Dr Riffat Mahmood
Associate Professor of Geography and Environment
Specialization in Human-Environment Interactions and GIS

CONTACT INFORMATIONS

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BIOGRAPHY

Dr Riffat Mahmood has 10 years of teaching experience and engaged in various national and international organizations doing research related to human-environment interaction, multi hazard and risk modelling, migration, urbanization, loss and damage (L&D), and climate action (SDG 13). She did **PhD in Cartography and Geographic Information Science (Research focus: Coast and Climate Change)** at the Aerospace Information Research Institute (AIR) of Chinese Academy of Sciences (CAS), China; Masters and Bachelor in **Geography and Environment with special focus on Human Geography** from University of Dhaka, Bangladesh. Based on the academic and research excellence, Dr Mahmood was awarded **"CAS-TWAS President's Fellowship" by The World Academy of Sciences (TWAS), Italy, and UNESCO**. She formulated novel **Climate Change Resilience of Place (C-CROP)** model based on the principles of climate change vulnerabilities and resilience with an approach to the incorporation of **nature-based solution (NBS)**. To formulate the C-CROP model, she thoroughly reviewed the discourse and related narratives on disaster management, climate change-induced vulnerabilities,

loss and damage, adaptation, and resilience. This theoretical review gave her deeper understanding of the need of vulnerable communities and barriers to the adaptation practices of local community especially in the Third World context. Using mixed methods approaches (i.e. Earth observation (EO) technology, quantitative modelling, and qualitative analysis). Dr Mahmood has worked on data linkage and surveys. However, her interest incorporates theoretical knowledge with various powerful tools and techniques (i.e**. PAR, GIS, RS, MCE etc**.) to support policy recommendation and advocacy. She has led multi- disciplinary, multi-site research teams that have community relevance, and policy and practice impact. Dr Mahmood has **25 peer reviewed publications** since 2016.

PRESENT PROFESSIONAL AND ACADEMIC INVOLVEMENT

Associate Professor
Department of Geography and Environment,
Faculty of Life and Earth Sciences, Jagannath University,
Dhaka, Bangladesh

Deputy Director
Centre for Climate, Society and Environment,
Jagannath University, Dhaka, Bangladesh

Founder and Lead Researcher
HELIOS Lab
(*Human-Environment Linkages through Integrated Observation and Science*)
Non-profit Academic Research Lab, Bangladesh

EDUCATIONAL BACKGROUND

- **PhD in Cartography and Geographic Information Science**
  |2018-2022|
  Research Focus: Coast and Climate Change
  Thesis Title: Coastal Resilience Assessment based on the Proposed Climate Change Resilience Model and Geospatial Techniques
  - Key Laboratory of Digital Earth Science, Aerospace Information Research Institute (AIR), Chinese Academy of Sciences (CAS), China
  - College of Resources and Environmental Studies, University of Chinese Academy of Sciences (UCAS), China
- **MS in Human Geography and Environment**
  |2012-2013|
  Thesis: Building Vulnerable Island Resilience in the context of Natural Disaster

Department of Geography and Environment, University of Dhaka, Bangladesh
Result: 3.87 out of 4.00
Position: 1st position (in Human Geography and Environment Stream)

- **BSc in Geography and Environment**
  |2009-2012|
  Department of Geography and Environment, University of Dhaka, Bangladesh
  Result: 3.71 out of 4.00
  Position: 3rd position

HSC (2008) and SSC (2006) from Viqarunnisa Noon School and College, Dhaka Board with GPA 5.00

EMPLOYMENT TRAJECTORY

- **Associate Professor**
  |April 2024- Present|
  Department of Geography and Environment, Faculty of Life and Earth Sciences, Jagannath University, Dhaka, Bangladesh
- **Assistant Professor**
  |December 2020- April 2024|
  Department of Geography and Environment, Faculty of Life and Earth Sciences, Jagannath University, Dhaka, Bangladesh
- **Lecturer**
  |July 2016- December 2020|
  Department of Geography and Environment, Faculty of Life and Earth Sciences, Jagannath University, Dhaka, Bangladesh

LEAD PROFESSIONAL EXPERIENCE

- **Lead Organizer & Key Facilitator**
  2025 International Training Workshop on Enhancing Climate Adaptation and Resilience through Earth Observation in the South Asian Region |April 2025|

  AOGEO is a Regional Group on Earth Observations, which currently includes the participation of 23 countries from the Asia-Oceania region and 12 international organizations. The main objective of AOGEO is to establish an efficient cooperation framework at the regional level and enhance Earth Observation capacity of Asia-Oceania countries to tackle numerous and fast environmental changes as well as frequent disasters. Since 2018, AOGEO has organized several capacity-building training workshops in different countries. Over a thousand young scientists and students have participated in these training workshops, which helped them develop Earth Observation skills and knowledge.

