

Developing Flash Flood Early WArning System, Capacity Building and Knowledge Management for the Haor Region of Bangladesh under Climate Adaptation and Livelihood Protection (CALIP)

The Climate Adaptation and Livelihood Protection (CALIP) is a supplementary project integrated with IFAD's Haor Infrastructure and Livelihoods Improvement Project (HILIP) launched in 2012. The CALIP project will work in the same project areas as HILIP in the five Haor districts of Netrakona, Habiganj, Brahmanbaria, Kishoreganj and Sunamganj in 28 Upazilas selected on the basis of their exposure to climate risks and poverty context. These include 4 Upazilas in Netrakona, 4 Upazilas in Kishoreganj, 6 Upazilas in Brahmanbaria, 3 Upazilas in Habiganj and 11 Upazilas in Sunamganj. The objective of the HILIP/CALIP project is to enhance livelihood opportunities and reduce vulnerability of the poor. The main outcomes expected from the HILIP/CALIP project include: (i) enhanced access to markets, livelihood opportunities and social services; (ii) enhanced village mobility, reduction in production losses and protection against extreme weather events; (iii) enhanced access to fishery resources and conservation of biodiversity; (iv) enhanced production, diversification and marketing of crop and livestock produce; (v) efficient, cost effective and equitable use of project resources; and vi) enhanced capacity and knowledge for building resilience (new outcome introduced by CALIP).



Goals & Objectives

The work conducted in the CALIP project focused on the capacity building for weather and flash flood forecasting: Current and future climate risk management will depend on access to real-time weather and flash flood information. In this regard, CALIP will build on existing systems to make more robust the weather and flash flood related data generation, analysis and dissemination, as well as, community preparedness and response capacity. The specific tasks will be carried out by BUET team -

- Field data collection and assisting on carrying out social, technical, hydrological and navigational survey;
- Carrying out statistical analysis and data assimilation for WRF data assimilation;
- Set-up, calibration and validation of WRF model for the Haor area using data assimilation;
- Assisting on the development of Rainfall-Runoff model and 1D-Hydrodynaic model;
- Interpretation of Flood inundation depth into local level flood warning;
- Interaction with FFWC, BMD and other partners of the project;
- Assisting capacity Building of the Govt. officials through two short course on (a) WRF & Data Assimilation and (b) Flash Flood forecasting.

Project Partners

- Bangladesh Meteorological Department (BMD)
- Flood Forecasting and Warning Center (FFWC) of Bangladesh Water Development Board (BWDB)
- Institute of Water modeling (IWM)

Implementing Agency

Local Government Engineering Department (LGED)

Research Team

- Principal Investigator: Professor AKM Saiful Islam (Email: akmsaifulislam@iwfm.buet.ac.bd)
- Co-Investigators: Professor G M Tarekul Islam, Professor Mashfiqus Salehin, Professor Sujit Kumar Bala and Professor M. Shahjahan Mondal
- Research Assistants: Mutasim Billah and Md. Golam Rabbani Fahad



