DEBANJALI SAHA

Institute of Water and Flood Management, Bangladesh University of Engineering and Technology (BUET)

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**CAREER OBJECTIVE**

To become a successful researcher and efficient teacher where I can effectively utilize my skills and enhance my knowledge with new findings about water resource related issues from both technical and management perspectives.

**EDUCATIONAL QUALIFICATION**

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| --- | --- | --- | --- |
| **Degrees Obtained** | **Name of the Institution** | **Duration** | **Result** |
| **M.Sc.** (WRD)  **(Under IDRC-SAWA Fellowship)** | Institute of Water and Flood Management (IWFM), Bangladesh University of Engineering and Technology (BUET) | 2013-2016 | 3.92 (On a scale  of 4.00) |
| B.Sc. (Engg.) | Bangladesh University of Engineering and Technology (BUET) | 2008-2013 | 3.42 (On a scale  of 4.00) |
| **H.S.C.** | Holy Cross College | 2005-2007 | 5.00 (On a scale  of 5.00) |
| S.S.C. | Agrani Girls’ School and College | 1995-2005 | 5.00 (On a scale  of 5.00) |

**M.Sc Thesis**

Prospect of Rabi Crops in South-West Coastal Area Under Climate Change Scenarios

**Supervisor:** Dr. M. Shahjahan Mondal, Professor, Institute of Water and Flood Management (IWFM), Bangladesh University of Engineering and Technology (BUET)

**B. Sc. Thesis**

Statistical Characterization of Hydrological Data and a Study on Jamuna River Bank Protection Work at Doripara in Bogra District

**Supervisor:** Dr. Md. Sabbir Mostafa Khan, Professor, Department of Water Resources Engineering, Bangladesh University of Engineering and Technology (BUET)

**CURRENT ACADEMIC STATUS**

Pursuing Ph.D. at the Department of Civil Engineering in the University of Tokyo, Japan**CURRENT INSTITUTIONAL POSITION**

Working as an Assistant Professor in the Institute of Water and Flood Management (IWFM) of Bangladesh University of Engineering and Technology (BUET) from August 1, 2018 till date (currently under study leave for Ph.D.)

**PAST EXPERIENCE**

Worked as a Lecturer in the Institute of Water and Flood Management (IWFM) of Bangladesh University of Engineering and Technology (BUET) from February 24, 2015 to July 30, 2018

**EXPERIENCES IN RESEARCH PROJECTS**

* Worked as a co-investigator in an international collaborative project titled: ‘Deltas, vulnerability and Climate Change: Migration and Adaptation (DECCMA)’ project under the Collaborative Adaptation Research Initiative in Africa and Asia (CARIAA) program with financial support from the UK Government's Department for International Development (DFID) and the International Development Research Centre (IDRC), Canada from March 2015 to October 2018
* Worked as Mentor-Monitor of Masters’ Researchers in an international research project titled: ‘South Asian Water (SAWA) Fellowship Project’ funded by IDRC, Canada from July 2015 to April 2017
* Worked as research personnel in a project titled ‘Landscape Salinity and Water Management for Improving Agricultural Productivity’ jointly with Bangladesh Institute of Nuclear Agriculture (BINA), funded by FAO/IAEA from August 2015 to July 2017
* Worked as Mentor-Monitor of Masters’ Researchers in an international research project titled: ‘South Asian Water (SAWA) Leadership Program’ funded by IDRC, Canada from May 2017 to March 2019
* Worked as a co-investigator in an international collaborative project titled: ‘Research on Disaster Prevention/Mitigation against flood and Storm Surges in Bangladesh’ funded by Japan Science and Technology Agency (JST)-Japan International Cooperation Agency-JICA (SATREPS) from September 2017 to March 2019

**PAST RESPONSIBILITIES**

* Worked as Assistant Organizing Secretary in the ‘6th International Conference on Water and Flood Management (ICWFM-2017)’ held in Bangabandhu International Conference Centre (BICC), Agargaon, Dhaka during 4-5 March, 2017
* Worked as Assistant Course Coordinator in ‘5th Short Course on Remote Sensing and GIS in Water Management’ in Institute of Water and Flood Management (IWFM), BUET, Dhaka during 22-24 May, 2015

**RESEARCH INTEREST**

Agricultural water management, Crop modelling, Climate change and its impact, Flood damage assessment and monitoring, River hydrology and flow analysis, Disaster management and vulnerability analysis, Integrated water resources management, Climate change adaptation, Gender and water.