- **Lead Coordinator & Key Facilitator**
  CPEOS International Data Node (IDN) Deployment at Jagannath University, Bangladesh | October 2024|

The International Data Node (IND) is an essential part of the remote sensing satellite data service system of the China National Space Administration (CNSA), which is managed and operated by the Earth Observation System and Data Centre (EOSDC) of CNSA. Through the IDN, cooperative institutions in other countries may obtain Chinese remote sensing satellite data products in the area authorized by CNSA and may distribute and provide data services to users in the authorized zone in an agreed form.

- **Key Facilitator**
  Memorandum of Understanding (MoU) between China National Space Administration and Jagannath University (JnU) | November 2023|

  The Aerospace Information Research Institute, Chinese Academy of Sciences (AIRCAS) is the designated construction and technical support unit of the Chinese side. And Jagannath University (Applicable for Department of Geography and Environment) (JnU) is the operating and extension organization of the Bangladesh Scientific Research Node.

FUNDED RESEARCH PROJECT AND CONSULTANCY EXPERIENCE

- **Co-investigator**
  Funder: Start Network
  Duration: February 2026-March 2026
  Project Title: Impact and vulnerability Assessment for Heatwave Disaster Risk Risk Financing in Bangladesh
  Outcome: Accepted
- **Principal Investigator**
  Funder: Jagannath University Research Grant, University Grant Commission (UGC) of Bangladesh, 2025-2026.
  Duration: June 2025-June 2026
  Project Title: Assessing Climate Change Induced Loss and Damage of the Southwestern Coastal Region of Bangladesh.
  Outcome: Ongoing
- **Principal Investigator**
  Funder: Jagannath University Research Grant, University Grant Commission (UGC) of Bangladesh, 2024-2025.
  Duration: June 2024-June 2025
  Project Title: Land Surface Eco-Environmental Degradation on Saint Martin Island, Bangladesh: A Remote Sensing Based Spatial Analysis
  Outcome: The project identified and quantified spatiotemporal patterns of eco-environmental degradation on Saint Martin's Island using multi-temporal remote sensing and geospatial analysis. It revealed significant land cover transformation, vegetation decline, and increasing anthropogenic pressure, providing a scientific basis for sustainable land management and conservation planning in Bangladesh.

- **Co- Principal Investigator**
  Funder: Population Council's PERCC Case Studies Grant (112); The Population Council, USA
  Duration: December 2024- June 2025
  Project Title: Empowering Minds: Unravelling Psychological Resilience and Coping Mechanisms among Cyclone and Salinity Affected Population in Coastal Bangladesh
  Outcome: The project generated evidence-based insights into the psychological resilience and coping mechanisms of cyclone- and salinity-affected communities in coastal Bangladesh. The findings contributed to informed mental health planning, community-based adaptation strategies, and strengthened policy recommendations to enhance psychosocial well-being and long-term climate resilience in vulnerable coastal populations.
- **Principal Investigator**
  Funder: University Grant Commission (UGC) of Bangladesh, 2023-2024.
  Duration: June 2023-June 2024
  Project Title: Climate Change Risk Assessment of Coastal Community of Bangladesh using Big Earth Data
  Outcome: The project has used Big Earth Data in identifying and analysing the actual risks of climate change faced by the coastal communities of Bangladesh. The results have provided very important insights that shall be useful in policy development and climate action plans focusing on building resilience among vulnerable communities. It contributed to local knowledge on the academic literature of the application of satellite data in the assessment of climate change risk.
- **Co- Investigator**
  Funder: Innovation Drive Development Special Project of Guangxi 'China-ASEAN Big Earth Data Platform and Applications' (Grant No. guikeAA20302022), National Natural Science Foundation of China (Grant No. 42071305)
  Duration: June 2022-June 2023
  Project Title: Geospatial assessment of intrinsic resilience to the climate change for the central coast of Bangladesh
  Outcome: The project determines the intrinsic resilience of coastal regions to climate change in Bangladesh. It provided the most valuable data to improve coastal management and adaptation strategies towards climate change by showing high levels of vulnerability or resilience in regions. It also facilitated collaboration between China and Bangladesh, solidifying cross-border scientific cooperation concerning climate concerns.
- **Co- Investigator**
  Funder: Chinese Academy of Sciences, Grant No. XDA19030105
  Duration: June 2021-June 2022
  Assessing effectiveness of nature-based solution with big earth data: 60 years mangrove plantation program in Bangladesh coast
  Outcome: This project allowed space observation to appraise the 60-year-long mangrove plantation program along the Bangladesh Coast and track biodiversity change, coastal protection, and carbon sequestration. Sharing these long-term impacts of nature-based solutions to climate resilience supported calls for recommendations for scaling up these

