

## **Mohammad Rezaur Rahman**

Professor

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### **Field of interest**

Ecosystem based Management; Disaster Impact Assessment; Climate Change Adaptation

### **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. BUET
- B.Sc. in Civil Engineering. BUET

### **Employment**

- Currently Professor at IWFM, BUET
- Faculty at IWFM, BUET since 1982
- 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 (ICCCAD), Independent University

### **Involvement in national plans/strategies/action plan formulation**

- 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 professional engagements**

- Steering Committee Member (representing Bangladesh). Himalayan University Consortium (HUC), ICIMOD, Nepal.
- Expert Member, Selection Board of the Faculty of Department of Climate and Disaster Management. Jashore University of Science and Technology
- Member, Joint Technical Committee for conducting the Feasibility Study of the Ganges-Padma Barrage Project with Alternate Option Analysis for Optimum Utilization of the Water Received under the Provisions of Ganges Water Sharing Treaty, 1996. Ministry of Water Resources.
- Chair, Technical Valuing Water Committee. Prime Minister's Office.
- Member- Multi-disciplinary Advisory Committee for the Haor Scoping Study. Ministry of Water Resources.
- Member, Technical Working Committee. Sex, Age and Disability Disaggregated Data (SADDD) for Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA). Bangladesh Bureau of Statistics (BBS).

## **Latest professional activities (selected)**

- Panel Discussant. Workshop on National Disaster Management Plan (NDMP)2021-25. 14 September, 2020.
- Invited Speaker. 4<sup>th</sup> Young Scientist Congress (Young Scientists for Achieving Sustainable Development Goals)organized by Bangladesh Academy of Science. 13-15 December, 2019. Topic of the Speech - Research Agenda for SDGs.
- Invited Speaker. International Conference on Himalaya Water: Highland-lowland Interaction. Organized by Bangladesh Center for Advanced Studies. 16-18 November, 2019. Topic of the speech - Sharing Water for Shared Ecosystems: Himalayan Opportunities.
- Chair of Climate Change session. 4<sup>th</sup> Annual Conference on Social Research in Bangladesh. Organized by Bangladesh Institute of Social Research. 2 November, 2019.
- Chair of Group presentation and discussion session. Workshop on Industrial Water Use Policy. Organized by Water Resources Planning Organization (WARPO). 24 November, 2019.
- Resource Person - Certificate Course on Water Diplomacy. Foreign Service Academy, Ministry of Foreign Affairs. 29 April - 4 May, 2019.
- Designated Discussant - 'Monitoring and Evaluation Procedure of Bangladesh Climate Change Trust (BCCT) and the Impact Assessment of Climate Change Trust Fund (CCTF) Projects. BIDS. 6 February, 2019

## **Selected advisory services**

- Project Preparation Facility activity for the project 'Climate Resilient Sustainable Coastal Forestry in Bangladesh' of Green Climate Fund (GCF). Client: C3ER, BRAC University. 2020-21. [Coastal Zone Management/Environment Expert]
- Developing an Integrated 'National Recovery Strategy and Plan for Cyclone Amphan and Flood 2020'. Client: UNDP.[Institutional Expert]
- Developing Institutional Framework for Flood Preparedness Programme (FPP). Client: National Resilience Programme (NRP),Department of Disaster Management. [Institutional Expert]
- Watershed Management Policy and Implementation Framework. Client: IUCN & FAO. 2020. [Team Leader]

- Development of Disaster Impact Assessment Tools and Guidelines. Client: UNDP. 2019-20. [Disaster Risk Reduction Specialist].
- 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]

### **Current research projects**

- Sediment Discontinuity in Ganges River and its Impact on Flooding Patterns. BUET research project. 2021-22.
- Research on Water-related Disaster Mitigation and Environment Symbiosis Technology in Rural Bangladesh; Lead Kyoto University, Japan. 2019-2023
- Evaluation of adaptation trials for coastal livelihoods in GBM Delta and its upscaling to climate financing; CDKN Asia Program. 2019-2021

### **Selected list of taught courses**

at IWMF, 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 University of Dhaka

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

at North South University

- Introduction to Environmental Science (under-graduate)

