

SHARMIN SULTANA

Environmental Scientist | Technical Manager | Researcher

Sirajganj, Bangladesh | +880 1723844089 | sharminsultana.mbstu@gmail.com

Professional Profile

Environmental scientist and technical manager with academic and professional experience spanning industrial wastewater treatment, environmental monitoring, environmental impact assessment, pollution assessment, laboratory quality assurance, and environmental compliance. First-ranked graduate at both B.Sc. and M.S. levels, with peer-reviewed research in sustainable wastewater treatment and hands-on experience in river-sediment contamination research, air-quality and meteorological monitoring, and technical environmental consultancy.

Education

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| Mawlana Bhashani Science and Technology University (MBSTU) | Tangail, Bangladesh |
| <i>Master of Science (M.S.) in Environmental Science; CGPA: 3.79/4.00, 1st Position</i> 2018 – 2021 | |
| – Thesis: <i>Assessment of Polycyclic Aromatic Hydrocarbons in River Sediments Affected by Tannery Effluents</i> . | |
| – Relevant study areas included climate change and adaptation, industrial pollution management, advanced wastewater engineering, environmental modelling, biodiversity conservation, and advanced research methodology. | |
| Mawlana Bhashani Science and Technology University (MBSTU) | Tangail, Bangladesh |
| <i>B.Sc. (Honours) in Environmental Science and Resource Management; CGPA: 3.81/4.00, 1st Position</i> 2013 – 2018 | |
| – Thesis: <i>Environment-Friendly Clay Coagulant Aid for Industrial Effluent Treatment</i> . | |
| – Awarded the University Academic Genius Award for outstanding undergraduate performance and first position in the department. | |

Professional Experience

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| EnviroCare International Ltd. | Dhaka, Bangladesh |
| <i>Technical Manager</i> Mar 2025 – Present | |
| – Manage technical activities involving environmental sampling, monitoring, laboratory data review, quality assurance, and preparation/review of scientific environmental reports. | |
| – Support environmental compliance and assessment work aligned with Department of Environment (DoE) and Bangladesh Accreditation Board (BAB) requirements and organizational quality systems. | |
| – Work with air-quality analyzers, particulate-matter sensors, VOC detectors, meteorological systems, and noise/vibration monitoring devices; interpret complex monitoring data for practical conclusions. | |
| EnviroCare International Ltd. | Dhaka, Bangladesh |
| <i>Consultant (Environment)</i> May 2019 – Feb 2025 | |
| – Contributed to environmental impact assessment, environmental and atmospheric monitoring, pollution assessment/modelling, sustainability planning, and industrial environmental compliance assignments. | |
| – Coordinated field and laboratory workflows, interpreted environmental datasets, and contributed to technically defensible reports and recommendations for industrial and environmental projects. | |
| – Supported maintenance of organizational quality practices associated with ISO 17020:2012 and ISO 9001:2015 certifications. | |
| Atomic Energy Centre Dhaka (AECD) | Dhaka, Bangladesh |
| <i>Research Assistant</i> Oct 2019 – Sep 2020 | |
| – Worked on the research project <i>Assessment of Polycyclic Aromatic Hydrocarbons in River Sediments Affected by Tannery Effluents</i> , focusing on sediment contamination, environmental sampling, analytical interpretation, and pollution-risk assessment. | |
| Bangladesh Reference Institute for Chemical Measurements (BRiCM) | Dhaka, Bangladesh |
| <i>Research Assistant, Government-Funded Research Project</i> Apr 2017 – Mar 2018 | |
| – Supported the project <i>Environment-Friendly Clay Coagulant Aid for Industrial Effluent Treatment Plant</i> , including laboratory investigation and evaluation of sustainable industrial wastewater-treatment approaches. | |

Research & Publications

Peer-Reviewed Journal Article **2022**
– Sultana, S., Karmaker, B., Saifullah, A.S.M., Galal Uddin, M., & Moniruzzaman, M. “Environment-friendly clay coagulant aid for wastewater treatment.” *Applied Water Science*, 12(1), 1–10. doi:10.1007/s13201-021-01540-z.

Manuscripts in Preparation **2026**
– *Coupled Assessment of Industrial Effluent Quality and River Sediment Contamination to Inform Pollution Control Priorities*. Focus: industrial effluent, river-water quality, sediment contamination, heavy-metal risk indices, source apportionment, and pollution-control prioritization.
– *Impact of Industrial Effluent Treatment Efficiency on Downstream Sediment Quality*. Focus: Buriganga and Dhaleshwari Rivers, treatment efficiency, downstream sediment quality, heavy metals, and statistical assessment of contamination patterns.

Research Interests

Industrial wastewater treatment; water quality and river health; sediment contamination and heavy metals; environmental monitoring; environmental risk assessment; pollution modelling; environmental and social impact assessment; sustainable treatment technologies; industrial environmental compliance and resource management.

Honors & Awards

University Academic Genius Award, MBSTU – First position in B.Sc. (Honours), CGPA 3.81/4.00 **2023**
National Science and Technology (NST) Fellowship, Ministry of Science and Technology, Bangladesh **2018–2019**
Talent Pool Scholarship, Bangladesh **2006**
Shapla Cub Award, Bangladesh Scouts **2005**

Selected Training & Certifications

Environmental and Social Framework (ESF) Fundamentals, Open Learning Campus, World Bank Group **2024**
Introduction to Waste Management System, EnviroCare International Ltd. **2023**
Introduction to Chemical Management System and Handling Procedure, EnviroCare International Ltd. **2022**
ISO 14001:2015 – Environmental Management Systems, EnviroCare International Ltd. **2022**
Hazard Identification and Risk Assessment, EnviroCare International Ltd. **2022**
Environmental and Social Impact Assessment (ESIA), EnviroCare International Ltd. **2020**
Environmental and Social Legislations, Guidelines, and Policies, EnviroCare International Ltd. **2020**
Leadership and Resume Writing Workshop, Green Leaf Youth Association, MBSTU **2015**
Computer: Office Applications and Internet Browsing, Bangladesh Small and Cottage Industries Corporation (BSCIC) **2014**

Conference & Seminar Participation

International Conference on Advancement of Life Sciences (ICALS), MBSTU **2024**
International Conference on Advancement of Life Sciences (ICALS), MBSTU **2019**
1st International Conference on Environmental Science and Resource Management (ICESRM), MBSTU **2019**
Seminar: Use of Mangrove Microalgae as Tool for Detecting Trace Metal Contamination in Estuarine Ecosystem, MBSTU **2019**
Seminar: World Clean Up Day, MBSTU **2016**
Seminar: Water for Sustainable Development, MBSTU **2015**

Technical Skills

Environmental: Environmental monitoring; industrial effluent and wastewater assessment; water/sediment sampling; air-quality and meteorological monitoring; EIA/ESIA; environmental compliance; pollution assessment; environmental risk assessment; laboratory QA/QC.
Data & Software: SPSS; ArcGIS; Microsoft Excel, Word, PowerPoint, Access; Python for data science and machine learning (ongoing learning).
Instrumentation: Air-quality analyzer; particulate-matter sensor; VOC detector; meteorological monitoring system; noise and vibration monitoring devices.
Languages: Bangla (native); English (IELTS Academic 6.5; Listening 7.5, Reading 7.0, Writing 6.0, Speaking 5.5). Both B.Sc. and M.S. programs were taught in English.

Leadership & Affiliations

Member, ESRM Alumni Association, Mawlana Bhashani Science and Technology University **2018 – Present**
Member, Raising Awareness for Conserving Environment (RACE), MBSTU **2013 – 2020**