

CURRICULUM VITAE

I. Personal Information

1. **Name:** MD. IQUEBAL HOSSAIN
2. **Present Position: Assistant Professor and Head**
Department of Civil Engineering
Prime University, Bangladesh
Cell Phone: +88 01715023570
E-mail: mshnukali@gmail.com
Alternate E-mail: iquebal_hossain@yahoo.com
3. **Permanent Home Address:**
 - Village: Nukali, P.O. Baghabarighat, Upazila: Shahzadpur, District: Sirajganj, Bangladesh
4. **Date and Place of Birth:** 31 December 1966, Sirajganj, Bangladesh
5. **Nationality:** Bangladeshi
6. **Marital Status:** Married

II. Academic Degrees Obtained

1. **Ph. D. (Civil Engineering)**
 - Thesis Title: Development of Onsite Surface Water Treatment Unit for Managed Aquifer Recharge in Barind Area, Bangladesh
 - Year: 2023
 - Institution: Department of Civil Engineering, Rajshahi University of Engineering & Technology (RUET), Rajshahi, Bangladesh
 - CGPA: 3.88
2. **M.Sc. (Civil Engineering)**
 - Thesis Title: Groundwater Modelling for Joypurhat District
 - Year: 2011
 - Institution: Department of Civil Engineering, Rajshahi University of Engineering & Technology (RUET), Rajshahi, Bangladesh
 - CGPA: 3.75
3. **B. Sc. (Agricultural Engineering)**
 - Major: Irrigation and Water Management
 - Thesis Title: Irrigation Methods Suitable for Diversified Crops in Mymensingh District
 - Year: 1991
 - Institution: Bangladesh Agricultural University, Mymensingh, Bangladesh
 - Class: 2nd Class
4. **Higher Secondary Certificate (H.S.C.)**
 - Year: 1984
 - Board: Rajshahi Board
 - Group: Science Group
 - Division: First Division
5. **Secondary School Certificate (S.S.C.)**
 - Year: 1982

- Board: Rajshahi Board
- Group: Science Group
- Division: First Division

III. Membership : Fellow, IEB (Institution of Engineers Bangladesh). Fellowship no-F/9563.
Silver Member, IWRA (International Water Resource Association)
Membership ID- 3268777

IV. Research Interest

Water resources, Managed Aquifer Recharge (MAR)/Artificial Recharge of Groundwater, Irrigation & Water management, Integrated Water Resource Management (IWRM).

V. Academic Experience

Position	Duration	University
Postgraduate Research Fellow (Ph.D. Civil Engg.)	2012 to 2021	Rajshahi University of Engineering & Technology (RUET), Rajshahi.
Postgraduate Research Fellow (M.Sc. Civil Engg.)	2008 to 2010	Rajshahi University of Engineering & Technology (RUET), Rajshahi.
Assistant Professor and Head, Department of Civil Engineering	January 2026 to Present	Prime University, Dhaka, Bangladesh

VI. List of Publications

a) Publications in Journals

1. **Hossain, M.I.** (2026). Research and technological innovations for sustainable groundwater development and management in the water-scarce Barind Tract, Northwestern Bangladesh. *Water Practice and Technology*, 21 (5): 1980–1992. <https://doi.org/10.2166/wpt.2026.278>
2. **Hossain, M.I.**, Bari, M.N., Dirar, M.D., Kafy, A.A., Altuwaijri, H.A., Bahiru, T.K. (2025a). Design and field performance of an integrated horizontal flow treatment managed aquifer recharge system for groundwater rehabilitation in Bangladesh. *Applied Water Science*, <https://doi.org/10.1007/s13201-025-02588-x>. Springer link.
3. **Hossain, M.I.**, Bari, M.N., Dirar, M.D., Kafy, A.A., Altuwaijri, H.A., Bahiru, T.K. (2025b). Engineering hydrological resilience: Quantitative assessment of managed aquifer recharge (MAR) potential utilizing advanced horizontal flow treatment in water stressed regions. *Applied Water Science*, <https://doi.org/10.1007/s13201-025-02665-1>. Springer link.
4. Islam, M., Bushra, T.N., **Hossain, M.I.** (2022). Trend analysis of groundwater level in Rajshahi, Bangladesh. *Journal of the Sylhet Agricultural University*, 9(2): 213-224.
5. Suresh, A., Chanda, A., Rahaman, Z.A., Kafy, A.A., Rahaman, S.N., **Hossain, M.I.**, Rahman, M.T., Yada, G. (2022). A geospatial approach in modeling the morphometric characteristics and course of Brahmaputra river using sinuosity index. *Environmental and Sustainability Indicators*, <https://doi.org/10.1016/j.indic.2022.100196>. Elsevier pub.