**LIST OF PUBLICATIONS**

***Journal Article***

* Haque, S., **Saha, D.** and Mondal, M.S. (2019). *“Improving Practice of Flood Shelter Implementation in Alluvial River Floodplain With Hydro-Morphological Analysis”, International Journal of Disaster Response and Emergency Management (IJDREM),* Volume 2, Issue 2 (2019), (DOI: 10.4018/IJDREM.2019070103), pp. 35-50.

<https://www.igi-global.com/gateway/article/240786#pnlRecommendationForm>

* Uddin, M. N., Islam, A. S., Bala, S. K., Islam, G. T., Adhikary, S., **Saha, D.,** Haque, S., Fahad, M. G. R. and Akter, R., (2019)*. “Mapping of climate vulnerability of the coastal region of Bangladesh using principal component analysis”, Applied Geography,* Volume 102, (2019), (DOI: 10.1016/j.apgeog.2018.12.011) pp.47-57.

<https://www.sciencedirect.com/science/article/pii/S0143622818302170>

* **Saha, D**, Hossain, M. S. S., Mondal, M. S. and Rahman, R. (2016). *“Agricultural Adaptation Practices in Coastal Bangladesh: Response to Climate Change Impacts”, Journal of Modern Science and Technology*, Volume 4, Issue 1 (2016) (ISSN: 2201-6686), pp 63-74.<http://www.jmstpapers.com/static/documents/September/2016/7.%20Debanjali.pdf>
* Kibria, M. G., **Saha, D.**, Kabir, T., Naher, T., Maliha, S. and Mondal, M. S. (2015). “*Achieving Food Security in Storm-surge Prone Coastal Polders of South-west Bangladesh*”, *South Asian Water Studies (SAWAS) Journal*, Volume 5, Issue 1 (2015), pp 26-43. <http://www.sawasjournal.org/files/v5i12015/Sawas_Journal_final_8th_June.pdf>

***Book Chapter***

* Hussain, M. S. S. and *Saha, D.* (2019). *“Adaptation in the Coastal Regions of Bangladesh”,* in Selim S. A., Furlong, B. T. and Ahmed, M. (eds) *Resilience in Action: Challenges and Solutions to Climate Change in Bangladesh,* The University Press Limited (UPL), pp. 27-40.

<http://www.uplbooks.com/book/resilience-action-challenges-and-solutions-climate-change-bangladesh>

* Mondal, M. S., Islam, M. T., **Saha, D.,** Hossain, M. S. S., Das, P. K. and Rahman, R., (2019). *“Agricultural Adaptation Practices to Climate Change Impacts in Coastal Bangladesh”,* in Huq S., Chow J., Fenton A., Stott C., Taub J., Wright H. (eds.) *Confronting Climate Change in Bangladesh.* The Anthropocene: Politik—Economics—Society—Science, vol 28. Springer, Cham (2019), (DOI https://doi.org/10.1007/978-3-030-05237-9\_2, ISBN 978-3-030-05236-2), pp: 7-21.

<https://link.springer.com/chapter/10.1007/978-3-030-05237-9_2>

* **Saha, D.,** Hossain, M. A., Hossain, M. S. S., Mondal, M. S. and Rahman, R. (2017). *“Adaptations to Climate Change in Bangladesh: Development of a National Inventory”,* in Leal Filho, W. (ed.) *Climate Change Research at Universities: Addressing the Mitigation and Adaptation Challenges,* Cham: Springer International Publishing (2017), (DOI: 10.1007/978-3-319-58214-6\_11, ISBN: 978-3-319-58213-9), pp. 175-189.

