Coastal and marine ecosystems, biology and ecology

## Causes Of Coastal Ecosystem Degradation In Bangladesh

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The coastal region of Bangladesh contributes to about one fifth of the country's landmass and one seventh of the total population. Once the region was diverse and rich in natural resources with huge forest vegetation, fishes, crops, poultry, livestock and wildlife, but at present, the whole region is at the verge of serious degradation due to human interventions and climate change. Brackish water shrimp cultivation, salt production, fish processing, exhaustive marine fishing, discharges from industrial plants and navigation, and other manmade activities have been considered as major causes playing detrimental roles on its natural resources. Most of the rivers and canals have been dried up, even died in many places. Due to intrusion of saline water for brakish water shrimp farming and increasing prolong drought, soil and water salinity have been increased remarkably, which adversely affecting both floral and faunal resources in the region. Increased soil and water salinity hampered soil fertility status as it was observed that around 40-50% reductions in soil organic matter content in the study areas since 1999. The other major impacts were the reduction of productivity and yield of rice, vegetables and other crops due to increased soil and water salinity. There is a severe crisis of safe drinking water in terms of quality and quantity across the region. Water salinity created several health related problems like diarrhea, skin diseases, hypertension, asthma, and other health problems. There were also increasing instances of arsenic contamination in the ground water, agricultural soils, and also in rice and other vegetables. Besides, various natural calamities and risks as an outcome of climate change have been seen in the coastal region. Changes in temperature and rainfall patterns are accelerating flood, salinity, drought, cold injury and cyclonic hazards, having detrimental impacts on both resources and environments. Increasing trend of cyclonic storms as well as tidal surges would be more and more vulnerable to climatic extremities in the coastal region. The major impacts might be loss of land suitability, decline in agricultural productions, crisis of safe drinking water, increased health related complications. Recently tow big cyclones, namely SIDR and Aila, made huge causalities, loss of biodiversity, degradation of natural resources and various geo-hazards. Suitable coping and adaptation measures should be taken immediately to restore the coastal ecosystem for sustaining agricultural production and development.