6. Bari, M.N, Muna, F.Y., Rahnuma, M., **Hossain, M.I.** (2022). Production of Activated Carbon From Rice Husk and Its Proximate Analysis. Journal of Engineering Science, 13(1), 105–112. <https://doi.org/10.3329/jes.v13i1.60568>
7. **Hossain, M.I.**, Bari, N., Kafy, A. A., Rahaman, Z.A., Rahman, M.T. (2022). Application of double lifting method for river water irrigation in the water stressed Barind Tract of northwest Bangladesh. Groundwater for sustainable Development, <https://doi.org/10.1016/j.gsd.2022.100787>. Elsevier pub.
8. **Hossain, M.I.**, Bari, N., Miah, S.U. (2021). Opportunities and challenges for implementing managed aquifer recharge models in drought-prone Barind tract, Bangladesh. Applied Water Science, <https://doi.org/10.1007/s13201-021-01530-1>. Springer link.
9. Bari, N., **Hossain, M.I.**, Miah, S.U. (2021). Development of storm water pretreatment system for managed aquifer recharge in water-stressed Barind Tract. Arabian Journal of Geosciences, <https://doi.org/10.1007/s12517-021-08398-0>. Springer link
10. Kafy, A.A., Rakib, A.A., Akter, K.S., Rahaman, Z.A., Faisal, A.A., Mallik, S., Nasher, N.M.R., **Hossain, M.I.**, Ali, M.Y. (2021). Monitoring the effects of vegetation cover losses on land surface temperature dynamics using geospatial approach in Rajshahi City, Bangladesh. Environmental Challenges, <https://doi.org/10.1016/j.envc.2021.100187>. Elsevier pub.
11. **Hossain, M.I.**, Bari, N., Miah, S.U., Kafy, A. A., Nasher, N.M.R. (2021). Application of modified managed aquifer recharge model for groundwater management in drought-prone water-stressed Barind Tract, Bangladesh. Environmental Challenges, <https://doi.org/10.1016/j.envc.2021.100173>. Elsevier pub.
12. **Hossain, M.I.**, Bari, N., Miah, S.U., Reza, M.S., Jahan, C.S., Hasan, M.R., Rahman, M.F. (2020). IWRM Approaches in Water Resources Management Activities of BMDA, Barind Tract of Bangladesh: A Blooming Effort. Hydrology, doi: [10.11648/j.hyd.20200804.15](https://doi.org/10.11648/j.hyd.20200804.15). Science PG.
13. Reza, M.S., **Hossain, M.I.**, Hossain, M.E. (2020). Environmental Challenges and the Measures Taken by the BMDA for Sustainable Agriculture and Environment in the Barind Tract, North-West of Bangladesh. International Journal of Agricultural Economics, doi: [10.11648/j.ijae.20200505.1](https://doi.org/10.11648/j.ijae.20200505.1). Since PG.
14. **Hossain, M.I.**, Bari, N., Matin, I. (2020). Groundwater Zoning for the North-West Region of Bangladesh. Hydrology, doi: [10.11648/j.hyd.20200803.13](https://doi.org/10.11648/j.hyd.20200803.13). Science PG.
15. **Hossain, M.I.**, Bari, N., Miah, S.U., Jahan, C.S., Rahman, F. (2019). Performance of MAR model for storm water management in Barind Tract, Bangladesh. Groundwater for Sustainable Development. <https://doi.org/10.1016/j.gsd.2019.100285>. Elsevier pub.
16. **Hossain, M.I.**, Bari, N., Miah, S.U., Jahan, C.S., Rahman, F. (2019). Application of Modified MAR Model in Barnai River Basin, NW Bangladesh: A Performance Study. Hydrology. <https://doi.org/10.11648/j.hyd.20190702.11>
17. **Hossain, Md. I.**, Bari, N., Miah, S.U., Jahan, C.S., Rahman, Md.F. (2019). MAR Technique to Reverse the Declining Trend of groundwater Level in Barind Area, NW, Bangladesh. Journal of Water Resource and Protection, 11, 748-757. <https://doi.org/10.4236/jwarp.2019.116045>