<https://link.springer.com/chapter/10.1007/978-3-319-58214-6_11>

***Conference Proceedings***

* Hossain, M. S. S and **Saha, D.** (2017). *“Major Infrastructural Adaptations in Coastal Areas of Bangladesh Considering Cyclone and Tidal Flood”,* Proceedings of 6th International Conference on Water and Flood Management (ICWFM 2017), 4-5 March 2017, Dhaka, Bangladesh (ISBN: 978-984-34-2207-1), pp 285-294.
* Kibria, M. G., Khan, M. S. A. and **Saha, D.** (2016). *“Local Adaptation Practices in Response to a Super Cyclone in the Coastal Region of Bangladesh”,* Proceedings of the 3rd International Conference on Civil Engineering for Sustainable Development (ICCESD 2016), 12~14 February 2016, KUET, Khulna, Bangladesh (ISBN: 978-984-34-0265-3), pp 15-23.
* **Saha, D.** and Mondal, M. S. (2016). *“Assessing the Impact of Climate Change on Sunflower Yield Using the AquaCrop Model”,* Proceedings of the 3rd International Conference on Civil Engineering for Sustainable Development (ICCESD 2016), 12~14 February 2016, KUET, Khulna, Bangladesh (ISBN: 978-984-34-0265-3),pp 457-468.
* **Saha, D.** and Mondal M. S. (2016). *“Assessing the Impacts of Climate Change on Dry Season Crop Yields Using the AquaCrop Model”*, Proceedings of the International Conference on Sustainable Development (ICSD 2016), 4-6 February 2016, ULAB, Dhaka, Bangladesh (ISBN: 978-984-34-1611-7), pp 373-388.
* Habib, M. A., **Saha, D.** and Mondal M. S. (2016). *“An Assessment on the Perception Alteration of the Local People on the Conventional Land Use Pattern to Achieve Livelihood Sustainability”*, Proceedings of the International Conference on Sustainable Development (ICSD 2016), 4-6 February 2016, ULAB, Dhaka, Bangladesh (ISBN: 978-984-34-1611-7), pp 410-420.
* **Saha, D.** and Saiful, A.K.M. (2015). *“Assessment of the Changes of Climate in Bangladesh Using Geo-spatial Interpolation of Climatic Variables”,* Proceedings of the International Conference on Climate Change in relation to Water and Environment (I3CWE-2015), 9-11 April 2015, DUET, Gazipur, Bangladesh (ISBN: 978-984-33-9066-0), pp 95-102.
* **Saha, D.** and Akhter, F. (2015). *“Analysis of Severe Flood and Cyclone Events in Bangladesh Using Hazard Impact Coordinate System”,* Proceedings of 5th International Conference on Water and Flood Management (ICWFM-2015), 6-7 March 2015, Dhaka, Bangladesh (ISBN: 978-984-33-8801-8), pp 111-118.
* **Saha, D.** and Mondal, M. S. (2015). *“Simulation of Boro Rice Yield in South-west Coastal Bangladesh Using the AquaCrop Model”*, Proceedings of 5th International Conference on Water and Flood Management (ICWFM-2015), 6-7 March 2015, Dhaka, Bangladesh (ISBN: 978-984-33-8801-8), pp 81-88.

**LIST OF PRESENTATIONS**

* **Saha, D.,** Bala, S. K., Huq, H., Leya, R. S., Fujita, K. and Parvin, G. A. *“Gender Aspects in Flood Management of North-East and Northwest Regions of Bangladesh”,* 12th International Symposium on Ecohydraulics (ISE, 2018), Tokyo, Japan, 2018.
* Kibria, M. G., **Saha, D.** and Mondal, M. S. *“Canal Re-excavation: A Viable Option for Agricultural Productivity Enhancement in a Coastal Region of Bangladesh”,* International Conference on Sustainable Development 2016, ULAB, Dhaka, Bangladesh, 2016.
* Habib, M. A., **Saha, D.**  and Mondal, M. S. *“An Assessment on the Perception Alteration of the Local People on the Conventional Land Use Pattern to Achieve Livelihood Sustainability”,* International Conference on Sustainable Development 2016, ULAB, Dhaka, Bangladesh, 2016.
* **Saha, D.** *“Analyses on the Adaptation Inventory of Bangladesh Delta” (Poster)*,4th DECCMA Consortium Workshop of Deltas, vulnerability and Climate Change: Migration and Adaptation (DECCMA) project, Southampton, United Kingdom, 2016.
* Kibria, M. G., **Saha, D.**, Kabir, T., Maliha, S. and Naher, T. *“Migration and its Impacts on the Affected Families in a Coastal Region of Bangladesh: A Case Study in Dacope Upazila” (Poster)*, The Gobeshona Conference for Research on Climate Change in Bangladesh, Dhaka, Bangladesh, 2015.
* Kibria, M. G., **Saha, D.** and Mondal, M. S. *“Local Adaptation Practices in Response to a Super Cyclone Aila in the Coastal Regions of Bangladesh”*, The Gobeshona Conference for Research on Climate Change in Bangladesh, Dhaka, Bangladesh, 2015.

