

## **SYNOPSIS**

### **Environmental Challenges, Livelihood and Migration: A Study in Sagar Island, Indian Sundarban Delta**

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The global climate is undergoing rapid changes with significant implications for ecosystems worldwide. The Sundarban, one of the most prominent victims of climate change, face mounting challenges due to a combination of natural factors and anthropogenic activities. Traditional livelihoods in the region are under threat from climate change, environmental degradation, and human-induced issues. Most inhabitants, who rely on natural resource-based economic activities, are experiencing losses and uncertainty. In this context, out-migration has emerged as a significant adaptation strategy to cope with livelihood challenges. This micro-level study assesses the environmental challenges, their impact on livelihoods, and migration patterns in Sagar Island, located in the Indian Sundarban Delta.

Environmental challenges are creating much stress on the life and livelihood assets of the inhabitants of Sagar Island. The basic concept of the study is migration as a strategy to cope with environmental stressors both natural and anthropogenic. The natural stressors in the Sagar Island include climatic events (Cyclones, floods), climatic processes (sea level rise), and geomorphological processes (marine and riverine processes). On the other hand, anthropogenic stressors include demographic, socio-economic, and political changes like overpopulation, extortion of natural resources, etc. The stressors negatively impact the life and livelihood assets of the inhabitants. People use different sorts of measures or strategies such as migration, job diversification, job transformation, adoption of new technologies, sustainable use of resources, etc to adapt to these adverse conditions of livelihood. In Sagar Island, migration is one of the most important strategies among them.

The study explores the intricate relationship between environmental changes, livelihood patterns, and migration on Sagar Island. The major objectives include identifying environmental changes, understanding their impact on the livelihood of the inhabitants, and examining the role of migration as an adaptive strategy. The research draws from a combination

of primary and secondary data. The primary data is collected through field surveys utilising various types of questionnaires, including structured, semi-structured, and unstructured formats. Secondary data from sources, such as the Census of India, Agricultural Census of India, and satellite imagery from Landsat 8 – 9 OLI/TIRS, as well as images from Google Earth are used. Findings reveal that climate change has had profound effects on the island's ecosystem. Natural hazards like tropical cyclones, coastal floods, and erosion have caused significant damage to infrastructure, agricultural assets, and aquaculture, thereby undermining livelihood opportunities and prompting socio-economic transformations. Traditional occupations like agriculture and fishing have declined, giving way to alternative means of income such as small-scale trade, labour work and migration. Migration has emerged as a vital adaptive strategy for the inhabitants, with at least one member from 34.79% of households having migrated within a year. Interstate migration, particularly to states like Kerala, Tamil Nadu, Telangana, and Andhra Pradesh, is predominant, driven by better job opportunities, higher wages, and reliable payment processes. The study underscores the urgent need for comprehensive disaster management strategies and sustainable development practices to mitigate the adverse impacts of environmental changes on Sagar Island's ecosystem and its inhabitants. It also highlights the importance of migration in providing alternative sources of income and facilitating adaptation to the changing environmental conditions.