

INCOIS has carried out coastal vulnerability assessment

- INCOIS has brought out an Atlas comprising 156 maps on 1:1,00,000 scales to prepare a CVI.
- These maps determine the coastal risks due to future sea-level rise.
- Based on the physical and geological parameters for the Indian coast.

The CVI is based on parameters like:

- Tidal range
- Wave height
- Coastal slope
- Coastal elevation
- Shoreline change rate
- Geomorphology
- Historical rate of relative sea-level change

Significance of CVI

- India has a coastline of 7516 Km i.e.
 - 6100 km of mainland coastline
 - plus coastline of 1197 Indian islands touching 13 States and UTs
- CVI assessments can be for coastal disaster management and building resilient coastal communities.

Bengal coast faces most erosion

The Ministry of Earth Sciences informed the Lok Sabha that 34% of the Indian mainland is under varying degrees of erosion.

Recent observations:

- Between 1990 and 2018, West Bengal's coast was eroded along 60.5 percent of its length.
- Kerala, on the west coast, comes in second, with a 46.4 percent erosion rate.

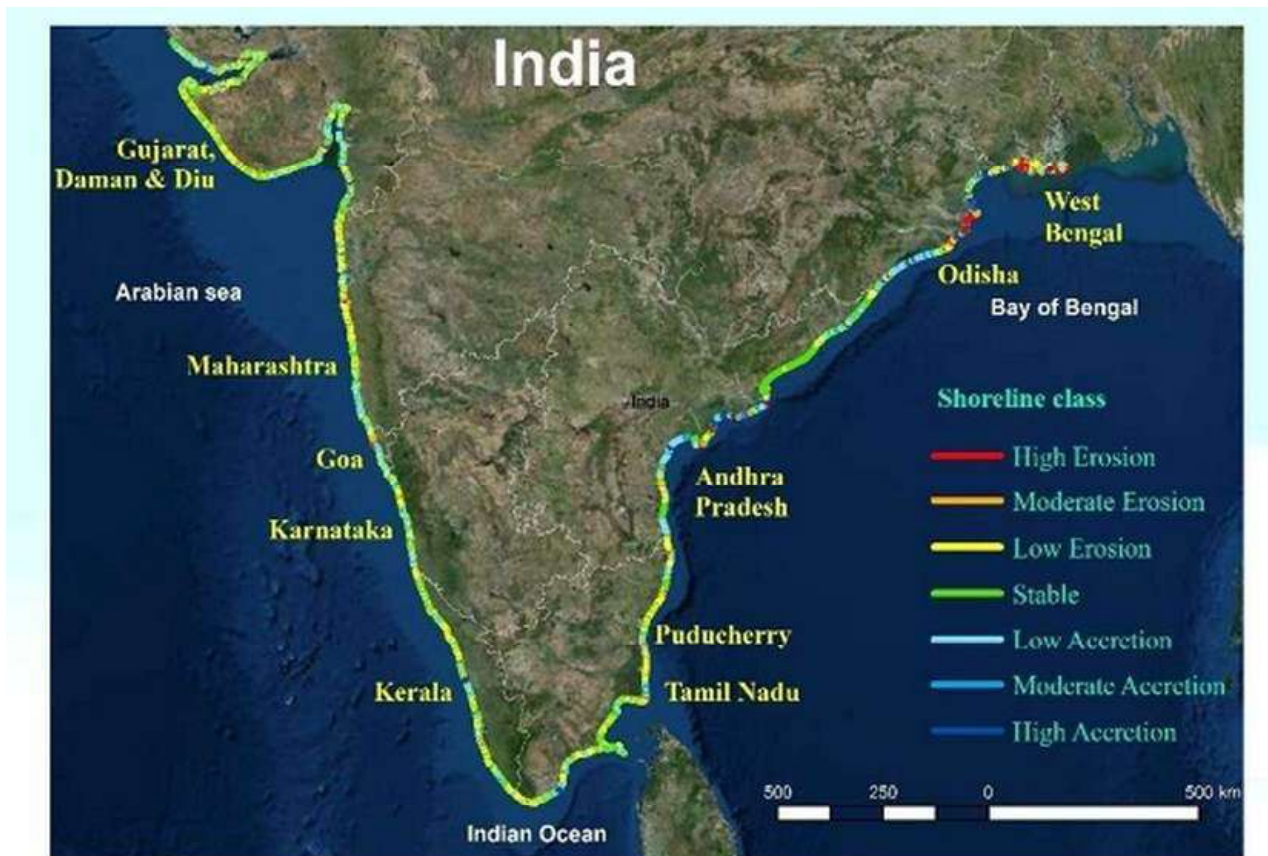


Figure 8: Shoreline change map along Indian coast (1990-2016)

- Tamil Nadu saw a 42.7 percent erosion rate.
- Gujarat saw erosion on 27.06 percent of it.
- 2 percent of the coast in the Union Territory of Puducherry was eroded.

Coastal Vulnerability Index (CVI) :

- The Indian National Center for Ocean Information Services (INCOIS) has prepared and published an atlas of CVI maps for the entire coastline of India at a 1:100000 scale.

15th Finance Commission Recommendations:

- For the award period 2021-22 to 2022-26, the 15th FC recommended the creation of a National Disaster Risk Management Fund (NDRMF) and State Disaster Risk Management Fund (SDRMF),
- It would include a mitigation fund at the national and state levels (NDMF/SDMF) and a response fund at the national and state levels.
- Under the NDMF and the NDRF, the Commission has made specific recommendations for 'Mitigation Measures to Prevent Erosion' and 'Resettlement of Displaced People Affected by Erosion.'

Have coastal ecosystem norms been violated?

In News

- CAG of India presented a report in the Parliament based on the observations from an audit of 'Conservation of Coastal Ecosystems from 2015-20'.
- Report evaluates the effectiveness of the conservation process being followed by Centre and States in coastal ecosystems.
 - CAG has a constitutional mandate to undertake 'performance audits' of publicly funded programmes.

Overview:

- Govt. had come up with the Coastal Regulation Zone Notification (CRZ) 2019.
- This classifies the coastal area into different zones for regulation.
- Framework visions an institutional mechanism for the implementation of the CRZ with an overall objective of
 - Integrated Coastal Zone Management Programme (ICZMP).

Key findings of the report:

- "Pre-audit studies" conducted by the CAG found large-scale CRZ violations in the coastal parts.
- Incidences of illegal construction activities, effluent discharges from local bodies, industries

and aquaculture farms into the sensitive coastal ecosystems.

- National Coastal Zone Management Authority (NCZMA) envisioned as the apex institution for the implementation of the CRZ policy
 - Has been functioning as an ad-hoc body due to the failure of the Environment Ministry to notify NCZMA as a permanent body.
- It is being reconstituted every few years and this has had an adverse impact on its functioning and its effectiveness.
- Expert Appraisal Committees (EACs): Committee of scientific experts and senior bureaucrats who evaluate the feasibility of an infrastructure project and its environmental consequences
 - Were found to be absent during some project deliberations.
 - Also in some instances, the members of the EAC being fewer than half of the total strength during deliberations.
- State Coastal Zone Management Authority had not been reconstituted in Karnataka and there was delayed reconstitution in States like Goa, Odisha and WB.
- District Level Committees (DLCs) of TN lacked participation from local traditional communities. In Andhra Pradesh DLCs were not even established.

- Some projects were being approved despite serious concerns raised with respect to them in the EIA reports.

