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Institute of Water and Flood Management (IWFM)
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Education:

- Ph.D in Environmental Engineering. University of Illinois at Urbana-Champaign, USA
- M.Sc in Environmental Engineering. The Johns Hopkins University, USA
- M.Sc in Water Resources Engineering. Bangladesh University of Engineering and Technology
- B.Sc. in Civil Engineering. Bangladesh University of Engineering and Technology

Employment:

- Professor at Institute of Water and Flood Management (IWFM), Bangladesh University of Engineering and Technology (BUET)
- Environment and Climate Change Expert in updating of National Sustainable Development Strategy, Planning Commission, Government of Bangladesh. 2011-12
- Environmental Expert at Center for Environmental and Geographic Information Services (CEGIS). 1999 - 2002
- Served as part-time/adjunct faculty at
 - Institute of Disaster Management and Vulnerability Studies, University of Dhaka
 - Department of Environmental Science and Management, North South University
 - Post graduate Program in Disaster Management, BRAC University
 - School of Environmental Science and Management, and International Center for Climate Change and Development (ICCAD), Independent University

Involvement in formulation of national policies, plans and strategies:

- Member of the drafting committee. National Plan for Disaster Management 2016-2020 Reformulation. Ministry of Disaster Management and Relief. 2016
- Member - Panel of Experts. Target 6.4 of Sustainable Development Goal 6. Ministry of Water Resources. 2016.
- Water Resources Specialist. Bangladesh National Conservation Strategy (NCS). Ministry of Environment and Forest. 2016
- Environment and Climate Change Expert. National Sustainable Development Strategy. Planning Commission, Ministry of Planning. 2012-2013.
- Coastal and Water Resources Expert. National Communication of Bangladesh to the United Nations Framework Convention on Climate Change. 2012.
- Contributing author. Bangladesh Climate Change Strategy and Action Plan 2009
- Member. Sectoral Working Group on Water, Coastal Zone, Natural Disaster and Health, National Adaptation Programme of Action (Climate Change), Ministry of Environment and Forest, 2005
- Member, Task Force on Knowledge Base for Integrated Coastal Zone Management Plan Project; Ministry of Water Resources, 2004-05
- Member, Thematic Subgroup on Water Resource Management for finalization of Poverty Reduction Strategy Paper, Ministry of Water Resources, 2004.
- Team Leader (Environmental Support Team of CEGIS). National Water Management Plan. Water Resources Planning Organization, Ministry of Water Resources. 2001.
- Hydrologist and Implementation Issues Specialist. Multipurpose Cyclone Shelter Plan. Planning Commission, Ministry of Planning. 1992-93.

Current research projects:

- REACH: Improving Water Security for the Poor. Lead - University of Oxford, UK. 2016-2021.
- DECCMA: Deltas, Vulnerability and Climate Change: Migration and Adaptation (a project under Collaborative Adaptation Research Initiative in Africa and Asia (CARIAS)). Lead - University of Southampton, UK. 2014-2018.
- Climate Policy, Conflicts and Cooperation in Peri-Urban South Asia: Towards Resilient and Water Secure Communities (A CoCooN - Conflict and Cooperation in the Management of Climate Change - Integrated Project). Lead - Wageningen University, the Netherlands. 2014-2018.
- Disaster Prevention/Mitigation Measures against Floods and Storm Surges in Bangladesh. Co-lead - Kyoto University, Japan and BUET. 2014-2019.

Selected list of courses taught in recent past:

at *IWFM, BUET*

- Socio-economic Analysis (post-graduate)
- Climate Change Risk Management (post-graduate)
- Water and Ecosystem (post-graduate)
- Water Disaster Management (post-graduate)

at *Independent University*

- Sustainable Floodplain Management (post-graduate)
- Flood Mitigation and Management (post-graduate)
- Climate Change and Sustainable development (post-graduate)

at *BRAC University*

- Disaster Preparedness Response and Recovery (post-graduate)

at *Institute of Disaster Management and Vulnerability Studies, The University of Dhaka*