kinds of efforts worldwide. It added weight to international research regarding how mangroves could perform their dual functions regarding climate mitigation and adaptation.

- **Co- Investigator**

  Funder: Chinese Academy of Sciences (Grant No. XDA19030302) and National Natural Science Foundation of China (Grant No. 41771392)

  Duration: June 2020-June 2021

  Project Title: Geo-based model of intrinsic resilience to climate change: an approach to nature-based solution

  Outcome: The project developed a geo-based model for intrinsic resilience measurement and visualization, emphasizing nature-based solutions for climate change adaptation on coastlands. The results informed the design of climate adaptation strategies that combined nature-based solutions, such as mangrove restoration, in pursuit of increased ecosystem resilience. This project, therefore, contributed to the formulation of policy frameworks pertaining to nature-based solutions considering addressing the effects of climate change on the coasts.

- **Research Consultant**

  Employer: Aerospace Information Research Institute, Chinese Academy of Sciences, China

  Funder: Centre for Sustainable, Healthy and Learning Cities and Neighbourhoods, UK

  Duration: June 2019-September 2019

  Project Title: Transformation of agricultural land and waterbodies in rapidly urbanising Bangladesh: recognising the extent of sustainability concerns

  Outcome: The study comprehensively explored the ongoing transformations of agricultural land and waterbodies in Bangladesh, focusing on the impacts of rapid urbanisation. By identifying key sustainability concerns, the project provided critical insights into the challenges and opportunities posed by urban expansion.

- **Junior Research Associate**

  Employer: Emeritus Professor Gavin Jones, Australian National University, Canberra and Murdoch University, Perth, Australia

  Duration: February 2016-June 2016

  Project title: Urbanization and Migration in Bangladesh funded by UNFPA

  Outcome: The Urbanization and Migration in Bangladesh project, funded by UNFPA and conducted under the guidance of Emeritus Professor Gavin Jones, explored the complex relationship between urbanisation trends and migration patterns in Bangladesh. The study sought to understand the causes, trends, and consequences of migration from rural to urban areas, with a focus on both internal migration within the country and international migration flows.

- **Data and GIS Assistant**

  Employer: International Union for Conservation of Nature (IUCN), Dhaka, Bangladesh

  Duration: November 2015-January 2016

  Project title: Technical Study for Land Use Mapping, Assessment and Monitoring of Proposed Afforestation and Reforestation Sites

Outcome: The Technical Study for Land Use Mapping, Assessment, and Monitoring of Proposed Afforestation and Reforestation Sites project, conducted by the International Union for Conservation of Nature (IUCN) in Dhaka, Bangladesh, aimed at evaluating potential areas for afforestation and reforestation. The project focused on providing critical data and Geographic Information System (GIS) analysis for the selection, assessment, and ongoing monitoring of afforestation sites to enhance environmental sustainability.

PUBLICATIONS

ResearchGate Profile: https://www.researchgate.net/profile/Riffat-Mahmood

Citations: 409 (assessed in February 2026)