**COMPUTER SKILLS**

**Modeling Software:** ETabs, C++, Flowmaster, StormCAD, WaterCAD, HEC-RAS,

AquaCrop, CROPWAT

**Mapping Software**: ARCView GIS 3.3, ArcGIS 10.2, ILWIS

**Design Software:** AutoCAD, GRASP

**Others:** MS Office: Word, Excel, Access and PowerPoint

**Operating System:** Windows XP/Vista, Windows 7, 8 and 10

**AWARDS**

* **South Asian Water (SAWA) Fellowship** funded by IDRC, Canada in M.Sc. in Water Resources Development during May 2013 – April 2015
* **Merit Scholarship** funded by BUET, Bangladesh in Level 4/Term 1 in B.Sc. in Water Resources Engineering in the year 2012
* **Technical Scholarship** funded by the Board Secondary and Higher Secondary Education, Dhaka, Bangladesh (From 2008-2012) in Higher Secondary School Certificate (HSC) Examination in the year 2007
* **Junior Scholarship** funded by the Board Secondary and Higher Secondary Education, Dhaka, Bangladesh (From 2003-2004) in Talent pool grade: (first place in Agrani School and College and third place in Lalbagh Thana) in the year 2002

**EXPERIENCES**

* Participated in the Inception Workshop of National Resilience Programme (NRP)-Department of Disaster Management (DDM) part at the Department of Disaster Management (DDM), Bangladesh Secretariat, Dhaka on 4 December 2018
* Participated in the International Symposium of Ecohydraulics (ISE 2018) in Nihon University, Tokyo, Japan during 19-20 August 2018
* Visited to Kyoto and Tokyo in Japan regarding preparation of a training module jointly with the researchers from Japan and Bangladesh under the SATREPS (funded by JICA-JST) Project during 17-26 January 2018
* Participated in the final stakeholder workshop of “High End cLimate Impact and eXtremes (HELIX)” project at the Council Building of BUET on 12 September 2017
* Participated in the ‘6th International Conference on Water and Flood Management (ICWFM 2017)’ in Bangabandhu International Conference Center (BICC), Dhaka during 4-5 March 2017
* Participated in a training workshop on “Outcome Based Education and Self Assessment” in ITN-BUET, Dhaka on 9 February 2017
* Participated in a training workshop on “Quality Assurance in Outcome Based Education” in ITN-BUET, Dhaka on 18 August 2016
* Participated in a workshop on “Effective Writing and Review of Research Proposal, research Paper and Thesis” in Directorate of Continuing Education (DCE), BUET, Dhaka on 23 July 2016
* Joined as a Resource person in a training on “কৃষি গবেষণায় পরমাণু শক্তির ব্যবহার” in Bangladesh Institute of Nuclear Agriculture (BINA), Bangladesh Agriculture University (BAU), Mymensingh on 16 June 2016
* Participated in a Round Table Seminar on ‘Research and Development in Energy and Power Sector in Bangladesh-Prospects and Challenges’ in Council Bhaban, BUET, Dhaka on 13 June 2016
* Participated in ‘3rd International Conference on Civil Engineering for Sustainable Development-(ICCESD-2016)’ in Khulna University of Engineering and Technology (KUET), Khulna during 12-13 February 2016
* Participated in ‘International Conference on Sustainable Development-2016’ in the University of Liberal Arts Bangladesh (ULAB), Dhaka during 4-5 February 2016
* Participated in‘4th DECCMA Consortium Workshop’ of Deltas, vulnerability and Climate Change: Migration and Adaptation (DECCMA) project in Hotel Grand Harbour, Southampton, United Kingdom during 11-15 January 2016
* Participated in ‘11th Global Engineering, Science and Technology Conference’ in BIAM Foundation, Dhaka during 18-19 December 2015
* Completed Training Course on ‘Land Cover Classification System Development’ in Bangladesh Bureau of Statistics (BBS), Agargaon, Dhaka during 29 November-3 December 2015