- Concepts and Issues of Disaster Management (post-graduate)

at *North South University*

- Introduction to Environmental Science (under-graduate)

Post-graduate thesis/project supervision (selected list):

- Changes of Land Use and Soil Properties and their Impact on Rice Yield in Dacope Upazila of Khulna District. M.Sc thesis in Water Resources Development by Sultana Maliha. IWFM, BUET, 2016.
- A Study on Earthquake Preparedness in Schools in North Dhaka City. A dissertation for the degree of Master in Disaster Management by Nafisa Ziauddin; SPRING 2016; Postgraduate Program in Disaster Management, BRAC University.
- Flood Risk Mapping and Damage Analysis through GIS based Approach - A Case Study of Nabinagar Upazila, District - Brahmanbaria. Master of Disaster Management thesis by Md. Abdur Rahman. Institute of Disaster Management and Vulnerability Studies, University of Dhaka. 2013.
- Solving Water Logging Problem: A Study on Munshigonj Town. Master of Disaster Management thesis by Kakoli Akter. Institute of Disaster Management and Vulnerability Studies, University of Dhaka. 2013.
- SWOT Analysis of SWAIWRMP from Poverty Reduction Perspective. Post Graduate Diploma Project in Water Resources Development by Md. Rashed Jalal. IWFM, BUET, 2011.

- Assessment of the Risk due to Storm Surge under Climate Change in the Coastal Zone of Bangladesh. M.Sc thesis in Water Resources Development by Dipanker Kumar Sarkar. IWFM, BUET, 2011.
- Future Economic and Livelihood Impact of Storm Surge Disaster under Climate Change Context in a Selected Polder. M.Sc thesis in Water Resources Development by Pronab Kumar Halder. IWFM, BUET, 2011.
- Social Perceptions and Technical Evaluation of Performance of Selected Water Control Structures. M.Sc thesis in Water Resources Development by Abul Bashir Mohammed Khan Mozahedy. IWFM, BUET, 2011.
- Health Impact due to Subsistence Use of Polluted Water of Shitalakkhya River. Post Graduate Diploma Project in Water Resources Development by Khaleda Begum. IWFM, BUET, 2010.
- Comparing Ecological Resource Dependent Livelihood Patterns between a Water Project and Non-Project Area. Post Graduate Diploma Project in Water Resources Development by Suha Sanwar. IWFM, BUET, 2010.
- Assessing the Livelihood Resilience to Change in the Sundarban Mangrove System due to Climate Change. M.Sc thesis in Water Resources Development by Shibly Sadik. IWFM, BUET, 2009.
- People's perception in Early Warning System : A case study of Bhandara VDC Padariya -7 in Chitwan district, Nepal. A dissertation for the degree of Master in Disaster Management by Richa Lamichanne; Fall 2011; Postgraduate Program in Disaster Management, BRAC University.
- Use of Indigenous Knowledge in Strategies for Disaster Risk Reduction for flood disaster: The Study of Tharu Community in Bardiya District of Nepal'; A dissertation for the degree of Master in Disaster Management by Rachhita Dhungel. Fall 2011; Postgraduate Program in Disaster Management, BRAC University.
- Char dweller's adaptation to climate change. A dissertation for the degree of Master in Disaster Management by Nasrul Momen Saifullah. Fall 2010. Postgraduate Program in Disaster Management, BRAC University.
- Design and dissemination of community oriented flood warning message. A dissertation for the degree of Master in Disaster Management by Md. Saiful Hossain, Fall 2009; Postgraduate Program in Disaster Management, BRAC University.

