



Short Course On **Climate Change and Adaptation in Water Sector**

Date: 07 October to 23 November 2025

Location: Remote Sensing and GIS Lab, IWFM, BUET

Participants will receive certificates upon completion of the course
Water professionals from any organization are open to register

Registration Details

Course Fee: 15,000 BDT

Application Deadline:
30th September 2025

Seats are Limited

APPLY NOW



*The authority may decide to drop/reschedule the course in case of a lack of sufficient applicants



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

For more details: [Check IWFM Website](#)
Contact email: shortcourse@iwfm.buet.ac.bd

Course Overview

This course offers a comprehensive journey through the science of climate change, climate data analysis, and practical adaptation strategies within the water sector. The program aims to build participants' capacity to understand climate change scenarios, work with climate data, and apply this knowledge to water resource planning and management. Throughout the training course, participants will understand key concepts of climate change, analyze and interpret historical and projected climate data, and apply various tools for data visualization, transformation and downscaling. The course will also guide participants in using climate data for impact analysis and adaptation planning to support climate-resilient decision-making.

What to Learn

Fundamentals of Climate Change & Adaptation: Concepts of global warming, climate variability, and extreme events, climate change impacts on water resources and ecosystems, understanding and analyzing historical climate data and climatic projections, and adaptation approaches in the water sector.

Applications of Climate Data: The fundamentals of climate change will be integrated with hands-on techniques relevant to the water sector. Applications include interpreting gauged and reanalysis data, global and regional climate models for monitoring long-term changes, projecting future climate scenarios and extremes, and applying tools such as RClimDex and SDSM. Participants will engage in climate data preprocessing, analysis of trends and variability, and visualization of global and regional projections—equipping them to integrate climate data meaningfully into water resource planning and impact assessment.

Hands-On Experience: Engage in practical projects designed to reinforce the concepts covered in lectures. The participants will be able to apply this practical application in their working fields in the sector of water and climate change.

By the end of the course, participants will have a robust understanding of climate change science, climate data analysis, and adaptation planning in the water sector. They will be equipped with practical skills in handling global and regional climate datasets, performing geospatial analysis, and applying tools and techniques specifically tailored to support climate-resilient water resource management, while learning the development and application of adaptation strategies.

The course will be offered for 7 weeks, two days per week (Sundays and Tuesdays), from 06:00 PM to 09:00 PM.

Seats are limited

Apply Online!

(QR code available on the Front Page)

Programme

Time	Topic	Resource Person
Day 1: 07 October 2025 (Tuesday)		
06:00PM-06:30PM	Registration and Inauguration	
06:30PM-07:30PM	Global warming, climate variability, changes and extremes	Prof. A.K.M. Saiful Islam
07:30PM-07:45PM	Tea Break	
07:45PM-08:45PM	Climate change impact on the flood flow and its implications in the design of climate-resilient water control structures	Prof. G.M. Tarekul Islam
Day 2: 12 October 2025 (Sunday)		
06:00PM-07:15PM	Historical observed data on Climate and Earth System Modeling	Prof. A.K.M. Saiful Islam
07:15PM-07:30PM	Tea Break	
07:30PM-09:00PM	Hands-on: Observational climate data: seasonality, trends, variability, and correlation	Prof. Sara Nowreen, Ms. Mushrufa Mushreen Winey, Ms. Fariha Islam Mou
Day 3: 14 October 2025 (Tuesday)		
06:00PM-07:15PM	Climate change scenarios and projections	Prof. Shahjahan Mondal
07:15PM-07:30PM	Tea Break	
07:30PM-09:00PM	Hands-on: Introduction to climate reanalysis data repositories	Prof. Sara Nowreen, Ms. Nusaiba Nueri Nasir, Ms. Zarin Tasnim
Day 4: 19 October 2025 (Sunday)		
06:00PM-07:15PM	Regional climate modeling and scenario generation for Bangladesh	Prof. A.K.M. Saiful Islam
07:15PM-07:30PM	Tea Break	
07:30PM-09:00PM	Hands-on: Accessing GCM and RCM Projections	Dr. Sonia Binte Murshed, Ms. Zarin Tasnim, Ms. Nusaiba Nueri Nasir
Day 5: 21 October 2025 (Tuesday)		
06:00PM-07:15PM	Implication of climate change on water resource management	Prof. Mashfiqus Salehin
07:15PM-07:30PM	Tea Break	
07:30PM-09:00PM	Hands-on: Interpretation and visualization of climate datasets	Dr. Shampa, Ms. Zarin Tasnim, Ms. Mushrufa Mushreen Winey
Day 6: 26 October 2025 (Sunday)		
06:00PM-07:15PM	Water quality management in the context of climate change	Prof. Mohammed Abed Hossain
07:15PM-07:30PM	Tea Break	
07:30PM-08:45PM	Impact of climate change for project planning: drinking water, salinity, and livelihood	Dr. Ahmed Ishtiaque Amin Chowdhury
Day 7: 28 October 2025 (Tuesday)		
06:00PM-07:15PM	Impact of climate change on coastal project planning	Prof. Anisul Haque
07:15PM-07:30PM	Tea Break	
07:30PM-09:00PM	Hands-on: Techniques for data transformation, interpolation, and spatial re-gridding	Prof. Sara Nowreen, Ms. Nusaiba Nueri Nasir, Ms. Fariha Islam Mou