18. **Hossain, M.I.**, Islam, M.T., Matin, I. (2015). Groundwater Resources Assessment for Joypurhat District Using Mathematical Modelling Technique. American Journal of Engineering Research, Volume-4, Issue-6, pp-137-143.
19. Islam, M.T., Islam, M.M, **Hossain, M.I.** (2015). Investigation of Ground water Potential using Mathematical Model: A Case Study in Part of Northwest Region of Bangladesh. American Journal of Engineering Research, Volume-4, Issue-5, pp-74-80.
20. **Hossain, M.I.**, Rahman, M.A., Afroja, K. (2008). Irrigation methods suitable for growing diversified crops in Mymensing district. International Journal of Bio Research, 5(2):36-41.
21. Rahman, M.A., **Hossain, M.I.** (2008). Ground water assessment in Niamatpur Upazila under Naogaon district. Bangladesh Journal of Progressive Science and Technology, 6(1):53-56.

b) Published Chapters in Books

22. **Hossain, M.I.**, Bari, N. (2022). The Unique Approaches to Water Management for Transforming Bangladesh's Drought-prone Northwest Region into a Lush and Granary Landscape. Arid Environment. DOI: 10.5772/intechopen.105840
23. Jahan, C.S., Rahman, M.F., Mazumder, Q.H., **Hossain, M.I.** (2020). Chapter 45 - MAR model: a blessing adaptation for hard-to-reach livelihood in thirsty Barind Tract, Bangladesh. Global Groundwater, Source, Scarcity, Sustainability, Security, and Solutions. <https://doi.org/10.1016/B978-0-12-818172-0.00045-1> Elsevier pub.

c) Publications in International Conference Proceedings

24. Md. Niamul Bari¹, Faria Hasan, **Md. Iquebal Hossain**, Moonmoon Biswas, Mohammad Salah Uddin (2025). Vulnerability Assessment of Potential Groundwater Contamination Using DRASTIC Index Method in the North-Western Region of Barind Area. "Proceedings of the International Conference on Civil Engineering Research & Innovations (ICCEI), 12 – 14 December 2025, Rajshahi University of Engineering & Technology, Rajshahi, Bangladesh".
25. Md. Niamul Bari, Md. Riaz Uddin, **Md. Iquebal Hossain** (2025). Groundwater Level Prediction in Godagari and Tanore Using Statistical and Machine Learning Models: A Comparative Study. "Proceedings of the International Conference on Civil Engineering Research & Innovations (ICCEI), 12 – 14 December 2025, Rajshahi University of Engineering & Technology, Rajshahi, Bangladesh".
26. **Md. Iquebal Hossain**, Md. Niamul Bari (2024). Characterization of surface water for managed aquifer recharge in the water-stressed barind tract of Bangladesh. Proceedings of the 7th International Conference on Civil Engineering for Sustainable Development (ICCESD 2022), 7~9 February 2024, KUET, Khulna, Bangladesh.
27. **Md. Iquebal Hossain**, Md. Niamul Bari (2024). An assessment of the possible quantities of MAR installations in the water-scarce barind region of northwest Bangladesh. Proceedings of the 7th International Conference on Civil Engineering for Sustainable Development (ICCESD 2022), 7~9 February 2024, KUET, Khulna, Bangladesh. 2024b
28. Md. N. Bari, **Md. I. Hossain**, Md. M. Hasan (2024). Prospect of supplementary irrigation with ponds water in water stressed barind tract. Proceedings of the 7th International

Conference on Civil Engineering for Sustainable Development (ICCESD 2022), 7~9 February 2024, KUET, Khulna, Bangladesh.

