

Title: A systematic review of cyclonic disaster: Damage-loss, consequences, adaptation strategies, and future scopes

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Abstract: [Tropical cyclones](#) have direct and indirect repercussions in many coastal areas worldwide. In coastal regions, several studies have identified the driving factors of cyclonic hazards and their associated impacts. However, previous studies have focused little on cyclone-induced damage and loss, consequences, and adaptation strategies. As a result, it is critical to explore the global focus areas of cyclone-related studies. This review systematically examined cyclone-induced damage and loss, its consequences, adaptation strategies in coastal regions, and associated research gaps. Results revealed eight main types of cyclone-induced damages and losses. About 46 % of studies focused on vegetation damages, followed by water and sanitation (11 %), crop damages (8 %), income or business losses (8 %), health and injuries (8 %), land use and [land cover](#) changes (8 %), infrastructural damages (5 %), and mixed damages and losses (5 %). These damages and losses led to further consequences, including disruption of [biocenoses](#), fish death because defoliated leaves carried carbon into the water, changes in forest structure and composition, loss of timber plantation confidence, hampering the steady supply of safe [drinking water](#), raising drinking water costs, unsanitary circumstances, an increase in infectious diseases, a decrease in [protein consumption](#), and business and supply chain interruptions. Approximately 35 % of the studies addressed one or more of the thirteen adaptation strategies identified in this review. Most of these studies documented the use of [natural regeneration](#) and [tree planting](#) as responses to vegetation damage and [water purification](#) and the distribution of emergency-safe water in response to water and sanitation damage. The findings have led to a proposal for an adaptation framework for cyclone-induced damage and loss. This review recommended investigating cyclone-induced land use and land cover change, damage to vegetation functional traits and patterns, health and injuries, service networks, and infrastructural damages.

Keywords: Adaptation strategy, Damage-loss Cyclone, PRISMA Vegetation ,LULC

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