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Day 8: 02 November 2025 (Sunday)		
06:00PM-07:15PM	Impact of climate change on ecosystem services	Prof. Munsur Rahman
07:15PM-07:30PM	Tea Break	
07:30PM-08:45PM	Adaptation measures to climate change risks on water resources management	Dr. Shammi Haque
Day 9: 04 November 2025 (Tuesday)		
06:00PM-07:15PM	Impact of atmospheric river on extreme precipitation	Dr. Shampa
07:15PM-07:30PM	Tea Break	
07:30PM-09:00PM	Hands-on: Climate data preprocessing: managing missing data, descriptive statistics	Dr. Shammi Haque, Ms. Fariha Islam Mou, Ms. Mushrufa Mushreen Winey
Day 10: 09 November 2025 (Sunday)		
06:00PM-07:15PM	Climate model diagnosis, Hypothesis testing, and Model selection	Prof. Shahjahan Mondal
07:15PM-07:30PM	Tea Break	
07:30PM-09:00PM	Hands-on: Climate model selection strategies	Dr. Shammi Haque, Ms. Zarin Tasnim, Ms. Nusaiba Nueri Nasir
Day 11: 11 November 2025 (Tuesday)		
06:00PM-07:15PM	Understanding Bias Correction: Concepts and Methods	Prof. Sara Nowreen
07:15PM-07:30PM	Tea Break	
07:30PM-09:00PM	Hands-on: Bias correction techniques for climate data	Prof. Sara Nowreen, Ms. Mushrufa Mushreen Winey, Ms. Zarin Tasnim
Day 12: 16 November 2025 (Sunday)		
06:00PM-07:15PM	Climate extremes indices	Dr. Shammi Haque
07:15PM-07:30PM	Tea Break	
07:30PM-09:00PM	Hands-on: RCLimDex	Dr. Shammi Haque, Ms. Fariha Islam Mou, Ms. Mushrufa Mushreen Winey
Day 13: 18 November 2025 (Tuesday)		
06:00PM-07:15PM	Statistical Downscaling tools and techniques	Dr. Shammi Haque
07:15PM-07:30PM	Tea Break	
07:30PM-09:00PM	Hands-on: Statistical Downscaling using SDSM	Dr. Shammi Haque, Ms. Fariha Islam Mou, Ms. Nusaiba Nueri Nasir
Day 14: 23 November 2025 (Sunday)		
06:00PM-07:00PM	Impact of sea level rise on the coastal salinity	Prof. Mohammad Asad Hussain
07:00PM-07:15PM	Tea Break	
07:15PM-08:30PM	Group Presentation	
08:30PM-09:00PM	Certification and feedback	