## **Doctoral committees**

at IWFM, BUET

- Md. Mostafizur Rahman - An Integrated Risk-based System Dynamics Approach for Analyzing Water Security in a Fluvio-Tidal Setting; ongoing
- Nadia Nowshin - Co-creation of sustainable small-scale flood mitigation technologies to improve community resilience; ongoing
- Md. Rezaul Hasan - Groundwater Security in Coastal Peri-Urban Areas of South-West Bangladesh in the Context of Multi-Scalar Hydrological and Anthropogenic Processes; ongoing
- Md. Abul Bashar - Changes and Causes of Rainfall Extremes of Northeast Bangladesh under the Warming World. 2019
- Md. Mahbubul Alam - Poverty Alleviation Through Improved Water Management in a Deltaic Tidal Plain; 2011
- Ahmadul Hassan - Development of Decision Support Framework for Sustainable Land and Water Use in Deltaic Floodplain; 2010
- Sultan Ahmed - Development of Decision Aid for Ecohydrological Consideration in Flood Management in Deltaic Floodplain; 2010

at other Departments of BUET

- Moushumi Zahur - Impact of Climate Change on Water Collection and Consumption, Sanitation and Hygiene Practices at Household Level in the Coastal Regions of Bangladesh: A Study from Gender Perspective. Urban and Regional Planning Department; ongoing
- Md. Mizanur Rahman - Teleconnections and Long-Range Prediction of Summer Monsoon Rainfall Variability over Bangladesh - Department of Physics; 2013.
- Ganesh Chandra Saha - Accumulation of arsenic in agricultural soil and selected crops. Department of Civil Engineering. 2006

at other universities

- Md. Mahedi Al Masud - Tidal River Management and Its Impact in the Southwest Region of Bangladesh. Environmental Science Discipline, Khulna University. 2019.
- Md. Shafiqul Islam - Sustainable Approaches to Drought Management Exploratory Study on Selected Regions of Northwest in Bangladesh, Institute of Disaster Management and Vulnerability Studies, University of Dhaka, 2019
- Md. Golam Rabbani - Climate Change Impacts on Small Isolated Wetlands and Associated Livelihoods in Coastal Region of Bangladesh, Department of Environmental Science, Jahangirnagar University, 2019

#### at overseas universities

- Sonia Binte Murshed - Hydro-Climatic Changes and Corresponding Impacts on Agricultural Water Demand in the Ganges Delta of Bangladesh; Department of Civil and Environmental Engineering, Utah State University, USA. 2019
- Md. Aminur Rahman - Impact of Structural Development Projects on Vulnerability of Coastal Communities to Disaster; School of Civil Engineering and Built Environment, Queensland University of Technology, Australia. 2019
- Mahmuda Mutahara - Turning the Tide? The role of Participation and Learning in Strengthening Tidal River Management in the Bangladesh Delta; Sociology of Development and Change Group, Wageningen University, The Netherlands. 2018

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

- Minimizing the Risk of Sedimentation in Tidal Rivers; Ph.D thesis by Md. Saif Uddin. IWFM, BUET. Ongoing
- Valuation of Ecosystem Services of Tidal River Management in Pakhimara Beel of Kobadak Basin. M.Sc thesis in Water Resources Development by Aniqua Suhala. IWFM, BUET, Ongoing
- Investigation of Sundarbans Ecosystem Resiliency through Multi Temporal Remote Sensing Data. M.Sc thesis in Water Resources Development by Maruf Billah. IWFM, BUET, Ongoing.
- Impact of Resuscitation of Ichamoti River, Pabna on Urban Land Price by using Hedonic Price Model. M.Sc thesis in Water Resources Development by A.K. Azad. IWFM, BUET, Ongoing.
- Role of Mangrove Plantation in Improving Embankment Safety and Supporting Local Livelihoods. M.Sc thesis in Water Resources Development by Kazi Samsunnahar Mita, IWFM, BUET, 2019.
- 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.
- Ecological Risk Assessment of Sundarbans Mangrove Forest due to Sea Level Rise. M.Sc thesis in Water Resources Development by Kazi Wahidur Rahman. IWFM, BUET. April 2008.
- Sustainability Assessment of Arsenic Mitigation Technologies in Bangladesh, M.Sc thesis in Water Resources Development by Farhana Sharmin, IWFM, BUET, April, 2008.
- Relationship between Salinity and Crop Production in Different Hydrological Regimes Downstream of Muhuri Regulator, M.Sc thesis in Water Resources Development by A.K.M. Alauddin Chowdhury, IWFM, BUET, September, 2007.
- Women's Empowerment through their participation in Small Scale Water Resources Development Projects, by Sayeda Asifa Ashrafi, M.Sc thesis in Water Resources Development, IWFM, BUET, February, 2007