Selected publications:

- Akber, M.A., Patwary, M.M., Islam, M. A., **Rahman, M.R.** Storm protection service of the Sundarbans mangrove forest, Bangladesh. Accepted for publication in Natural Hazards.
- Adams, H., Adger, W.N. Ahmed, M., Huq, H., **Rahman, R.**, Salehin, M. Defining Social-Ecological Systems in South-West Bangladesh. (In) Ecosystem Services for Well-Being in Deltas - Integrated Assessment for Policy Analysis. Eds. R. J. Nicholls, C. W. Hutton, W. N. Adger, S. E. Hanson, M. M. Rahman, M. Salehin. Palgrave Macmillan. 2018
- Suckall, N., Tompkins, E.L., Nicholls, R.J., Kebede, A.S., Lazar, A.N., Hutton, C., Vincent, K., Allan, A., Chapman, A., **Rahman, R.**, Ghosh, T. & Mensah, A. A Framework for Identifying and Selecting Long Term Adaptation Policy Directions for Deltas. Science of the Total Environment, 633, p. 946-957, 2018.
- Sadik, M.S., Nakagawa, H., **Rahman, R.**, Shaw, R., Kawaike, K. & Fujita, K. A Study on Cyclone Aila Recovery in Koyra, Bangladesh: Evaluating the Inclusiveness of Recovery with Respect to Pre-disaster Vulnerability Reduction. International Journal of Disaster Risk Science, doi.org./10.1007/s13753-018-0166-9, 2018.

- Islam, M. A., Akber, M.A., Ahmed, M., Rahman, M.M. & **Rahman, M.R.** Climate Change Adaptations of Shrimp Farmers: A Case Study from Southwest Coastal Bangladesh. *Climate and Development*, doi.org./10.1080/17565529.2018.1442807, 2018.
- Sadik, M.S., Nakagawa, H., **Rahman, M.R.**, Shaw, R., Kawaike, K., Fujita, K. and Islam, S.M.T. *Systematic Study of Cyclone Aila Recovery Efforts in Koyra, Bangladesh Highlighting the Possible Contribution to Vulnerability Reduction*. *Journal of Natural Disaster Science*, 36: 109-121, September 2017.
- Akber, M. A., Islam, M.A. Ahmed, M., Rahman, M. M. and **Rahman, M. R.** *Changes of Shrimp Farming in Southwest Coastal Bangladesh*. *Journal of Aquaculture International*, 25(3), June 2017. DOI 10.1007/s10499-017-0159-5.
- Gain, A.K., Benson, D., **Rahman, M.R.**, Datta, D.K. and Rouillard, J.J. *Tidal River Management in the South West Ganges-Brahmaputra Delta in Bangladesh: Moving Towards a Transdisciplinary Approach?* *Journal of Environmental Science and Policy*, 75: 111-120, 2017.
- Gain, A.K., Mondal, M.S. and **Rahman, R.** *From Flood Control to Water Management: A Journey of Bangladesh towards Integrated Water Resources Management*. *Water*, 9(1), 2017.
- **Rahman, M.R.** *Resistance or Resilience? Evidences from Recent Flood in Haor Basin*. Proceedings of the International Conference on Disaster Risk Mitigation, BUET, September 23-24, 2017.
- Saha, D., Hossain, M. A., Hossain, M. S. S., Mondal, M. S. and **Rahman, R.** *Adaptations to Climate Change in Bangladesh: Development of a National Inventory*. Leal Filho, W. (ed.), *Climate Change Research at University: Addressing the Mitigation and Adaptation Challenges*, Springer International Publishing (2017)
- Saha, D., Hossain, M.S.S., Mondal, M.S. and **Rahman, R.** *Agricultural Adaptation Practices in Coastal Bangladesh: Response to Climate Change Impacts*. *Journal of Modern Science and Technology*, Vol. 4. No. 1. pp. 63 - 74, 2016.
- MSA Khan, MS Mondal, **R Rahman**, H Huq, DK Dutta, U Kumar and MR Jalal. *Urban burden on peri-urban areas: shared use of river a river in a coastal city vulnerable to climate change*. (In) *Water Security in Peri-urban South Asia: Adapting to Climate Change and Urbanization*. Editors: V Narain and A Prakash. Oxford University Press. 2016.
- P Dasgupta, PK Ghosh, **R Rahman**, MSA Khan. *Mapping gains and losses from the Mayur ecosystem*. (In) *Water Security in Peri-urban South Asia: Adapting to Climate Change and Urbanization*. Editors: V Narain and A Prakash. Oxford University Press. 2016.
- **R Rahman**, and MS Mondal. *Role of Water Resource Management in Ensuring Food Security*. Chapter 12 (in) *Food Security and Risk Reduction in Bangladesh*. U. Habiba et. al. (eds). Springer Japan. 2015
- MS Mondal, A Rahman, N Mukherjee, H Huq, **R Rahman** (2015). *Hydro-climatic hazards for crops and cropping system in the chars of the Jamuna River and potential adaptation*. *Natural Hazards*, 76: 1431-1455.
- A Rahman, F Mallick, MS Mondal, and **R Rahman**. *Flood shelters in Bangladesh: Some issues from the users' perspective*. (In) *Hazards, Risks and Disasters in Society*, AE Collins et al. (eds) Elsevier. 2015
- D McEvoy, I Ahmed, A Trundle, LT Sang, NN Diem, LTT Suu, TB Quoc, FH Mallick, **R. Rahman**, A Rahman, N Mukherjee & A Nishat. *In support of urban adaptation: a participatory assessment process for secondary cities in Vietnam and Bangladesh*. *Climate and Development*, 6:3, 2014. pp 205-215.
- SA Ashrafi and **R Rahman**. *An Attempt at Quantification of Women's Empowerment in Small Scale Water Resources Project*. Chapter 5 in *Informing Water Policies in South Asia*. Edited by: A. Prakash, C.G. Goodrich and S. Singh. Routledge, New Delhi. 2014.

