

## Shabiha Hossain

Graduate Research Assistant  
 Department of Geography and Sustainability,  
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**Research Interest**  
 Geospatial Analysis, Health  
 Geography, Remote Sensing,  
 Environmental Geography

### Education:

2023 - Present	3 <sup>rd</sup> Year PhD Student, Geography and Sustainability University of Tennessee, Knoxville
2021-2022	Master of Science (M.Sc.) in Environmental Science Department of Environmental Science Bangladesh University of Professionals, Dhaka, Bangladesh
2017-2021	Bachelor of Science (B.Sc.) in Environmental Science Department of Environmental Science Bangladesh University of Professionals, Dhaka, Bangladesh

### Professional Experiences:

#### Graduate Research Assistant (January 2025 – Present)

Department of Geography and Sustainability, University of Tennessee, Knoxville

Responsibilities: Working on different research methods, analysis, and visualization

#### Graduate Teaching Assistant (August 2023 – December 2024)

Department of Geography and Sustainability, University of Tennessee, Knoxville

Responsibilities: Assisted in GEOG 111 (Our Digital Earth), GEOG 345 (People and Environment), GEOG 331 (Natural Hazards), GEOG 200 (Environmental Issues in National Parks), Secondary Instructor in GEOG 131 (Our Geography),

#### Research Associate (November 2022 – July 2023)

Environment and Climate Change Division, Bangladesh Institute of Social Research Trust

Activities: Develop work plans according to project; preparation of EOI, proposal, questionnaires and research reports, imparting training to the field staff, supervision and monitoring of field works; data analysis and summarizing.

#### Research Assistant (September 2020 – October 2022)

Reactor and Nuclear Physics Division (RNPD), Atomic Energy Research Establishment (AERE), Baipail, Dhaka, Bangladesh

Activities: Writing and reviewing proposals; designing conceptual framework; assisting in research projects; data collection, preservation and analyzing

## Publications & Research Experiences:

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R1 **Hossain, S.**, Anik, A.H., Khan, R., Ahmed, F.T., Siddique, A.B., Khan, A.H.A.N., Saha, N., Idris, A.M., Alam, M., (2022). Public Health Vulnerability Due to the Exposure of Dissolved Metal(oid)s in Tap Water from a Mega City (Dhaka, Bangladesh): Source and Quality Appraisals. *Exposure and Health*. <https://doi.org/10.1007/s12403-021-00446-0>

R2 **Hossain, S.**, Khan, R., Anik, A.H., Siddique, A.B., Tamim, U., Islam, A.R.M.T., Idris, A.M., Khaleque, (2022). Natural and anthropogenic contribution to the elemental composition and subsequent ecological consequences of a transboundary river's sediments (Punarbhaga, Bangladesh). *Environmental Research*, 114444. <https://doi.org/10.1016/j.envres.2022.114444>

R3 **Hossain, S.**, Anik, A.H., Alam, M., (2021). Radioactivity and Its Possible Impact on Environment and Human Health: A Review. *Int. Res. J. Environmental Sci.* Vol. 10(4), 24-34.

R4 Hasan Anik, A., **Hossain, S.**, Alam, M., Binte Sultan, M., Hasnine, M., & Rahman, M. (2021). Microplastics pollution: A comprehensive review on the sources, fates, effects, and potential remediation. *Environmental Nanotechnology, Monitoring & Management*, 16, 100530. <https://doi.org/10.1016/j.enmm.2021.100530>

R5 Khan, R., **Hossain, S.**, Anik, A. H., Phoungthong, K., Islam, A. R. M. T., Saha, N., ... & Alam, M. (2023). Indexical and statistical approaches to investigate the integrated origins of elements in the sediment of Teesta River, Bangladesh: sediment quality and ecological risk assessment. *Environmental Science: Processes & Impacts*, 25(4), 832-849. <https://doi.org/10.1039/D2EM00475E>

R6 Khan, R., Anik, A. H., **Hossain, S.**, Phoungthong, K., Islam, A. R. M. T., Saha, N., ... & Alam, M. (2023). Receptor model-based source tracing and risk assessment of elements in sediment of a transboundary Himalayan River. *Chemosphere*, 339, 139733. <https://doi.org/10.1016/j.envres.2022.114134>

R7 Anik, A.H., Khan, R., **Hossain, S.**, Siddique, M., Tamim, U., & Islam, A. et al. (2022). Reconciling the geogenic and non-crustal origins of elements in an Indo-Bangla transboundary river, Atrai: Pollution status, sediment quality, and preliminary risk assessment. *Environmental Research*, 214, 114134. <https://doi.org/10.1016/j.envres.2022.114134>

R8 Alam, M., Sultan, M., Mehnaz, M., Fahim, C., **Hossain, S.**, & Anik, A. (2022). Production of biogas from food waste in laboratory scale dry anaerobic digester under mesophilic condition. *Energy Nexus*, 7, 100126. <https://doi.org/10.1016/j.nexus.2022.100126>

R9 Khan, R., Basir, M. S., Akhi, S. Z., Anik, A. H., **Hossain, S.**, Islam, H. T., ... & Tareq, S. M. (2023). Radiation exposure and health concerns associated with the environmental geochemistry of relatively higher radioactivity in a fresh water basin. *Marine Pollution Bulletin*, 196, 115588. <https://doi.org/10.1016/j.chemosphere.2023.139733>

R10 Alam, M., Sultan, M. B., Anik, A. H., **Hossain, S.**, Kabir, A., Hasnine, M. T., & Yuan, Q. (2024). Microplastics in Landfill and Leachate. In *Microplastics Pollution and its Remediation* (pp. 267-298). Singapore: Springer Nature Singapore.

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### **Field Experiences:**

Environmental Assessment and Construction Site Characterization of Metro Rail, 2020, Dhaka, Bangladesh.

Field work on Coastal Environment (Cox's Bazar and Saint-martin Island, Bangladesh), 2019.

Field work on soil, water, and ecological study of the world largest mangrove forest Sundarban, 2018.

Field work on the geomorphological study (Sylhet, Bangladesh), 2017.

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### **Grants, Awards & Honors:**

National Science and Technology (NST) Fellowship, 2021-2022 for the accomplishment of M.Sc. thesis from Ministry of Science and Technology (MoST), Bangladesh.

Best Paper Award in the “International Conference on Rural Development in Asia Pacific Region, NIRDPR-NERC, 2020, India.”

Dean's appreciation award, Magna cum laude, Spring 2018, Bangladesh University of Professionals, Dhaka, Bangladesh

Dean's appreciation award, Summa cum laude, Spring 2020, Bangladesh University of Professionals, Dhaka, Bangladesh

Dean's appreciation award, Summa cum laude, Fall 2020, Bangladesh University of Professionals, Dhaka, Bangladesh

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### **Conference & Presentation:**

*International Seminar on Rural Development in Asia Pacific Region* (24-28 August 2020) Awarded ‘Best Presenter’ (ISRDAP0613) of Technical Session VI (Health and other social issues)

Grand Challenge Summit 2025 (13-14 February 2025), Title: Unraveling the Interconnection: Substance Use and Health-Related Behaviors among Youth in Tennessee.

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### **Guest Lectures**

Guest lecture on “Water Resources” in the course “Environmental Issues of National Parks”, April 2024. University of Tennessee. Knoxville, Tennessee.

Guest lecture on “Environmental Issues of Bangladesh” in the course “Societies and Spaces of South Asia”, March 20225. University of Tennessee. Knoxville, Tennessee.