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Title : Cumulative Environmental Impact Assessment of Narail Sub-Project

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Cumulative environmental impacts are caused by the aggregate of past actions, present, and foreseeable future actions. Traditional environmental impact assessment (EIA) usually focuses

on single-project development undertaken by single proponents in a narrowly defined physical area and defined time frame. That is why cumulative impact assessments especially for water sector project are important and essential. This study has assessed cumulative impact for the compartment one of Southwest Area Integrated Water Resources Management Project (SWAIWRMP). The EIA carried out by SWAIWRMP eventually didn't address the cumulative environmental impact. Therefore attempt has been made in this study for investigating such impact.

Southwest Area Integrated Water Resources Management Project (SWAIWRMP) aims to rehabilitate and upgrade the existing flood control and drainage/irrigation (FCD/I) schemes located in the Southwest region of Bangladesh, thereby achieving their maximum development potentials in terms of agriculture production, fishery production and incomes of the beneficiaries in a sustainable manner. Study area of this research is 1804 ha and situated with in Narail Sub-Project in compartment no 1. Beside the Afra River six regulators exist in Tularampur union of compartment one. This study area is located in the upstream of the Afra River. There are a number of existing and proposed infrastructures in the Sub-Project area, which might have cumulative impact.

Objectives of this study are:

- a) to identify important environmental parameters for SWAIWRMP
- b) to screen parameters which may have cumulative impact
- c) to assess cumulative impact of different parameters and
- d) to suggest mitigation measures which will address cumulative environmental impacts

To assess achievement of these objectives and also to assess the cumulative impacts, primary and secondary data were collected through FGDs, KII, individual interview, and secondary literatures were also reviewed. Also some field assessment was done e.g. fish catch assessment. Several field visits were performed to get field data, to know the stakeholders perceptions and to observe the physical situation to understand the project.

This study screened twelve parameters which are of cumulative in nature. However, detail assessment was done for six parameters (capture fisheries, wet land, irrigation facility, employment opportunity, soil quality, flooding) among twelve parameters based on study area people's perception and available information which shown how much these parameters are cumulative e.g. additive or multiplicative in nature.

From the study, it has been seen that almost every parameters are cumulative in nature. The impact on capture fisheries is multiplicative in nature and it is negatively affected by the sub-project interventions. Regarding wetland, soil quality and flooding all are affected negatively by the sub-project intervention and the impact of these parameters on people's livelihood is quite tangible. However, irrigation facility and employment opportunity have positively affected people's living. After completion of regulators, crop production and employment opportunity of the study area has been increased significantly. The environmental management plan has been given with potential measures with a view to mitigate the negative impacts. The study has made a few recommendations for well being of the project stakeholders and future follow up study and research. Finally it can be

concluded that a project should be taken after conducting Cumulative Impact Assessment rather than conducting traditional EIA considering impact of the single project.