h-index: 11

Peer Reviewed Journal Paper

- Hassan, M. F., **Mahmood, R.**, Nasher, N. M. R., Das, S., Akter, U., Kona, N., Tabassum, N., Rahman, T. (2026). Integrated Remote Sensing and Multi-Criteria Evaluation to Assess Coastal Ecosystem Degradation under Climate and Human Pressures: Insights from Bangladesh. *Environmental Challenges*. 101403. https://doi.org/10.1016/j.envc.2025.101403.
- **Mahmood, R.**, Roy, S., Zhang, L., Hossain, B. (2025). Assessment of coastal vulnerability in the era of sea level rise along the coast of Bangladesh. *Natural Hazards*. https://doi.org/10.1007/s11069-025-07724-z.
- Hassan, M. F., Tabassum, N., Noirit, T. R., Kona, N., **Mahmood, R.** (2025). Assessing severity of ecological integrity depletion using satellite imagery: The case of central coast of Bangladesh. *Jagannath University Journal of Life and Earth Sciences*, 10(2), 211–238. https://doi.org/10.3329/jnujles.v10i2.85259.
- **Mahmood, R.**, Hassan, F. M., Reza, M. M., Tabassum, N., Akter, U., Kona, N. (2025). A GIS based Multi Criteria Decision Analysis for Community Risk Mapping based on IPCC AR6 Framework: The case of Coastal Bangladesh. *Human Settlements and Sustainability*. https://doi.org/10.1016/j.hssust.2025.07.001.
- **Mahmood, R.**, Hassan, F. Kulsum, U. (2025). Exploring the role of population dynamics in surface urban heat island hotspots in peri-urban Dhaka. *Forum Geografi,* 39(1), 20 – 37. https://doi.org/10.23917/forgeo.v39i1.6648.
- Malak, M. A., Lina, N. K., Quader, M. A., **Mahmood, R.** (2024). Immobility, Older Adults and Adaptation to Tropical Cyclones: Insights from Coastal Bangladesh. *Migration and Development*. https://doi.org/10.1177/21632324241281093.
- Dong, Y., Li, Y., Zhang, L., Yan, M., Shao, W., Zhang, Q., Ji, C., **Mahmood, R**., Wang, P., (2024). Improved urbanization-vegetation cover coordination associated with economic level in port cities along the Maritime Silk Road, *Ecological Indicators,* 163: 112116. https://doi.org/10.1016/j.ecolind.2024.112116.
- Hasan, M., Hassan, L., Mamun, A.A., Kamal., A. H. M., Idris, M. H., Hoque, M. Z., **Mahmood, R.**, Alam, M.N., Ali, A. (2024). Human intervention caused massive

destruction of the second largest mangrove forest, Chakaria Sundarbans, Bangladesh, *Environmental Science and Pollution Research*. 31: 25329–25341. https://doi.org/10.1007/s11356-024-32792-2.

- Zuo, J., Zhang, L., Chen, B., Liao, J., Hashim, M., Sutrisno, D., Hasan, M. E., **Mahmood, R**., Sani, D. A. (2023). Assessment of coastal sustainable development along the maritime silk road using an integrated natural-economic-social (NES) ecosystem, *Heliyon,* 9(6). https://doi.org/10.1016/j.heliyon.2023.e17440.
- **Mahmood, R.**, Zhang, L., Li, G., Roy, N. R., Rawnaq, N., Yan, M., Dong, Y., Chen, B. (2023). Geospatial Assessment of Intrinsic Resilience to the Climate Change for the Central Coast of Bangladesh, *Climate Risk Management*, 40(4):100521. https://doi.org/10.1016/j.crm.2023.100521.
- Yang, F., Zhang, L., Chen, B., Li, K., Liao, J., **Mahmood, R**., Hasan, M. E., Al-Mamun, M. M. A., Raza, S. A., Sutrisno, D. (2023). Long-Term Change of Coastline Length along Selected Coastal Countries of Eurasia and African Continents, *Remote Sensing*, 15(9):2344. https://doi.org/10.3390/rs15092344.
- **Mahmood, R.**, Zhang, L., Li, G. (2023). Assessing effectiveness of nature-based solution with big earth data: 60 years mangrove plantation program in Bangladesh coast, *Ecological Processes*, 12(1). https://doi.org/10.1186/s13717-023-00419-y.
- Yan, M., Fan, S., Zhang, L., **Mahmood, R.**, Chen, B., Dong, Y. (2022). Vegetation dynamics from Urbanization in the Coastal Cities along the Maritime Silk Road, *Land*, 11(2):164. https://doi.org/10.3390/land11020164.
- **Mahmood, R.**, Zhang, L., Li, G., Rahman, M. K. (2021). Geo-based model of intrinsic resilience to climate change: an approach to nature-based solution, *Environment, Development and Sustainability*. https://doi.org/10.1007/s10668-021-01925-9.
- Hasan ME., Zhang, L., **Mahmood, R.**, Guo, H., Li, G. (2021). Modeling of Forest Ecosystem Degradation Due to Anthropogenic Stress: The Case of Rohingya Influx into the Cox's Bazar–Teknaf Peninsula of Bangladesh, *Environments,* 8, 121. https://doi.org/10.3390/environments8110121.
- Hasan, M.E., Zhang, L., Dewan, A., Guo, H., **Mahmood, R**. (2020). Spatiotemporal pattern of forest degradation and loss of ecosystem function associated with Rohingya influx: A geospatial approach, *Land Degradation and Development,* 1–18. https://doi.org/10.22541/au.159335774.45364777.
- **Mahmood, R.**, Ahmed, N., Zhang, L. and Li, G. (2020). Coastal vulnerability assessment of Meghna estuary of Bangladesh using geospatial techniques, *International Journal of Disaster Risk Reduction*, 42: 1-14. https://doi.org/10.1016/j.ijdrr.2019.101374.
- Nahar, N., Neegar, S., Uddin, MA., Sultana, S. and **Mahmood, R.** (2018). Degradation of river water quality and its effects on livelihood in Narsingdi industrial area, Bangladesh, Rajshahi University Journal of Environmental Science, 6: 118-127.
- **Mahmood, R.** (2017). Monitoring LULC dynamics using geospatial techniques: A case study of coastal Hatiya island of Bangladesh, *Jagannath University Journal of Life and Earth Sciences*, 3 (1): 66-74.
- Nahar, N., **Mahmood, R.** and Rahman, D. (2016). Fire hazard vulnerability issues in readymade garment industries in Mirpur zone, Dhaka, *Jagannath University Journal of Life and Earth Sciences,* 2(2):133-139.

