

Institute of Water and Flood Management, Bangladesh University of Engineering and Technology: Its Mission, Vision and Current Activities Disasters Management

Mission and Vision of IWFM: Bangladesh is predominantly a floodplain country where water is the key to socio-economic development and sustainability of the eco-system. Flood, drought, cyclone, river erosion, siltation, and water scarcity in dry season have made water management a challenging task during the monsoon and the dry seasons. The global warming with climate change and the gradual degradation of the environment as a result of various anthropogenic activities are adding further complexities to the water management with ultimate contribution to the sufferings of the people. To address these issues, the Institute of Flood Control and Drainage Research was established in 1974 at Bangladesh University of Engineering and Technology and later renamed as the Institute of Water and Flood Management (IWFM) in 2002. The vision of IWFM is to establish itself as a premier institute for the advancement of knowledge and development of human resources in water induced disasters management. The Institute since its inception pursues basic and applied research and capacity development in the field river and storm surge floods, river morphology, agro-hydrological drought, and integrated water resource management. Recently recognizing the world wide growing concerns of global warming and climate change risks and the importance of addressing these issues into national development planning processes and strategies BUET has given special emphasis on the research in the area of climate change impacts. As a result, a Climate Change Study Cell has been established which is housed at IWFM. The main focus of this cell is on providing education and training, and conducting research on climate-related disasters.

Current Studies of IWFM: Current research includes: (1) Predictions of climate change scenarios for Bangladesh, (2) Three dimensional residual flow simulation in the bay of Bengal considering future climate change induced hydro-meteorological scenarios, (3) Simulation of monsoon flood inundation and storm surge flooding with effect of climate change scenario and development of flood hazard and risk maps, (4) Climate change impact on the fate and toxicity of pollutants in water resources systems, (5) Adaptation and mitigation of water related disaster due to climate change, (6) River erosion and sediment management and evaluation of locally adaptive dikes for flood control and bank protection, (7) Sustainable management of river bank erosion, (8) Assessment of climate change risks and adaptation options for secondary cities in South Western Bangladesh and Central Vietnam (9) Agricultural drought management, (10) Tsunami hazard management, (11) Development of institutional framework for management of rivers, (12) Hydraulic profiling of important fish habitats of the major rivers, (13) Development of decision support tools in water sector, (14) Stabilization of major rivers of Bangladesh, (15) Numerical investigation of residual currents in the estuary, (16) Flood forecasting and warning system and (17) Assessment of health, livelihoods, ecosystem services and poverty alleviation in populous deltas.

In addition to post graduate teaching and research IWFM provides, on request, expert level advisory services to the government, private and international organizations.