

Curriculum Vitae

1. Personal Details and Date of CV

- **Surname:** Chowdhury
- **First Name:** Anwarul Islam
- **Researcher ID:** ORCID: 0000-0002-6934-3082
- **Date of the CV:** March 1 2025

2. Degrees

- **Doctor of science (DSc.) in Forest health and remote sensing**
 - University of Eastern Finland
 - *Topic: Novel methods for large-scale assessment of biodiversity using remote sensing and deep learning.*
 - *Supervisors:*
 - Samuli Junttila, Associate professor, School of Forest Sciences, Faculty of Natural Sciences, Forest Sciences and Technology, University of Eastern Finland;
samuli.junttila@uef.fi
 - Topi-Mikko Tanhuanpää, Postdoctoral researcher, Department of History and Geography, Faculty of Social Sciences and Business Studies, University of Easter Finland;
topi.tanhuanpaa@uef.fi
 - November 2024- current
- **Master of Science (M.Sc.) in Spatial and Ecological Modelling in European Forestry**
 - University of Lleida, Lleida, Spain
 - September 2023 - Current
- **Master of Science (M.Sc.) in European Forestry**
 - University of Eastern Finland, Joensuu, Finland
 - August 2022 - July 2023
- **Bachelor of Science (Honors) in Forestry**
 - University of Chittagong, Chittagong, Bangladesh
 - January 2016 - December 2019

3. Other Education and Expertise

- **Sustainable Forest Management in a Changing World**
Offered by: University of British Columbia
- **Spatial Analysis and Satellite imagery in a GIS**
An online course authorized by University of Toronto and offered through Coursera.
- **GIS Data Acquisition and Map Design**
An online course authorized by University of Toronto and offered through Coursera.
- **Leading Teams**
An online course authorized by University of Michigan and offered through Coursera.
- **The Sustainable Development Goals a Global, Transdisciplinary Vision for the Future**
An online course authorized by University of Copenhagen and offered through Coursera.

4. Language Skills

- Bengali (Native)
- English (Proficient)
- Finnish (Basic)
- Spanish (Basic)

5. Current Employment

- **Visiting Researcher**
 - Natural Resources Institute Finland (Luke), Helsinki, Finland
 - February 2024 - Present
 - Supervisor: Dr. Parvez Rana, Senior scientist, Luke
 - Stage of Research Career: Stage I
 - **Activities:**
 - Predicting ecosystem services using expert models.
 - Generating and processing point clouds.
 - Extracting and analysing key metrics.
 - Employing different machine learning algorithms such as RF SVM, CNN etc.
 - Conducting grid-level ecosystem services predictions.
 - Performing extensive data analysis and authored comprehensive reports.

6. Previous Work Experience

- **Intern**
 - Forest Science and Technology Centre of Catalonia, Solsona, Spain
 - June 2023 - August 2023
 - **Activities:**
 - Building and validating ecohydrological models of mountainous areas in Catalonia.
 - Tree core sampling and dendrochronological dating.
 - Fieldwork to characterise topographical profile of riverbed and riparian vegetation composition.
- **Research Assistant**
 - Institute of Forestry and Environmental Sciences, University of Chittagong, Bangladesh
 - September 2019 - August 2022
 - **Activities:**
 - Natural Forest ecological sampling, Forest biomass (live tree and deadwood) estimation, Forest floor and soil (carbon, nutrient) analyses in lab.
 - Forest gap and gap trees measurement, Gap characteristics, Assessment of regeneration, saplings and trees in gaps.
 - Data input and analyses, Writing the manuscript.
- **Survey Enumerator**
 - International Union for Conservation of Nature (IUCN), Bangladesh
 - October 2021 - December 2021
 - **Activities:**
 - Field survey and growth data collection, Data input.
 - Collection of LPG, Socioeconomic data, and Elephant survey.