- Roy, S. and **Mahmood, R.** (2016). Monitoring shoreline dynamics using Landsat and hydrological data: A case study of Sandwip island of Bangladesh, *The Pennsylvania Geographer*, 54(2): 20-41.

Peer Reviewed Book Chapter

- **Mahmood, R.** and Mahbub, AQM. (2018). Building vulnerable islander resilience to natural hazard: A participatory approach. In W. Leal Filho (ed.), *Handbook of Climate Change Resilience*. Cham, Switzerland: Springer International Publishing AG, part of Springer Nature.

Paper Proceedings

- Hasan, M. M., Hassan, M. L., Mamun, A. A., Hoque, M.Z., **Mahmood, R.**, Ali, A., Alam, M. N., Kamal, A. H. M. (2022, July 25). Human interaction caused land cover changes of Chakaria Sundarban mangrove forest in Bangladesh: a fifty-years study. *Proceedings of 1st International Postgraduate Symposium on Food Security 2022 (IPSyoFS-22)*. Paper presented at 1st International Postgraduate Symposium on Food Security 2022. Indonesia: Faculty of Fisheries and Food Science (UMT) & Institute Pertanian Bogor (IPB Indonesia).
- Rahman, M. M., Masrur, M. H., **Mahmood, R.,** Rahaman, M. A. and Bijoy, M. R. (2018, January 8-11). Disasters and forced migration: A case study on riverbank erosion and its potential impacts on rural and urban Bangladesh. *Proceedings of 4th Gobeshona Conference for Research on Climate Change in Bangladesh*. Paper Presented at the 4th Gobeshona Conference for Research on Climate Change in Bangladesh. Dhaka: Independent University.
- **Mahmood, R.** (2015, November 22). Adaptation of isolated coastal community in the context of changing climatic scenario: A case study of Sandwip island of Bangladesh. In R. Morimoto & T. Jafry (Eds.). *Paper Proceedings of Climate Change Adaptation 2015*. Paper presented at the 4th International Conference on Climate Change 2015 (pp. 24-30). Colombo, Sri Lanka: International Centre for Research and Development.

SCIENTIFIC ENGAGEMENT

As a Session Chair

- **Mahmood, R.** (2025, Dec 18-19). Session Chair, *1st International Conference on Life and Earth Science for Sustainable Development (ICLESSD 2025)*. Dhaka, Bangladesh: Faculty of Life and Earth Sciences, Jagannath University.

As a Session Speaker

- **Mahmood, R.** and Akter, U. (2025, November 24-26). *A Socio-Ecological Framework for Loss and Damage Assessment in Climate-Vulnerable Coastal Islands of Bangladesh: Implications for Disaster Resilience and Sustainable Development*. Paper presented at 4th International Symposium on Disaster Resilience and Sustainable Development (DRSD 2025).