29. Md. Niamul Bari, Farzana Yasmin Muna, Mumtahina Rahnuma, **Md. Iquebal Hossain**. (2022). Production of activated carbon from rice husk and its proximate analysis. Proceedings of the 6th International Conference on Civil Engineering for Sustainable Development (ICCESD 2022), 10~12 February 2022, KUET, Khulna, Bangladesh.
30. **Md. Iquebal Hossain**, Md. Niamul Bari and Shafi Uddin Miah (2021). Prospects of MAR application at the water stressed Barind area, North West of Bangladesh. Proceedings of the 6th international Conference on Engineering Research, Innovation and Education (ICERIE), 2021. Shahjalal University of Science and Technology (SUST), Sylhet, Bangladesh.
31. **Md. Iquebal Hossain**, Md. Akram Hossain Chowdhury (2021). Turning Barren Land into Productive One: An Adaptive Approaches with Water Resources Management in Barind. 7th Gobeshona International Conference 2021 {(Online (virtually)} , 18-24 January, 2021.
32. **Md. Iquebal Hossain**, Md. Niamul Bari and Shafi Uddin Miah(2020). Opportunities and Challenges of Managed Aquifer Recharge (MAR) at Drought Prone water stressed Barind area, Bangladesh. Proceedings of the 5th International Conference on Civil Engineering for Sustainable Development (ICCESD 2020), 7-9 February, 2020 KUET, Khulna, Bangladesh.
33. Md. Niamul Bari, Sharaf Anika, **Md. Iquebal Hossain**, Fatema Khatun (2020). Production of Activated Carbon from Rice Husk and its Characterization. Proceedings of the 5th International Conference on Civil Engineering for Sustainable Development (ICCESD 2020), 7-9 February, 2020 KUET, Khulna, Bangladesh.
34. Mohammad Selim Reza, **Md. Iquebal Hossain**, Elias Hossain (2019). Environmental Governance and Sustainable Development of Barind Tract Area in Rajshahi District. Proceedings of the 1st International Conference on Prospects and Challenges of Sustainable Development in Developing Countries, 19-20 July, 2019, University of Rajshahi, Rajshahi, Bangladesh.
35. **M. I. Hossain**, N. Bari, S.U Miah(2019). Operational Constraints in Conventional Managed Aquifer Recharge in Barind Area at North-Western Region of Bangladesh. Proceedings of the 2nd International Conference on Planning, Architecture and Civil Engineering (ICPACE 2019), 7-9 February 2019, Rajshahi University of Engineering & Technology (RUET), Rajshahi, Bangladesh.
36. Md. Abdur Rashid, **Md. Iquebal Hossain** (2019). Irrigation Management System of BMDA: an Innovative Approach. Proceedings of the 2nd International Conference on Planning, Architectrue and Civil Engineering (ICPACE 2019), 7-9 February 2019, Rajshahi University of Engineering & Technology (RUET), Rajshahi, Bangladesh.
37. **Md. Iquebal Hossain**, Md. Abdur Rashid (2018). Integrated Water Resource Management and Climate Change Adaptation at barind area, Rajshahi. Conference on Water Resource and Environmental Sustainability, Bangladesh Armi University of Engineering and Technology, Qadirabad Cantonment, Natore-6431, Bangladesh.
38. **Md. Iquebal Hossain**, Md. Tarikul Islam, Iqbal Matin (2012). Assessment of Groundwater Potential and its availability for Joypurhat. Proceedings of the 1st International Conference

on Advances in Civil Engineering (ICACE 2012), 12 –14 December 2012, CUET, Chittagong, Bangladesh.

