S. S., Mullick, M. R. A. & Tanim, A. H. (2018). *Land Use and Land Classification of Coastal Districts of Bangladesh using Sentinel-2 satellite imagery*. Proceedings, International Conference on Advances in Civil Engineering, Chattogram, Bangladesh.

Islam, S. S. & Mishuk, M.S. (2017). *Analysis of Surge Heights in Respect of Historical Cyclone Events*. Proceedings of International Conference on Planning, Architecture and Civil Engineering. Rajshahi, Bangladesh.

Islam, S. S., Mishuk, M.S., & Rahman, H. (2017). *Impact of Roadside Commercialization on Transportation Performance: A case study on Lalkhan Bazar to Customs road*. Proceedings of International Conference on Planning, Architecture and Civil Engineering. Rajshahi, Bangladesh.

Islam, S. S., Raja, D.R., & Arifin, R. (2017). *Analysis of The Transformation of Water Body of Dhaka Metropolitan Area (DMA) Using Remote Sensing and GIS Techniques*. Proceedings, International Conference on Disaster Risk Mitigation, Dhaka, Bangladesh.

PROFESSIONAL MEMBERSHIP

- Member (Student), American Planning Association (APA).
- Associate member, Bangladesh Institute of Planners.

SOFTWARE SKILL

- ArcGIS Online and Desktop
- ArcGIS Pro
- QGIS
- R programming
- Python for Machine learning
- SQL (basic)
- SNAP
- Sen2Cor
- SPSS
- Stata
- AutoCAD (2D and 3D)
- Google SketchUp
- ERDAS Imagine
- Microsoft Office programs (Word, Excel, and PowerPoint presentation)
- Microsoft project

REFERENCES

1. Steven Spears, Ph.D.
Position: Associate Professor, School of Planning and Public Affairs, The University of Iowa, IA, USA.
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2. Dr. Scott Spak
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