National Institute of Technology Rourkela

Registration Seminar

Seminar Title : Landfalling Tropical Cyclones in the Coastal Environments of India: Impacts, Vulnerability and Risk Assessment

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Abstract : Globally, the tropical

: Globally, the tropical warm Northern Indian Ocean (NIO) is considered an active breeding zone for Tropical Cyclones (TCs). The coastal regions of the NIO basin, especially the rim countries, viz., Bangladesh, India, Myanmar, Pakistan, and Sri Lanka, are regarded to be highly hazard prone, owing to TCs landfall. South Asian countries, especially India, which has a longer coastline and a major percentage of the population residing in coastal and near coastal regions are at higher risk in terms of loss of lives, and infrastructure and ecological-environmental damages. In the current warming climate scenario, the NIO exhibited a significant rise in the number of intensified TC events. In this regard, the proposed work emphasizes investigating the impacts, and vulnerability, and projecting the future risks associated with this disastrous catastrophic event. To accomplish the objectives of the proposed study, a comprehensive approach would be undertaken to assess the regional vulnerability based on the severity of the hazard and to categorize the vulnerable hotspots based on variabilities in the predominance of indices. The intention is to analyze the destruction potential induced by landfalling TCs and subsequently determine the probable future risks along the coastal environments of India. Thus, the study aims to encompass all the disastrous aspects associated with landfalling TCs and it is expected to provide insights to the public, policymakers, and stakeholders regarding the degree of losses and impacts that a catastrophic event can generate. Thus, it would help improve and recast the existing mitigation strategies