39. **Md. Iquebal Hossain**, Md. Shafiqur Rahman (2009). AWD Technology at Barind Multipurpose Development Authority. National Workshop Proceedings on AWD Technology for Rice Production in Bangladesh, 15 July 2009, Bangladesh Rice Research Institute (BRRI), Gazipur, Dhaka.

d) Technical Report

40. M.A. Kasem, **M.I Hossain**, A.S.M.D Hossain, M.S.I. Khan (2025). Sustainable Groundwater Irrigation through Cropping Pattern Change: A Suitable Model for the High Barind Region. February 2026, DOI: [10.13140/RG.2.2.25744.06404](https://doi.org/10.13140/RG.2.2.25744.06404)

e) Poster

- 41). Sihab Hossain, Dr. Mohammad Shamsudduha, **Dr. Md. Iquebal Hossain**, Majedul Islam Rony, Md. Siam Hossain, Dr. Kazi Matin Uddin Ahmed (202). Spatiotemporal Assessment of Groundwater Irrigation Sustainability in the High Barind and Ganges–Mahananda Floodplain, Northwestern Bangladesh. 25 January 2026, Research Fair, Faculty of Earth and Environmental Sciences, University of Dhaka.

VI. Groundwater Resource Studies

On behalf of BMDA, I was involved in conducting the following groundwater resource studies with the Institute of Water Modelling (IWM) study team:

1. Groundwater Model Study for Deep Tube Well Installation Project in Barind Area, 2004 to 2006.
2. Determination of Hydro-geological Parameter for Different Regions of Bangladesh using Different Method: Phase I, 2008 to 2011.
3. Groundwater Resource Study and Decision Support System Development of Thakurgaon, Panchagarh, Dinajpur and Joypurhat Districts through Mathematical Model Study, 2007 to 2009.
4. Strengthening BMDA's Capacity on Water Resources Management, January, 2010 to 2011.
5. Groundwater Resources Study and Decision Support System Development of Rajshahi, Naogaon, Chapai Nawabganj, Pabna and Natore Districts and Also Remaining Districts (Except Thakurgaon, Panchagarh, Dinajpur & Joypurhat Districts) of Rajshahi Division through Mathematical Model Study for Barind Integrated Area Development Project, Phase-III, 2009 to 2012.
6. Groundwater Resources Study and Interactive Information System (IIS) Development of Pabna, Sirajgonj, Bogra, Gaibandah, Rangpur, Kurigram, Nilphamari and Lalmonirhat Districts through Mathematical Model Study, 2011 to 2014.
7. Survey & Investigation of Water Resources Management by Mathematical Modelling of Panchagarh, Thakurgaon, Dinajpur & Joypurhat Integrated Agriculture Development Project Areas, 2013 to, 2015.

VII. Trainings

- Completed a training course on “Integrated Water Resource Management in Agriculture” from 16 February to 20 February 2025 at National Agriculture Training Academy (NATA), Gazipur.
- Completed a training course on “Using groundwater models to make water management decisions” from 17-20 November 2019, Dhaka University, organized by International Organization for Migration (IOM).
- Completed a training course on "Concept and Practice of Integrated Water Resources Management (IWRM)" held from 16 - 20 April, 2017 organized by Center for Environmental and Geographic Information Services (CEGIS) in association with Bangladesh Water Partnership (BWP).
- Completed a training course on “Disaster Management” organized by National Agriculture Training Academy (NATA), Gazipur from 25 – 28 September, 2016.
- Completed a training course on "Underground Taming of Floods for Irrigation (UTFI)" held from 4 to 6 June, 2016 organized by IWMI (International Water Management Institute), New Delhi. The course also included different aspects of groundwater management and site visits to New Delhi and Rampur District, India.
- Completed a training course on "Mathematical Modelling and Interactive Information System (IIS)" under Strengthening BMDA's Capacity on Water Resources Management & BIADP Phase-III from 25 to 29 September, 2011. The programme was organized by Institute of Water Modelling (IWM), Dhaka.
- Completed a training course on "Mathematical Modelling" from 12 to 14 December, 2010. The programme was organized by Institute of Water Modelling (IWM), Dhaka.
- Completed a short term training course on "DSS and Mathematical Modelling under Groundwater Resources Study and DSS development for DTW Installation Programme, BMDA Unit-2, Thakurgaon" at Institute of Institute of Water Modelling (IWM), Dhaka held from 31 May to 4 June, 2009.
- Completed a short term training course on "Risk Management in Water Resources" held from 13-14 March, 2010. The program was organized by Institute of Water and Flood Management (IWFM), Bangladesh University of Engineering and Technology (BUET).
- Completed a training course on “Integrated Field Water Management” held from 26 to 28 August 2007. The program was organized by Bangladesh Rice Research Institute (BRRI) in association with International Rice Research Institute (IRRI).
- Completed national training course on “Public Procurement Management” organized by Central Procurement Technical Unit (CPTU), Implementation monitoring & evaluation Division (IMED). Ministry of planning, Bangladesh from 4 to 22 December 2004.
- Completed short-term training ‘courses on assembling and service of submersible pump’ under KSB. Pumps Limited, Primpri Pune, India from 26th April 2004 to 6th May 2004.
- Completed a training course on ‘arsenic detection by digital arsenator’. The training conducted by R. Michael Jackman, Technical & training Manager and David Nunley, Asia/Pacific Representative, Wagtech International Ltd. held on March 10, 2004.