Thailand: Disaster Preparedness, Mitigation and Management (DPMM), Asian Institute of Technology (AIT).

- Hassan, M. F. and **Mahmood, R.** (2025, June 8-11). *Spatiotemporal assessment of coastal ecosystem degradation in Bangladesh using RS, GIS and MCE techniques*. Paper presented at 9th Digital Belt and Road (DBAR) Conference. China: DBAR.
- **Mahmood, R.** (2025, May 14). Technical session speaker, *Dissemination Workshop on Access to Chinese Commercial Satellite- Gaofen Satellite Series.* Dhaka, Bangladesh: Department of Geography and Environment, Jagannath University
- **Mahmood, R.**, Roy, S., Zhang, L. (2024, October 23-24). *Assessment of Coastal Vulnerability in the Era of Sea Level Rise Along Coast of Bangladesh to Promote Sustainable Development*. Paper presented at 8th Digital Belt and Road (DBAR) Conference. China: DBAR.
- **Mahmood, R**., Zhang, L. and Li, G. (2022, June 15-17). *Assessing effectiveness of nature-based solution with big earth data: 60 years mangrove plantation program in Bangladesh coast.* Paper presented at the 5th Asia-Oceania Group on Earth Observations (AOGEO) Workshop. Beijing: AOGEO.
- Zhang, L. and **Mahmood, R.** (2019, September 17-19). *Coastal research and innovation of DBAR-coast, Digital Belt and Road Initiative of China.* Paper presented at the Geomatics Scientific meeting on Spatial Planning and Disaster management. Bundung, Indonesia: Indonesia Society for Remote Sensing and Indonesian Society for Remote Sensing Congress.
- Rahman, M. M., Masrur, M. H., **Mahmood, R.,** Rahaman, M. A. and Bijoy, M. R. (2018, January 8-11). *Disasters and forced migration: A case study on riverbank erosion and its potential impacts on rural and urban Bangladesh*. Paper Presented at the 4th Gobeshona Conference for Research on Climate Change in Bangladesh. Dhaka: Independent University.
- **Mahmood, R**. (2016, January 8). *Land erosion in Meghna estuary: Problems and prospect.* Paper presented at the Special Conference on Coastal and Marine Environment of Bangladesh (SCCCMEB). Dhaka: Bangladesh Poribesh Andolon (BAPA) and Bangladesh Environment Network (BEN).
- **Mahmood, R**. (2015, November 22). *Adaptation of isolated coastal community in the context of changing climatic scenario: A case study of Sandwip island of Bangladesh.* Paper presented at the 4th International Conference on Climate Change 2015 (pp. 24-30). Colombo, Sri Lanka: International Centre for Research and Development.

As a Key Workshop Participants

- **Mahmood, R.** (2025, May 27-29). *Participant,* Capacity-Building Workshop on Integrating Human Rights and Climate Mobility into Higher Education Curricula. Colombo, Sri Lanka: The Raoul Wallenberg Institute of Human Rights and Humanitarian Law (RWI)
- **Mahmood, R.** (2023, September 11-13). *Participant,* Co-creation Workshop for Human Rights-based Approach (HRBA) Integration into Course Modules. Manila, Philippines: The Raoul Wallenberg Institute of Human Rights and Humanitarian Law (RWI)

TEACHING EXPERIENCE

Training conducted

06 Dec 2025- 06 Jan 2026	**GIS Training Organiser and Trainer** Certificate Course on "Introduction to GIS and its Applications," jointly organized by CCSE, Jagannath University and C3ER, BRAC University
12 Apr 2025 - 13 Apr 2025	**GIS Workshop Facilitator** 2025 International Training Workshop on 'Enhancing Climate Adaptation and Resilience through Earth Observation in the South Asian Region, Bangladesh
1 Feb 2025 - Present	**GIS Educator** Advisor, Jagannath University Geospatial Club, Bangladesh