8. Research Output

1. **Chowdhury, A. I.**, Kukkonen, M., Ukonmaanaho, L., Tuula, L., Aleksi, R., Rana, P., (2025) (under revision). Predicting ecosystem services using remote sensing and machine learning in boreal drained-peatland forests. *Remote sensing of environment*.
2. Keränen, K., **Chowdhury, A.I.**, Rana, P., (2025) (under revision). Spatially predicting ecosystem service patterns in boreal drained peatlands forests using multisource satellite data. *International Journal of Applied Earth Observation and Geoinformation*.
3. Rana, P., Muinonen, E., **Chowdhury, A. I.**, Tolvanen, M., Vastaranta, M., Tokola, T., (2025) (in press). Can We Monitor Seedling Stands Using Landsat Time Series? *European Journal of Forest Research*.
4. **Chowdhury, A. I.**, Baul, T. K., Uddin, Md. J., Karmakar, S., Nandi, R., Akhter J., & Nath, T. K., (2022). Quantifying the potential contribution of urban trees to particulate matters removal: A study in Chattogram city, Bangladesh. *Journal of cleaner production*, 380 (2022): 135015.
<https://doi.org/10.1016/j.jclepro.2022.135015>
5. Baul, T. K., **Chowdhury, A. I.**, Uddin, Md. J., Hasan, M. K., Kilpeläinen, A., Nandi, R., & Sultana, T. (2022). Forest carbon stocks under three canopy densities in Sitapahar natural forest reserve in Chittagong Hill Tracts of Bangladesh. *Forest Ecology and Management*, 492, 119217.
<https://doi.org/10.1016/j.foreco.2021.119217>
6. Baul, T. K., **Chowdhury, A. I.**, Uddin, Md. J., Hasan, M. K., Nandi, R., Nath, T. K., & Kilpeläinen, A.. (2022) Evaluating gap characteristics and their effects on regeneration in Sitapahar forest reserve, Bangladesh. *European Journal of Forest Research*. <https://doi.org/10.1007/s10342-022-01502-3>
7. Baul, T. K., **Chowdhury, A. I.**, Uddin, Md. J., Hasan, M. K., Schmidt, L. H., Nandi, R., & Nath, T. K. (2022) Diversity and Phytosociology of Natural Regeneration in a Sub-tropical Forest of Chittagong Hill Tracts, Bangladesh: Implications for Conservation. *Journal of Sustainable Forestry*, 1-14.
<https://doi.org/10.1080/10549811.2022.2059517>
8. Baul, T. K., **Chowdhury, A. I.**, Uddin, Md. J., Hasan, M. K., Kilpeläinen A.; Nandi R.; Karmakar S.; Akhter J. (2023) Effects of fragmentation and shifting cultivation on soil carbon and nutrients: A case study in Sitapahar forest, Bangladesh. *Rhizosphere*. <https://doi.org/10.1016/j.rhisph.2023.100756>
9. Baul, T.K., **Chowdhury, A.I.**, Uddin, M.J., Hasan, M.K., Nath, T.K. and Schmidt, L.H., 2025. Differences in Seedling and Sapling Densities and Species Composition between Canopy Gaps and Forest Understories in a Subtropical Forest in Bangladesh. *Journal of Resources and Ecology*, 16(1), pp.105-114.
<https://doi.org/10.5814/j.issn.1674-764x.2025.01.010>
10. Raihan, A., Ridwan, M., Zimon, G., Rahman, J., Tanchangya, T., Bari, A.M., Atasoy, F.G., **Chowdhury, A.I.** and Akter, R., 2025. Dynamic effects of foreign direct investment, globalization, economic growth, and energy consumption on carbon emissions in Mexico: An ARDL approach. *Innovation and Green Development*, 4(2), p.100207. <https://doi.org/10.1016/j.igd.2025.100207>

9. Awards and Honours

- Erasmus Mundus Joint master's degree program funded by European union.

10. Other key academic merits, such as:

- Ranked in the top 2% for academic excellence.
- Reviewer- South African Journal of Botany

11. Scientific and Societal Impact

- Bachelor dissertation (*Quantifying the potential contribution of urban trees to particulate matters removal: A study in Chattogram city, Bangladesh*) was appreciated by Chattogram city corporation during urban tree plantation initiative.

12. Other Merits

1st Jamal Nazrul Islam National Conference- 2022 for Young Researchers. Held on 21 May 2022 at the University of Chittagong, Chattogram, Bangladesh

- Potentiality of Urban trees to mitigate the atmospheric particulate matter: A study focused Chattogram City, Bangladesh (**Oral presentation**).

- Forest carbon stocks variation under three canopy densities in Sitapahar Forest Reserve, Chittagong Hill tracts, Bangladesh (**Poster presentation**).