- **R Rahman** and M Salehin. *Flood Risk and Reduction Approaches in Bangladesh*. Chapter 4 in *Disaster Risk Reduction Approaches in Bangladesh*, Edited by: R. Shaw, F. Mallick and A. Islam, Springer, 2013.
- PK Halder & **R Rahman**. *Future impact of storm surge hazard on agricultural production inside a coastal embankment under climate change context*. *Bangladesh J. of Environmental Science*, Vol. 25, pp 68-75, 2013.
- MS Mondal, MR Jalal, MSA Khan, U Kumar, **R Rahman**, and H Huq,, *Hydro-meteorological trends in southwest coastal Bangladesh: perspectives of climate change and human interventions*, *American Journal of Climate Change, Scientific Research*, 2013, 2, 62-70.
- **Rezaur Rahman**. *Environmental Flow: Assessment and Applications*. Chapter 3 in *Ecosystems & Integrated Water Resource Management in South Asia*, Edited by: ERN Gunawardena, Brij Gopal and H Kotagama. Routledge, New Delhi. 2012
- N Naher and **R Rahman**. *Cumulative Environmental Impact Assessment of Narail Sub-Project*. Proceedings of 3rd International Conference on Environmental Aspects of Bangladesh - ICEAB 2012. University of Kitakyushu, Fukuoka, Japan. October 13-14, 2012.
- **R Rahman**, MFA Khan, B Nishat, N Mukherjee, S Ahmed, S (2011). *Indicators to Assess Impacts on Hydro-meteorology. Chapter 3 in Protocol for Monitoring of Impacts of Climate Change and Climate Variability in Bangladesh*. Edited by Ainun Nishat. IUCN Bangladesh, Dhaka.
- MSA Khan & **R. Rahman**. *Water and Environment of Dhaka*. In *Environment of Capital Dhaka*. Md. Anwarul Islam (ed.). Asiatic Society of Bangladesh. 2010.
- *Water Resource Development in Bangladesh: Historical Documents*. Salim Rashid and **Rezaur Rahman** (eds.). University Press Limited, Dhaka, 2010.
- SA Khan, **R Rahman**, HE Rashid & S Rashid. *Socio-economic effects of Tsunami on Bangladesh*. Chapter 12 in *Windstorm and Storm Surge Mitigation*, Nasim Uddin (Ed.). ASCE Council on Disaster Risk Management, Monograph No. 4. 2009.