University Level Course Taught

2025-Present	**Integrated Coastal Management**	M.Sc. 1st Semester, Theory 3 Credits, Department of Geography and Environment, Jagannath University
2024 - Present	**Data Analysis Methods and Techniques**	M.Sc. 1st Semester, Lab 3 Credits, Department of Geography and Environment, Jagannath University
2016-2018; 2023 - Present	**Human Geography of Bangladesh**	B.Sc. 3rd Year 2nd Semester, Theory 3 Credits, Department of Geography and Environment, Jagannath University
2022 - Present	**Soil Geography**	B.Sc. 2ndd Year 2nd Semester, Theory 3 Credits, Department of Geography and Environment, Jagannath University
2022 - Present	**GIS in Practice**	B.Sc. 2nd Year 2nd Semester, Theory 3 Credits, Department of Geography and Environment, Jagannath University
2022 - Present	**Introduction to Field Survey**	B.Sc. 2nd Year 2nd Semester, Lab 3 Credits, Department of Geography and Environment, Jagannath University
2022 - 2023	**Urban Geography**	B.Sc. 3rd Year 2nd Semester, Theory 3 Credits, Department of Geography and Environment, Jagannath University
2016 - 2018	**Population Geography**	B.Sc. 3rd Year 1st Semester, Theory 3 Credits, Department of Geography and Environment, Jagannath University

Thesis Supervision (Selected manuscript)

Title of the MS Thesis	Name of the Student	Session	Fellowship/Award
Climate Resilient Solutions through Blue carbon: Multi-Sensor Assessment and restoration Pathways for Coastal Bangladesh	Md Fuad Hassan	2025-2026	Christian Commission for Development in Bangladesh (CCDB) Scholarship, 2025
Hazard-Specific Stress and Mental Resilience in the GBM Basin: A Focus on Marginalized Women	Nawshin Tabassum	2025-2026	Oxfam Student Grant Fellowship under Transboundary Rivers of South Asia (TROSA) project (Phase 2)
Spatial Risk Assessment to Salinity using Multi-Criteria Evaluation and Principal Component Analysis: A Case of Western Coast of Bangladesh	Farjana Fahan	2025-2026	National Science and Technology Fellowship 2025-2016, Ministry of Science and Technology, Bangladesh
Building Resilience of Riverine People through Participatory Geospatial Approach	Nusrat Kona	2024-2025	Oxfam Student Grant Fellowship under Transboundary Rivers of South Asia (TROSA) project (Phase 1)
Evidence-based socio-ecological assessment of loss and damage: A case study of Manpura Island of Bangladesh.	Urme Akter Putul	2023-2024	ICCCAD Capacity strengthening of multi-Actors to limit climate change impacts and Enhance resilience- (CAP-RES) project funded by Embassy of Sweden

SKILLS AND ACHIVEMENTS

Language Skill

- English (Proficient user), Chinese (Basic user)

Analytical Skill

- Geographic Information System (GIS)
- Satellite-based Earth Observation (EO)/Remote Sensing (RS)
- Quantitative and Qualitative methods
- Participatory Action Research (PAR)
- Systematic review and meta-analysis

Awards

- CAS-TWAS President's Fellowship Award, 2018 Chinese Academy of Sciences (CAS), China; The World Academy of Sciences (TWAS), Italy and UNESCO
- National Science and Technology (NST) Fellowship Award, 2015, Ministry of Science and Technology, Government of Bangladesh, Bangladesh.

- Merit Scholarship of Faculty of Earth and Environmental Sciences, University of Dhaka, Bangladesh

CO-OPERATION PARTNERSHIP AND MEMBERSHIP

- International Co-operation Partner, Asia Oceania Group on Earth Observations (AOGEO) of Group on Earth Observations (GEO), Geneva, Switzerland
- International Co-operation Partner, DBAR-coast working group, Digital Belt and Road (DBAR), Belt and Road Initiative, China
- International Co-operation Partner, China National Space Administration (CNSA), China
- Member, Asia Pacific Academic Network on Disaster Displacement (APANDD), Raoul Wallenberg Institute of Human Rights and Humanitarian Law, Sweden
- Member, Asiatic Society, Bangladesh
- Member, Bangladesh Poribesh Andolon (BAPA), Bangladesh
- Member, Bangladesh Geographical Society (BGS), Bangladesh

REFERENCES

Reference 1	Reference 2
Name: Professor Dr Zhang Li Designation: Professor Organization/ Institution: Aerospace Information Research Institute, Chinese Academy of Sciences (CAS), Beijing, China Email: zhangli@aircas.ac.cn	Name: Professor Dr Md. Humayun Kabir Designation: Professor Organization/ Institution: Department of Geography and Environment, University of Dhaka Email: mhk.geoenv@du.ac.bd Mobile No.: +880 17 7740 2959

I hereby declare that all the above information is correct and accurate.

Dr Riffat Mahmood