

BHOKTEAR MAHBUB KHAN

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Graduate Research Assistant

LinkedIn: Bhoktear Mahbub Khan

Department of Geography and Spatial Sciences

University of Delaware, Newark, DE.

EDUCATION

2021- present **PhD in Geography and Spatial Sciences**

University of Delaware

2018-2019 **MS in Agroforestry and Environment**

Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur-1706, Bangladesh.

Thesis title: Classification of a Fragmented Landscape Using Machine Learning Algorithm

2014-2017 **BS in Agriculture**

Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur-1706, Bangladesh.

RESEARCH INTERESTS

Sustainable Agriculture, Food Security and Sustainability, Crop Mapping and Modelling, Yield Forecasting, Natural resource management using GIS and remote sensing,

EXPERIENCE

Roads and Highways Department.

Government of Bangladesh

Tejgaon-1208, Bangladesh

GIS Analyst

October 2020-December 2020

Preparing GIS based road network map for road maintenance and development planning.

- Conducted field survey
- Digitized national road and highways

GIS & Remote Sensing lab.

Department of Agroforestry and Environment, BSMRAU

Gazipur-1706, Bangladesh

Graduate Research Assistant

March 2018-April 2020

Characterizing patterns of land use and land cover change in the southern coastal region of Bangladesh

- Interpreted and analyzed satellite time series composites and high-resolution imagery
- Digitized reference data to expand research group's land cover sample database

Quantifying ecological impact of Rohingya refugee in the reserve forest of Cox's Bazar district.

- Performed supervised image classification
- Generated change detection table for measuring forest loss

Delineating agroforestry area coverage of selected areas in Bangladesh with its carbon sequestration potentialities using GIS and remote sensing approach.

- Developed script for image classification
- Conducted field survey and prepare presentations

Analyzing Padma river dynamics using satellite imagery

- Identified factors affecting sinuosity by interpreting Landsat imagery and DEM data;
- Collected training data; assessed model outputs

Monitoring the dynamics of wetlands in Dhaka city using geospatial data

- Interpreted time series of surface reflectance as part of validation for change detection and land cover classification models

GIS & Remote Sensing lab.

Department of Agroforestry and Environment, BSMRAU

Gazipur-1706, Bangladesh

Lab Manager

October 2017 – January 2018

- Performed basic image processing tasks (downloaded image, performed atmospheric correction, took training and validation data)
- Operated drone, set flight path, observed visually for proximal remote sensing.
- Measured spectral reflectance of plants using handheld spectroradiometer
- Collected coordinate data using handheld GPS receiver
- Maintenance of computer, server, plotter, other instruments and Lab space
- Maintained lab's YouTube channel
- Assisted in Lab's procurement

PUBLICATIONS

1. Rahman, A., Abdullah, H. M., Tanzir, M. T., Hossain, M. J., **Khan, B. M.**, Miah, M. G., & Islam, I. (2020). Performance of different machine learning algorithms on satellite image classification in rural and urban setup. *Remote Sensing Applications: Society and Environment*, 20, 100410.
2. **Bhoktear M Khan**, Hasan Muhammad Abdullah, Nusrat T Mohona, Md. Sanaullah Biswas, Kyle Frankel Davis (2021). Habitability of Bay of Bengal islands for Rohingya relocation. In preparation.

SKILLS

Software/applications

- GIS: ArcGIS, ArcMAP, QGIS, ERDAS IMAGINE,
- Image processing: ENVI, eCognition, SNAP, Google Earth Engine, Google Earth
- Microsoft Office: Word, Excel, Powerpoint
- Statistical: RStudio, SPSS
- Other: Adobe photoshop, Adobe lightroom, Windows Movie Maker

Programming language

R (intermediate), Python (basic)

UAV operation

Maintenance, planning flight path, acquisition of aerial photography and mapping.

Other skills: Driving, Hiking, Swimming, Photo and Video Editing.

Language: Bengali (native), Hindi, English.