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Integrated Approaches to Mitigate Coastal Ecosystem Degradation in Purba Medinipur, West Bengal

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Abstract: *Coastal ecosystems in Purba Medinipur, West Bengal are critical for biodiversity, local livelihoods, and climate resilience. However, they are increasingly threatened by coastal erosion, salinity intrusion, mangrove degradation, and pollution due to both natural processes and human activities. This review paper synthesizes existing studies on the causes and extent of ecosystem degradation in the region. It further examines sustainable management strategies, including Integrated Coastal Zone Management (ICZM), community-based conservation, mangrove restoration, pollution control, and policy frameworks. The paper highlights key knowledge gaps, such as insufficient long-term monitoring, lack of socio-economic impact assessments, and poor integration of indigenous knowledge in management practices. Recommendations include strengthening data collection, enhancing community participation, and improving policy enforcement. The review emphasizes that a multidisciplinary and participatory approach is essential to achieve sustainable conservation and resilience of coastal ecosystems in Purba Medinipur.*

Keywords: Coastal Ecosystem Degradation, Sustainable Management, Purba Medinipur, Salinity Intrusion, Mangrove Restoration

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