

Recent Developments in Storm Surge Prediction in the North Indian Ocean and Future Plan

S. K. Dube
*Centre for Atmospheric Sciences
Indian Institute of Technology
New Delhi 110 016, India
Email: skdube@cas.iitd.ernet.in*

The damage from landfalling cyclones is mainly due to three factors: rain, strong winds, and storm surges. Of these, storm surges are an extremely serious hazard along the east coast of India, Bangladesh, Myanmar, and Sri Lanka. Storm surges affect Myanmar and Sri Lanka to a much less extent in comparison with Bangladesh and India. Notable storm surge which affected Myanmar in recent years has been during May 2008 (Nargis) which caused the heaviest loss of life and damage. Nargis generated storm surge in excess of more than 4 m near Ayeyarwady deltaic region. The entire deltaic coast of Myanmar was flooded with surges ranging from 1.5 - 4.5m.

Although the frequency of storm surges is less in the Arabian Sea than in the Bay of Bengal, major destructive surges can occur occasionally along the Gujarat Coast of India and Pakistan. Events of storm surges affecting Gulf of Oman have been somewhat rare; however there have been some cases when storm surges caused destruction along the coasts of Oman.

Thus, the real-time monitoring and warning of storm surges is of great interest in the region. It is necessary that the problem of the storm surge be seriously addressed by the countries of the region through collective efforts and in an integrated manner. The main objective of the present paper is to highlight the recent developments in storm surge prediction in the Bay of Bengal and the Arabian Sea and also future plan to enhance storm surge forecasting capability in the region.