## Selected Publications

### Journal articles (selected)

- S. B. Murshed, **M. R. Rahman**, and J. J. Kaluarachchi, *Changes in Hydrology of the Ganges Delta of Bangladesh and Corresponding Impacts on Water Resources*. Journal of the American Water Resources Association, Vol 55 (4):800-823. 2019. <https://doi.org/10.1111/1752-1688.12775>
- Md. Ali Akber, Md. Wahidur Rahman Khan, Md. Atikul Islam, Md. Munsur Rahman and **Mohammad Rezaur Rahman**. *Impact of land use change on ecosystem services of southwest coastal Bangladesh*. Journal of Land Use Science, 13:3, 238-250. 2019. <https://doi.org/10.1080/1747423X.2018.1529832>
- Dik Roth, Muhammad Shah Alam Khan, Israt Jahan, **Rezaur Rahman**, Vishal Narain, Aditya Kumar Singh, Monica Priya, Sucharita Sen, Anushiya Shrestha & Saroj Yakami (2018) *Climates of urbanization: local experiences of water security, conflict and cooperation in peri-urban South-Asia*, Climate Policy, 19:supl, S78-S93, DOI: 10.1080/14693062.2018.1530967

- Sadik, M.S., Nakagawa, H., **Rahman, R.**, Shaw, R., Kawaike, K. & Fujita, K. *Humanitarian Aid Driven Recovery of Housing after Cyclone Aila in Koyra, Bangladesh: Characterization and Assessment of Outcome*. Journal of Natural Disaster Science, Vol. 37: p. 73 -91 (2018)
- Parvin, G.A., **Rahman, R.**, Fujita, K. and Shaw, R. (2018) *Overview of flood management actions and policy planning in Bangladesh*. Int. J. Public Policy, Vol. 14, Nos. 5/6, pp.423-443. 2018.
- Akber, M.A., Patwary, M.M., Islam, M. A., **Rahman, M.R.** *Storm protection service of the Sundarbans mangrove forest, Bangladesh*. Natural Hazards, Vol. 94(1), pages 405-418, October, 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, Vol. 9 (1), p. 28-43. 2018. 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, Vol. 11:6, 459-468. 2018. doi.org./10.1080/17565529.2018.1442807.
- 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*. Aquaculture International, Volume 25(5), pp 1883-1899. 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?* 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.
- 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.
- 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.
- 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.
- 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.

- Wahid, C.M.M., **Rahman, R** and Islam, M.N. Single cell and multiple cell clouds analysed with satellite data in and around Bangladesh. MAUSAM (Quarterly Journal of Meteorology, Hydrology & Geophysics, India Meteorological Department), Vol. 50(2), pp177-180, 1999.
- Chowdhury, J.U., Watkins, D.W., Rahman, R. and Karim, F. Models for Cyclone Shelter Planning in Bangladesh. Water International, Vol. 23(3), pp 155-163, 1998.
- **Rahman, R.**, Salehin, M. and Matsumoto, J. Trend of monsoon rainfall pattern in Bangladesh, Bangladesh. Journal of Water Resources Research, Vol. 14-18, pp 121-138, 1997.
- Fuhu, R., **Rahman, M.R.** and Ochi, S. Delineation of catchment area and proximity analysis of cyclone shelters in coastal region of Bangladesh through GIS. Journal of the Japanese Society of Photo Geometry, May 27, pp 75-83, 1993.
- Eheart, J.W., Rahman, M.R., Keith, S.M. and Valocchi, A.J. A Game-theoretic parameter configuration technique for aquifer restoration design, Journal of Contaminant Hydrology, Vol.6, pp 205-226, 1990.

#### Edited Books

- *Water Resource Development in Bangladesh: Historical Documents*. Salim Rashid and **Rezaur Rahman** (eds.). University Press Limited, Dhaka, 2010.
- *Floods in Bangladesh; Views from Home and Abroad*. Mir M. Ali, M. Mozammel Hoque, **Rezaur Rahman** and Salim Rashid (eds.), University Press Limited, Dhaka, 1998.