Presentation at Adaptation Futures 2016 Conference, Rotterdam

- Rezaur Rahman. Climate change adaptation policies and practices in the delta region of Bangladesh

Presentations at Deltas Conference 2014, Rotterdam

- **Rezaur Rahman**, Anisul Haque, Mashfiqus Salehin, Munsur Rahman. Natural hazards and migration in the coastal region of Bangladesh. <http://edepot.wur.nl/314967>
- **Rezaur Rahman**, Munsur Rahman, Anisul Huq, Hajime Nakagawa. Restoration of coastal resilience through tidal river management. <http://edepot.wur.nl/315321>

Other recent selected academic and professional activities:

- Chair of the Session on Climate Change Impact on Water Resources. 4th Sub-Regional Workshop on Community Resilience to Climate Change in the Bay of Bengal. Organized by BUP, Concern Worldwide and Prism. December 17-18, 2017.
- Lecture on 'IWRM and Himalayan Rivers'. National Pilot Testing Workshop on Water Governance and Diplomacy. Organized by IUCN, Dhaka University and South Asian University. November 10-12, 2017, Dhaka.
- Presentation on 'Sediment & Water Quality Monitoring of Important Rivers in Sundarbans'. National Workshop on Challenges and Management of Sundarbans Landscape: Finding a Shared Way Forward. Organized by International Water Association (IWA), October 11, 2017, Dhaka.
- Panelist, Dialogue on Rights of River and Right to River, Organized by Action Aid, Bangladesh, October 5, 2017, Dhaka.

- Panelist, Regional Workshop on Disaster Risk Reduction in the Brahmaputra River Basin. Organized by IIT (Guwahati), JJS and Brac University. April 6, 2017, Dhaka.
- Panelist, SDG6 and Bangladesh Country Paper. International Conference on Sustainable Development. Organized by United International University, February 16-18, 2017, Dhaka
- Panelist, 3rd Climate Change Adaptation Policy and Science Conference. Organized by HiWARE project, ICIMOD and BCAS. February 6, 2017.
- Chair of Plenary Session on Sustainable Development and National Long Term Plan: Bangladesh Delta Plan 2100. International Conference on Sustainable Development 2016. University of Liberal Arts Bangladesh. February 4, 2016.
- Keynote Speaker. Participatory Water Management. National Water Convention. Organized by PKSF. December 28-29, 2016, Dhaka.
- Chair of Panel Discussion Session. The Links between Environmental Data, National Policy, Planning and Management. Expert Validation Workshop on Identifying Data Sources of Environmental Statistics for Developing Bangladesh Environmental Statistics Framework 2016-2030. Bangladesh Bureau of Statistics. December 21-22, 2016.
- Panelist. National Consultation Workshop on National Plan for Disaster Management. December 19, 2016.
- Member, Technical Committee for the management of Local Disaster Risk Reduction Fund (LDRRF), Comprehensive Disaster Management Programme (CDMP) - phase II. Ministry of Disaster Management [till December 2015]
- Member, National Scientific Body for Tanguar Haor - Community Based Sustainable Management of Tanguar Haor Project, Ministry of Environment and Forest. (till June, 2015)
- Expert Reviewer. Peer Review Meeting on Environmental Flow Assessment for the Sundarbans Ecosystem. IUCN - Ecosystem for Life: A Bangladesh-India Initiative programme. 7-8 November, 2014. Bangkok.
- Panel Discussant. Dissemination and Consultation Workshop on a Roadmap for Developing a National Adaptation Plan (NAP) for Bangladesh. 29 October, 2014. Dhaka
- Resource Person in Short Course on Project Appraisal, EIA and Formulation of DPP. Organized by National Academy for Planning and Development. August 1, 2016. Topic of Presentation - Economic Evaluation of Environmental Impacts of Development Projects.
- Resource Person in 75th and 76th Special Foundation Training Course for BCS (Health) Cadre Officers. Organized by National Academy for Planning and Development. February 8, 2016. Topic of Presentation: Environmental Policies and Laws of Bangladesh
- Resource Person in 'Dredging and Hydrographic Survey for LGED Engineers'. Short course organized by Water Resources Engineering (WRE) Department, BUET. 23-25 August, 2014. Topic of lecture: Environmental Impact of Dredging.
- Chair of Technical Session. Endeavor for Basic Requirements in Undergraduate Course Curricula for Environmental Sciences to Meet the Challenges of Twenty First Century. 20-21 June, 2014. Khulna University.
- Chair of Technical Session - 2: Research and Study. Workshop on the Conservation and Management of Tanguar Haor. IUCN - Bangladesh, June 22, 2014. Dhaka.
- Resource Person in "Concept and Practices of Integrated Water Resources Management for Training of the Trainers (ToT)". Center for Environmental and Geographic Information Services (CEGIS), Dhaka. 25-29 May, 2014. Topic: Water and Ecosystem

