

Kamal Ziaul Islam

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CLIMATE CHANGE RESEARCHER

I am a highly skilled hydrological modeler with over **2 years of experience** in **Soil and Water Assessment Tool (SWAT) model, Hydrus-1D, CropWat model**. I have knowledge of popular programming such as **Python, and R** and experience with the Statistical package **Minitab** and also developed data analysis and scientific report writing skills.

TECHNICAL SKILLS

Hydrological model : SWAT, Hydrus-1D, SPAW (Soil Plant Air Water), CropWat
Climate model : Statistical Downscaling (SDSM)
Computer programing : R, Python, C++,
Statistical Package : Minitab, XLstat
GIS and Remote Sensing : ArcGIS, QGIS, Google Earth Engine
Document Preparation : LaTeX, Overleaf

EXPERIENCE

Research Assistant May 2022 – Present
Grenfell Campus, Memorial University *Corner Brook, NL*

- Field scale hydrological modeling using **Hydrus-1D**. Conducted fieldwork to collect data on soil properties, vegetation cover, topography, and climate.
- Contributed to a greater understanding of the complex interactions between soil, water, and vegetation.

Engineer in Training May 2022 – Dec 2022
Grenfell Campus, Memorial University *Corner Brook, NL*

- Assist Facilities Management and maintenance staff with project management work and documentation and progress reporting of various on-site construction projects and upcoming works.
- Site assessments and tracking of work against proposed scheduling, and other associated duties.

Teaching Assistant May 2021 – April 2022
Grenfell Campus, Memorial University *Corner Brook, NL*

- Assist the course instructor with daily duties including grading assignments and offering additional support to students for using **Minitab**.

Deputy General Manager 2016 – 2021
Jessore PBS, BREB *Jessore, Bangladesh*

- Developed policies, procedures, guidelines, and priorities to achieve established goals.
- Managed projects and programs with engineers, planning, scheduling, and coordinating activities.
- Lead regional water resource initiatives focused on sustainable and efficient water; irrigation, drainage, flood protection, water supply, and natural system needs.
- Integrated climate science and climate change considerations across all aspects of program activities, giving emphasis on addressing impacts of sea-level rise and precipitation changes.
- Supported the Zonal's resilience initiative and efforts as a partner in the Southwest Regional Climate Change impact.
- Prepared and managed operational and capital budgets, pursuing funding opportunities and partnerships.
- Managed the execution of program reports and tracked performance, producing agency correspondence, briefing documents, and presentations.

Assistant General Manager 2007 – 2021
Kushtia PBS, BREB *Kushtia, Bangladesh*

- Developed solutions to agricultural problems concerned with power and machinery, electrification, structures, soil, and water conservation, improving the process of agricultural products, and applying agricultural engineering technology.

- Plan, design, and construct Irrigation and Drainage facilities and rural electrification.
- Lead project management and contract administration of District Irrigation and Drainage facilities including the construction system, distribution system, and related facilities.
- Managed and supervised the activities of staff; planned section work programs and managed project goals, assigned tasks, and oversees work efforts, provided supervision.

EDUCATION

PhD candidate, Transdisciplinary Sustainability doctoral program <i>Grenfell Campus, Memorial University</i>	Corner Brook, NL, Canada May 2022
Master of Science in Sustainable Water Management <i>Kristianstad University</i>	Kristianstad, Sweden Sept 2010 – Jun 2012
Master of Science in Farm Structure <i>Bangladesh Agricultural University</i>	Mymensingh, Bangladesh Jul 2005 – Jun 2007
Bachelor of Science in Agricultural Engineering <i>Bangladesh Agricultural University</i>	Mymensingh, Bangladesh Jul 1997 – Jun 2002

SHORT COURSES

Fundamental of GIS <i>University of California (Davis)</i>	Davis, California, USA 2018
Introduction to GIS Mapping <i>University of Toronto</i>	Toronto, Canada 2023

RESEARCH PROJECTS

Climate Change Research	<i>Upper Humber River Watershed Model</i>	<u>SWAT Model</u>
<ul style="list-style-type: none"> • To quantify the impacts of climate change on the spatial and temporal availability of water resources at the upper Humber River watershed. • To investigate the Climate Change Impact on the Crop Water Requirement of cereal crops and root vegetables. • To assess the impact of climate change on agricultural sustainability in Western NL. 		
Hydrological Modeling	<i>Agricultural field scale</i>	<u>Hydrus-1D</u>
<ul style="list-style-type: none"> • Measuring the Impact of Crop Rotation on Agricultural in Western Newfoundland • Estimate the water budget components of a corn field and assess the temporal variability of water content in shallow soil profiles. 		

PUBLICATION

- Faruque, M. J., Vekerdy, Z., Hasan, M. Y., **Islam, K. Z.**, Young, B., Ahmed, M. T., ... Kundu, P. (2022). Monitoring of land use and land cover changes by using remote sensing and GIS techniques at human-induced mangrove forests areas in Bangladesh. Remote Sensing Applications: Society and Environment, 25, 100699.
<https://doi.org/10.1016/j.rsase.2022.100699>
- **Islam, K. Z.**, Islam, M. S. , Lacoursière, J. O. , Dessborn, L. (2014). Low-Cost Rainwater Harvesting: An Alternate Solution to Salinity Affected Coastal Region of Bangladesh. American Journal of Water Resources, 2(6), 141-148.
<https://doi.org/10.12691/ajwr-2-6-2>

VOLUNTEERING

Member	<i>Academic Council, Graduate Student Rep.</i>	Grenfell Campus, MUN
VP In Person	<i>Grenfell Graduate Student Society</i>	Grenfell Campus, MUN
Member	<i>Bangladesh Red Crescent Society</i>	Satkhira, Bangladesh

REFERENCES

References are provided upon request.