

Now, coastal vulnerability is classified

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A large extent of Kancheepuram district and parts of Chennai along the 1,000 km-long Tamil Nadu coastline have been classified as “very high risk” areas in relation to future sea-level rise.

At least 6.38 per cent of the Tamil Nadu coastline has been bracketed as “very high risk,” seven per cent as “high risk” and the rest at medium and low risk.

In Andhra Pradesh, a stretch of 37 km (7.51 per cent

of the total coastline) between East Godavari and Visakhapatnam districts has been classified as very high risk.

This classification emerges from a comprehensive ‘Coastal Vulnerability Index’ (CVI) Atlas brought out by the Indian National Centre for Ocean Information Services (INCOIS).

Using data from satellites, simulated models, tide gauges and Shuttle Radar Topography Mission (SRTM) of the United States, INCOIS prepared this Atlas, which determines the relative risk to

coastline due to future sea-level rise.

“For the first time, such an Atlas has been done at the national level,” said T. Srinivasa Kumar, Head, Advisory Services and Satellite Oceanography Group, INCOIS, Hyderabad.

The Atlas, containing as many as 156 maps, covering all Indian coastal areas on 1:100000 scale will be useful to planners of coastal infrastructure and those involved in disaster mitigation.

Based on seven physical and geological parameters, the Atlas has classified the ar-



RISKY STRETCH: In Andhra Pradesh, a stretch of 37 km between East Godavari and Visakhapatnam districts has been classified as having very high risk. — PHOTO: C.V. SUBRAHMANYAM

A new service for shipping industry

In another first of its kind product, INCOIS scientists developed and released an “Ocean forecast system along the ship routes” a tailor-made service for navigational and operational safety of the shipping industry.

The product would provide ocean state parameters such as wave, swell, wind, sea surface temperature and high wave alert along the ship’s route.

A foreign company was currently providing only

wind and wave forecast whereas the product of INCOIS covered other important parameters, including the swell, according to its Director S.S.C. Shenoi.

Swell waves

Pointing out that swell waves were dangerous, he said that many a time the sea would appear to be calm but once in a while these high energy waves come along and bang the ship.

He said INCOIS was at

present providing a three-day forecast by updating the information on daily basis. The forecasts have been validated using a few methods. The forecast will be sent through e-mail to the captain of the ship, according to Dr. T.M. Balakrishnan Nair, Head Information Services & Ocean Sciences Group.

Apart from shipping industry, the service will be useful to dredging firms, oil industries and those in energy sector. — Y.M.

eas along the coastline in terms of very high risk, high risk, medium and low risk to future sea-level rise.

The seven parameters used are: tidal range, wave height, coastal slope, coastal elevation, shoreline change, geomorphology and historical rate of sea-level change.

Mr. Srinivasa Kumar said the shoreline change rate from satellite data was estimated for the past 40 years. If data showed shoreline ero-

sion, it meant that it was at high risk. In contrast, if there was accretion to the shore, the risk obviously was low. Similarly, the risk levels were estimated based on geomorphological features.

For instance, the presence of coastal cliffs indicates relatively low risk to that place. INCOIS is planning to come out with better maps having a scale of 1:50,000 based on high resolution input data sets.