#### Book articles (selected)

- Sadik, M.S., Nakagawa, H., **Rahman, M.R.**, Shaw, R., Kawaike, K., and Parvin, G.A. (2020). Assessment of Cyclone Aila Recovery Progress: A Comparison between Rice and Shrimp Farming Villages in Koyra. Haque, Anisul, Chowdhury, Ahmed Ishtiaque Amin (Eds.) *Water, Flood Management and Water Security Under a Changing Climate*. Springer Nature Switzerland AG 2020.
- Tompkins, E.L., Vincent, K., Suckall, K., **Rahman, R.** Ghosh, T., Mensah, A., Anderson, K., Chapman, A., Prati, G., Hutton, C.W., Day, S. & Price, V. Adapting to Change: People and Policies. (In) *Deltas in Anthropocene*; Nicholls, R.J., Adger, W.N, Hutton, C.W., Hanson, S.E. (eds.) Chapter 9, Palgrave Macmillan. 2019.
- Rezaie, A.M., Ferreira, C.M., and **Rahman, M. R.** Storm Surge and Sea Level Rise: Threat to the Coastal Areas of Bangladesh. (In) *Extreme Hydroclimatic Events and Multivariate Hazards in a Changing Environment-A Remote Sensing Approach*; V. Maggioni and C. Massari (eds.) Chapter 13, Elsevier, 2019.
- Sadik, M.S., Shaw, R. **Rahman M.R.**, Nakagawa, H. and Kawaike, K. Event-Consequence Chain of Climate Change-Induced Salinity Intrusion in Sundarbans Mangrove Socioecological System, Bangladesh. (In) *Science and Technology in Disaster Risk Reduction in Asia, Potentials and Challenges*, R Shaw, K. Shiwaku, T. Izumi (eds.), Chapter 6, Elsevier, 2018, DOI: <http://dx.doi.org/10.1016/B978-0-12-812711-7.00006-7>.
- **Rahman, M.R.** Technological Fixes for Disaster Management in Bangladesh. (In) *People at Risk: Disaster and Despair*, H. Khatun, A. Baqee, H. Kabir (eds.), Chapter 5, pp. 71-96, Disaster Research Training and Management Centre, University of Dhaka, February, 2019.



- Sadik, M.S., Nakagawa, H., **Rahman, M.R.**, Shaw, R., Kawaike, K., Fujita, K., and Parvin, G.A. Recovery of Coastal Polders after Cyclone Aila at Koyra, Bangladesh. (In) *People at Risk: Disaster and Despair*, H. Khatun, A. Bagee, H. Kabir (eds.), Chapter 8, pp. 139-155, Disaster Research Training and Management Centre, University of Dhaka, February, 2019.
- M. Shahjahan Mondal, Mohammad Towheedul Islam, Debanjali Saha, Muhammad Shahriar Shafayet Hossain, Prodip Kumar Das, **Rezaur Rahman**. Agricultural Adaptation Practices to Climate Change Impacts in Coastal Bangladesh: Policy Strategies for Adaptation and Resilience. (In) *Confronting Climate Change in Bangladesh*, edited by Saleemul Huq, Jeffrey Chow, Adrian Fenton, Clare Stott, Julia Taub, Helena Wright. DOI: 10.1007/978-3-030-05237-9\_2 ; Springer Nature Switzerland, 2019.
- 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.
- Khan, M.W.R., Akber, M.A., Islam, M.A., Rahman, M.M. and Rahman, M.R. Assessment of ecosystem service value in southwest coastal Bangladesh. Chapter 9 in *Sustainable Development Goals in Bangladesh*. Selim, S.A. et.al. (ed.). Routledge, London. 2018
- 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)
- 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
- 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
- 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.
- **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
- **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.
- 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.

#### Proceedings (selected)

- **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.
- Md. Sabbir Ahsan, Md. Ali Akber, Md. Atikul Islam, Md. Munsur Rahman, and **Mohammad Rezaur Rahman** (2017). *Shrimp Farmers' Competence and Training Needs on Climate Change Adaptation: A Case Study from Southwest Coastal Bangladesh*. Conference Proceedings of International Conference on Climate Change-2017. 16th-17th, February, 2017. Colombo, Sri Lanka.
- Helen Adams, W. Neil Adger, Hamidul Huq, **Rezaur Rahman** and Mashfiqus Salehin. *Transformations in land use in the southwest coastal zone of Bangladesh: Resilience and reversibility under environmental change*. University of Oslo. Proceedings of Transformation in a Changing Climate, 19-21 June 2013, Oslo, Norway.
- N Naher and **R Rahman**. *Cumulative Environmental Impact Assessment of Narail Sub-Project*. Proceedings of 3<sup>rd</sup> International Conference on Environmental Aspects of Bangladesh - ICEAB 2012. University of Kitakyushu, Fukuoka, Japan. October 13-14, 2012.
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