ASSESSMENT OF SUSTAINABLE DESIGN OF SHAFIQUE HAOR AND SONAMORAL HAOR WETLANDS FCD/FCDI PROJECT AGAINST FLASH FLOOD IN GREATER SYLHET AREA

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Flash flooding is one of the most recurring natural disasters over the northern part of Bangladesh. Early flash flood causes lot of damages to the standing crop before harvesting like Boro, the major crop cultivated in the haor area (approximately 80%).

For better water management and food production, BWDB has implemented 118 Flood Control Drainage (FCD) and Flood Control, Drainage & Irrigation (FCDI) projects in haor area. Pre-monsoon flood hits the region six times during the period of 2000–2017 and approximately 90% Boro crop was damaged in 2017. So, it is of utmost importance to evaluate the design of hydraulics structures by assess the pre and post condition to understand the hydraulics structure’s effectiveness and ecosystem of the Haor.

In order to evaluate the effectiveness of the hydraulic structures of Haor area, the hydrological data, agricultural data, remote sensing data has been collected from secondary sources. Then, collected secondary data has been analyzed based on flash flood frequency and Boro crop production and comparing the “Post-scheme scenario” of selected indicator with the status of the same indicator under the “Pre-scheme scenario”.

It has been found that after implementation of the scheme interventions, risk of entrance of early flash floods reduced significantly. From the study, it has been also revealed that additional 5,466 ton and 1,327-ton crops have been produced in Shafique Haor scheme and Sonamoral Haor scheme accordingly during the post-scheme period. Therefore, Shafique Haor scheme and Sonamoral Haor scheme can be considered as complying with the objective to protect Boro crop from early flash floods and to facilitate crop production.