- Completed a comprehensive training course on “ISO 9000: 2000 Quality Management System” held from 22-24 July 2003 . The training was conducted by Engineering Staff College, Bangladesh, a corporate body of the Institution of Engineers, Bangladesh.
- Completed a training course on “Introduction to Computer, Application Packages and Internet & E-mail Usage” organized by Bangladesh Computer Council from 18 October 2002 to 08 January 2003.
- Completed a short-term training course on ‘Deep tube well installation and operation’ under Barind Multipurpose Development Authority from 7 to 9 September 2002.
- Completed short term training course on ‘Irrigation management programme’ under Rural Development Academy (RDA), Bogra from 7 to 10 October, 1996.

VIII. Professional Experience

Total Experience

I bring more than 32 years of experience working with government and non-government organizations, specializing in irrigation and water management. My expertise spans groundwater development and modeling, surface water augmentation, integrated water resources management (IWRM), managed aquifer recharge (MAR), solar-powered and electrified irrigation systems, environmental development, climate change adaptation initiatives, and advanced irrigation technologies including buried pipe, sprinkler, drip, AWD and prepaid systems. I also have vast experience in research related to irrigation, groundwater, surface water, and Managed Aquifer Recharge (MAR), particularly in the Barind area. Additionally, conducted internship programs for multiple batches of students from Bangladesh Army University of Engineering and Technology (BAUET), Rajshahi University of Engineering and Technology (RUET), University of Rajshahi (RU), and other institutions. Participated in and presented papers at various national and international seminars and workshops. Currently I am working as an Assistant professor at Prime University on a part time basis.

Experience Records with the Government Organization Barind Multipurpose Development Authority (BMDA)

Additional Chief Engineer, BMDA Planning Wing, Head Quarter, Rajshahi (11 December 2025 to 30 December, 2025)

- Plan, design, and formulate comprehensive projects focused on groundwater development, surface water augmentation, rainwater harvesting, and managed aquifer recharge (MAR).
- Engage in policy formulation, strategic and master planning, decision-making processes, supervision of study and research activities and monitoring and evaluation.
- Monitor the progress of works, evaluation, prepare progress reports of the different projects.

Superintending Engineer, BMDA, Planning Wing, Head Quarter, Rajshahi (April 2024 to 11 December 2025)

- Plan, design, and formulate comprehensive projects focused on groundwater development, surface water augmentation, rainwater harvesting, and managed aquifer recharge (MAR).