* Completed online training course on ‘A Human Rights-Based Approach to Integrated Water Resources Management, Part I: Principles and Concepts’ by CAP-NET Virtual Campus during 28 September-13 November 2015
* Completed Training of Trainers (ToT) Course on ‘Build Back Better in Recovery and Urban Resilience: Challenges and Prospects in the Context of Bangladesh’ in the Center for Advanced Research in Sciences (CARS), University of Dhaka (DU), Dhaka during 26-27 October 2015
* Attended a seminar on the project ‘Developing Dynamic Web-GIS Based Early Earning System for the Communities at Landslide Risks in Chittagong Metropolitan Area, Bangladesh’ in BUET-Japan Institute of Disaster Prevention and Urban Safety (BUET-JIDPUS), BUET, Dhaka on 17 September 2015
* Participated in the National workshop on ‘Drought Risk Management in Bangladesh’ in Hotel Rigs Inn, Dhaka during 1-2 July 2015
* Attended a seminar on ‘DECCMA Climate Change Adaptation Inventory Dissemination’ in Institute of Water and Flood Management (IWFM), BUET, Dhaka on 15 June 2015
* Participated in a review workshop of IDRC-SAWA Fellows on ‘Climate Change and Food Security’ in Hyderabad, India on 29 May 2015
* Participated in ‘1st National Level Stakeholder Workshop’ of ‘Deltas, vulnerability and Climate Change: Migration and Adaptation (DECCMA)’ project in Institute of Water and Flood Management (IWFM), BUET, Dhaka on 10 May 2015
* Participated in ‘International Conference on Climate Change in relation to Water and Environment (I3CWE)’ in Dhaka University of Engineering and Technology (DUET), Gazipur during 9-11 April 2015
* Completed Training of Trainers (ToT) Course on ‘Concept and Practice of Integrated Water Resources Management’ in Center for Environmental and Geographic Information Service (CEGIS), Dhaka during 29 March-2 April 2015
* Attended the Gobeshona Seminar on ‘Contextualization of Adaptive livelihood’ in Ascott the Residence, Banani, Dhaka on 25 March 2015
* Participated in ‘5th International Conference on Water and Flood Management’ in BRAC Centre Inn, Dhaka during 6-7 March 2015
* Participated in ‘The Gobeshona Conference for Research on Climate Change in Bangladesh’ in the Independent University, Dhaka during 6-9 January 2015
* Completed Regional South Asian Water (SAWA) Fellows Training on ‘Interdisciplinary Research: Concepts and Methodologies’ in Hotel Rigs Inn, Dhaka during 18-22 December 2014
* Attended a national seminar on ‘Engineering Education in Public and Private Universities: Bangladesh Context’ in the Institution of Engineers, Bangladesh (IEB), Dhaka on 30 August 2014
* Participated in a Workshop on ‘Deltas, vulnerability and Climate Change: Migration and Adaptation’ in Gazipur during 7-9 June 2014
* Completed Regional South Asian Water (SAWA) Fellows Training on ‘Integrated Water Resources Management’ in Kathmandu, Nepal during 3-8 November 2013
* Participated in a Workshop on ‘Transnational Policy Dialogue for Improved Water Governance in Brahmaputra River’ in the Institute of Water and Flood Management, BUET, Dhaka on 21 August 2013
* Participated in an International Conference organized by BAPA-BEN on ‘Water Resources in South Asia: Conflict to Cooperation’ (IC WRSA CC’ 2012) as a *Rapporteur* from WRE Forum at Senate Bhaban, University of Dhaka (DU), Dhaka during 4-5 January 2013
* Participated in a Study Tour to Kaptai Hydropower Plant, Chittagong and Cox’s Bazar Marine Drive Project, Cox’s Bazar during 13-16 June 2012
* Completed Internship in the Flood Management Division of Institute of Water Modeling (IWM), Dhaka during 12-25 March 2012