

ইনস্টিটিউট অব ফরেস্ট্রি এন্ড  
এনভায়রনমেন্টাল সায়েন্সেস  
চট্টগ্রাম বিশ্ববিদ্যালয়, চট্টগ্রাম-৪৩৩১, বাংলাদেশ  
ফোন : (সরাসরি) ০২৩৩৪৪৬০৮১০  
পিএবিএক্স ০২৩৩৪৪৬০৭৬৫-৭৪  
এক্সটেন-অফিস : ৪৪৮২, ৪৪২৪  
ফ্যাক্স : ০২৩৩৪৪৬০৭৭৮



“শিক্ষা নিয়ে গড়ব দেশ  
শেখ হাসিনার বাংলাদেশ”

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Memo No.

Date : 10.01.2024

**TO WHOM IT MAY CONCERN**

This letter hereby certifies that **Ms. Marjena Beantha Haque** has worked as a "Research Assistant" in my field and lab-based research project, "Flow and solute transport characterization of the Halda River catchment," from October 2020 to December 2021 and hydrological modeling project "Assessing the geo-engineering impacts on hydrology in Bangladesh," Funded by: UNESCO-TWAS, Degree initiative (P.I.- Dr. Abu Syed, C4RE Foundation), from July 2022- December 2023 in the Institute of Forestry and Environmental Sciences, University of Chittagong. Throughout her term of employment, she did a tremendous job on those projects by carrying out all her responsibilities with diligence, sincerity, and perfection. In the project, Marjena's duties include-

- Geospatial data selection from different remote sense datasets, collection, and analysis to define watershed hydrological function.
- Soil and water quality data interpretation using geochemical and statistical analysis.
- Analyze, collect, and organize geospatial data of different Earth System Models for different climate variables, consistency analysis, and process large datasets in spreadsheets, database management packages, and Python.
- Summarize data and set the hydrological model, calibrate and validate the model with observed data for the watersheds using QSWAT and HEC-HMS, and compare the performance of the modeling packages.
- Prepare graphical representation of results using graphs, maps, charts, and tables; write reports for the projects.
- Prepare posters and abstracts for conference presentations and write manuscripts for journals or conference proceedings.

While performing all the duties mentioned above, Ms. Marjena Beantha Haque demonstrated excellent skills and standards. She is punctual and has mastered the art of doing her job on time.

I wish her success in all of her future endeavors.

**Dr. Shyamal Karmakar**

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