- Monitor the progress of works, evaluation, prepare progress reports for the following ongoing projects:
 - Expansion of Irrigation in Natore District through Best Uses of Surface Water and Conservation of Rain Water.
 - Expansion of Irrigation in Greater Rangpur District through Best Uses of Surface Water and Conservation of Rain Water.
 - Enhancement of Irrigation through Surface Water Augmentation in Greater Dinajpur & Joypurhat District.
 - Rehabilitation of Irrigation Infrastructure Project.
 - Enhancement of Command Area and Irrigation Efficiency through Extension of Subsurface Irrigation Channel and Piloting of Drip Irrigation System.
 - Extension of Irrigation in Barind Area through Conservation of Water in Canal-2nd Phase.
 - Program on Agricultural and Rural Transformation for Nutrition, Entrepreneurship and Resilience (PARTNER).
 - Project for Capacity Building Acceleration Including Infrastructure Development of Barind Multipurpose Development Authority.
 - Water supply from Padma river and extension of irrigation in Barind area by double lifting system.
 - Minor Irrigation through pond re-excavation and surface water augmentation.
- Prepared evaluation and completion reports for projects.
- Conducted and supervised various research studies, including groundwater modeling (by IWM), design and application of managed aquifer recharge techniques to replenish groundwater in water-stressed areas, and application of river water irrigation.

Superintending Engineer, BMDA Tharkurgaon Circle (September 2021 to April 2024)

- Served as the administrative head of the Circle (includes Thakurgaon, Panchagar, and Dinajpur districts).
- Prepared work plan, budget, tendered, monitored, supervised, implemented, and reported on different works/projects aimed at augmenting surface water and groundwater for irrigation. The projects include:
 - Enhancement of Irrigation through Surface Water Augmentation in Greater Dinajpur & Joypurhat District.
 - Rehabilitation of Irrigation Infrastructure Project.
 - Enhancement of Command Area and Irrigation Efficiency through Extension of Subsurface Irrigation Channel and Piloting of Drip Irrigation System.
- Conducted various training programs.
- Managed human resources and other activities.

Secretary (BMDA's administration) (August 2020 to September 2021)

- Managed various administrative activities of BMDA, including human resources management and development.

Director, Research and Training Unit, BMDA (July 2016 to August 2020)

- Engaged in and conduct studies and research works in collaboration with universities and research institutes.

- Supervised and monitored various studies and research works, for example, those were conducted by Institute of Water Modelling (IWM).
- Wrote research reports, research papers, keynote papers etc.
- Prepared Training module and schedule for various aspects including irrigation, water management, solar system, prepaid metering system, water distribution.
- Conducted training for the farmers, operators, water users, and beneficiaries of the project and the BMDA officials in different tiers.
- Conducted internship programs for multiple batches of students from Bangladesh Army University of Engineering and Technology (BAUET), Rajshahi University of Engineering and Technology (RUET), University of Rajshahi (RU), and other institutions.
- Prepared progress reports on the training activities.

Project Director, Smart Card-based Prepaid Pump Usages and Energy Measuring System Phase-II (July 2013 to June 2016)

- Established Prepaid Pump Usages and Energy Measuring Units in 4100 Deep Tube Wells to supply irrigation water based on farmers' actual demand, reducing excessive use of groundwater.
- Prepared work plans, procured construction materials, selected contractors through proper tendering methods, supervised and monitored project progress, and participated in meetings with the Ministry of Agriculture and the Planning Commission.
- Reported to the Head of the Authority and the concerned ministry.
- Conduct training for the farmers, operators, water users, and beneficiaries of the project.

Project Director, Command Area Development and Training Project Phase-II (December 2011 to June 2013)

- Aimed to increase crop production by bringing additional areas under cultivation through the extension of buried pipe-lined water distribution systems, minimizing irrigation water loss in 2500 Deep Tube Well schemes.
- Prepared work plans, procured construction materials, selected contractors through proper tendering methods, supervised and monitored project progress, and participated in meetings with the Ministry of Agriculture and the Planning Commission.
- Reported to the Head of the Authority and the concerned ministry.
- Conduct training for the farmers, operators, water users, and beneficiaries of the project.

Executive Engineer, BMDA (July 2003 to November 2011)

- Supervised and monitored project activities related to irrigation, groundwater development, surface water augmentation, water distribution, water control structures, drought management, climate change adaptation, construction of drinking water supply installation for the rural people and managed aquifer recharge structures.
- Prepared tender documents, progress reports, project completion reports, and formulated new development project proposals (DPP).
- Executed projects following procurement rules and plans.
- Overall supervision, monitoring and reporting of the following projects (While at Head Quarter):
 - Barind DTW Installation Project.

