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**ASSESSMENT OF LIVELIHOOD CHALLENGES DUE TO WETLAND ECOLOGICAL  
CHANGES: A CASE FROM CHALAN BEEL, THE LARGEST WETLAND OF  
BANGLADESH**

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ASSESSMENT OF LIVELIHOOD CHALLENGES DUE TO WETLAND ECOLOGICAL  
CHANGES: A CASE FROM CHALAN BEEL, THE LARGEST WETLAND OF  
BANGLADESH

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**ABSTRACT**

*Chalan Beel* is the largest wetland in Bangladesh and has historically provided numerous services to the local community. However, ecological changes have posed significant challenges to community livelihood. This study assessed the intricate relationship between ecological changes and community livelihood challenges. The study employed a qualitative approach to social research involving twelve focused group discussions with 96 participants from the *Chalan Beel* areas of Bangladesh along with seven key informant interviews and participant observations. The findings reveal many ecological issues, including the impermanent nature of water resources, unpredictable flooding, intensifying drought, increasing demand for fertilizer and mechanized irrigation, declining land production capacity, and increasing insect infestation, which affected the community's livelihood. The changes have led to a decreased fish population, reduced earnings, and a shift towards alternative occupations. The depletion of aquatic resources has increased livelihood expenditures, exacerbated by water impermanence and unpredictable floods during the rainy season. Farmers grapple with rising costs due to insufficient water for summer irrigation and heightened drought intensity in the *beel* area, necessitating increased reliance on fertilizers and machine irrigation, escalating cultivation expenses. The study identified seven driving forces behind these changes, including the construction of roads, the construction of the Farakka Dam, the closure of the Mirjapur Canal, population growth, indiscriminate use of fertilizers and insecticides, lack of wetland management plan, and climate change. As a result of the absence of adaptation management strategies, there is no visible improvement in community well-being. The study underscores the need for policy interventions and comprehensive planning to alleviate the community's hardships.