- Presentation on 'Changing Coast, Embankments and Tidal Basin Management'. Mangrove for Future (MFF) Symposium on Coastal Community Resilience. IUCN-Bangladesh. 30-31 March, 2014. Dhaka.
- Panel Discussant. Roundtable on Water Commons. Action Aid, Bangladesh. 22 March, 2104. Dhaka
- Resource Person. Capacity Development Programme. Institute of Water Modeling (IWM). 17 February, 2104. Topic: Planning Considerations for Hydraulic Structures.
- Resource Person. Disaster Workshop. Water Aid, Bangladesh. 19 February, 2014. Topic: Technologies in Disaster Risk Reduction. Dhaka.

Recent media:

Online article: <https://opinion.bdnews24.com/2017/12/26/climate-change-policy-is-crucial-for-bangladesh/>

Newspaper article: Government commitment to protecting our country from impacts of climate change, Dhaka Tribune, January 16, 2016.

Newspaper interview: এবারের বন্যা 'ভয়াবহ' থেকে 'অতি ভয়াবহ', Jugantor. August 30, 2017.

Selected advisory services:

- Feasibility Study with ESIA for Resuscitation of Ichamoti River in Pabna District. Client: Bangladesh Water Development Board. 2018 [Team Leader]
- Feasibility Study for Flood Control, Drainage and Irrigation System at Gowainghat in Sylhet District. Client: Bangladesh Water Development Board. 2018-19 [Team Leader]
- Preparation of Bangladesh SDGs Progress Report 2018. Client: UNDP. 2018 [Environment and Climate Change Expert]
- Advancing Water Security of Marginalized Communities Living along Karnali-Ganges River Basin in Nepal, India and Bangladesh. (for) WaterAid Bangladesh and C3ER, Brac University. 2017. [Advisor].
- Water Management Improvement Project. Impact Evaluation of Participatory Scheme Management Component. Bangladesh: World Bank/FAO Cooperative Programme. 2016. [Evaluation Specialist]
- Study to assess impact of disaster on market systems at char areas. Client: SwissContact. 2013. [Team Leader]
- Designing flash flood early warning system subcomponent for haor region of north-eastern Bangladesh under CALIP/HILIP. Client: IFAD. April, 2013.
- The Sundarbans Delta - A Vision. Client: IUCN - Bangladesh. 2012-13. [Water and Environment Management Expert]
- Preparation of National Strategy and Action Plan for Mangrove for Future (MFF). Client: IUCN-Bangladesh. 2011. [Lead author of Coastal and Marine Conservation].
- Setting up monitoring mechanism of evidence of climate change and climate variability. Client: IUCN - Bangladesh. 2010. [Team Leader of Hydro-meteorology group]
- Hydrological and Morphological Study and EIA of Proposed 18 Road Bridges over Different Rivers in Bangladesh. Client: LGED. 2010. [Environmental Specialist]
- A comparative analysis between different types of flood shelters. Client: DIPECHO Partners in Bangladesh. 2010. [Team Leader of Technical Analysis component]

- Social and Environmental Impact Assessment for Sustainable Drainage and Flood Management of Kobadak River Basin under Jessore and Satkhira Districts.
Client: Bangladesh Water Development Board. 2009-2010. [Team Leader]