- Drinking Water Supply from Irrigation Deep Tubewell Project.
- Barind Rural Road Development Project, Phase-III.
- Activating Inoperable DTW for Irrigation Project.
- Deep tubewell Installation project, Phase-II.
- Barind DTW Electrification Project.
- Conducted various technical and human resources development-oriented training programs.

Assistant Engineer, BMDA (July 1994 to June 2003)

- Worked in different areas of BMDA jurisdiction.
- Served as the administrative head and team leader of the field level office.
- Designed, supervised, and monitored the installation and operation of deep tube wells for irrigation, including the electrification of irrigation equipment and the establishment of solar-powered irrigation systems as needed.
- Oversaw the construction of feeder roads to improve agricultural support services, drinking water supply system from irrigation deep tube well, irrigation water distribution systems, pond and canal re-excavation with water control structures for rain water conservation, supplementary irrigation and groundwater recharge, and buried pipe water distribution systems for command area development, improving irrigation efficiency by minimizing conveyance loss.
- Tree plantation for environmental development, electric line and substation construction, and train farmers in modern technology related to cultivation and irrigation.
- The projects were:
 - Barind Integrated Area Development Project-Phase-II.
 - Rural Drinking Water Supply (PILOT) Project.
 - Barind Rural Road Development Project-Phase-I.
 - Barind Command Area Development And Training Project.
 - Barind DTW Electrification Project.

Experience Records with NGOs (for consultancy services)

Assistant Designer (May to July 1994)

With Kranti Associates Ltd. in favor of Grameen Krishi Foundation under Grameen Bank.

- Preparing scheme map, surveying the scheme, preparing contour map, layout, designing constructing buried pipe lined (underground) water distribution system.

Supervisor (October to November 1993)

Land Market Survey, under the organization Polli Unnayon Andolon (RDM) in favor of Jamuna Multipurpose Bridge Authority (JMBA).

- Designing questionnaires, supervising, and monitoring field studies on the Land Market Survey, including crop diversification programs, land types, soil types, and other agricultural information in Tangail district.
- Collecting Thana-level statistical data for different Thanas of Tangail district.
- Editing and compiling collected data.
- Assisting in report writing.

Research Assistant (July to August 1993)

Nutrition Study in Monu River Project area and Shanir Haor, Northeast Regional Project (FAP-6), Bangladesh Country Boat Owners Association (BCBOA) in favor of World Bank.

- Editing and compiling data.
- Assisting in processing, analyzing the data and report writing.

Research Investigator (February to July 1993)

Study on Water Transport in the Northeast region, Northeast Regional Project (FAP-6), under Bangladesh Country Boat Owners Association (BCBOA) in favor of World Bank.

- Interviewing boatmen and traders at key market centers of the region to gather information on the importance of water transport.
- Preparing field report.
- Assisting in report writing.

IX. Additional activities

- Served as a member of the Working Group on the “Groundwater situation Analysis and Action Plan for Sustainable Development in Bangladesh”, formed by the Water Resource Planning Organization (WARPO), Ministry of Water Resources from June 2025 to 30 December 2025.

-Worked as a member of the technical committee for the project titled “Feasibility Study on Livelihood and Integrated Management of Land and Water Resources in Chalan Beel Area with a view to Restoring Chalan Beel” from October 2025 to 30 December 2025.

- Served as a Jury Member to evaluate the submitted proposals from 16 to 29 November 2025 for the “Water Hackathon – Tackling the Safe Water Crisis in the Barind Region of Bangladesh”, organized under the “Integrated Social Development through Climate-Resilient Water Services Project” by BRAC, in collaboration with the Global Center on Adaptation and IWMI, and in partnership with Canada.

- Served as a Member of the Industrial Advisory Panel, Department of Civil Engineering, Rajshahi University of Engineering & Technology (RUET), from July 2024 to 30 December 2025.

- Served as a Member of the Industrial Advisory Panel, Department of Civil Engineering, Bangladesh Army University of Engineering & Technology (BAUET), 2025.

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