

GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

**LOK SABHA**  
**UNSTARRED QUESTION NO. 1066**  
TO BE ANSWERED ON 02.12.2024

**Report on National Assessment of Shoreline Changes along Indian Coast**

1066 SHRI CAPTAIN BRIJESH CHOWTA

Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

- (a) whether the Report on the 'National Assessment of Shoreline Changes along Indian Coast' has been acted upon with regard to safeguarding the coastline of the country;
- (b) if so, the details of measures for shoreline protection that have been implemented especially for the coast of the State of Karnataka;
- (c) whether the Coastal Management Information System (CMIS) has undertaken or proposes to undertake any study of coastal Karnataka or has plans for site specific coastal protection structures, if so, the details thereof; and
- (d) whether there has been any study regarding the loss of marine life species on the western coast of the country, especially coastal Karnataka, if so, the details thereof along with the steps to reversing the same and conservation of existing species?

**ANSWER**

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

(SHRI KIRTI VARDHAN SINGH)

- (a) to (b): National Assessment of Shoreline Changes along Indian Coast is a report published by the National Centre for Coastal Research (NCCR), Ministry of Earth Sciences which summarizes the methods of analysis, interprets the results and provides information on shoreline changes and rate of changes. This report is based on satellite-based shoreline change analysis along the entire Indian coast using multi-spectral satellite images along with the field-surveyed data. As per this study, about 33.6% of coast is eroding, 26.9% is accreting and 39.5% is in stable state.

The report has been used in the preparation of Shoreline Management Plan as per the provisions of Coastal Regulation Zone Notification, 2019 under the Environment (Protection) Act, 1986.

Shoreline change analysis was carried out for 313 km long shore of Karnataka and approximately 50% of Karnataka's coast is in stable conditions, 26% and 24% is under accretion and erosion respectively.

The shoreline protection measures have been taken across the country, which includes:

- Ministry of Environment, Forest and Climate Change has notified Coastal Regulation Zone (CRZ) Notification, 2019 with a view to conserve and protect coastal stretches, marine areas and to ensure livelihood security to the fisher and other local communities. The coastal regulations, however, permit setting up of erosion control measures in the coast. The notification also provides for No Development Zones (NDZ) along various categories of coastal areas to protect India's coastline from encroachment and erosion.
- The Government of Karnataka has prepared the Shoreline Management Plan in compliance to the provisions of CRZ Notification, 2019. Government of Karnataka has approached World Bank for assistance under the K-SHORE project of World Bank.

(c) Coastal Management Information System (CMIS) activities include collection of various offshore and onshore coastal data for better scientific planning, design, construction and maintenance of site-specific coastal protection structures at vulnerable coastal stretches including an integrated data bank. Under CMIS, nine parameters such as wave, current, tide, nearshore & offshore bathymetry, river current discharge, wind velocity, wind direction, relative humidity, shoreline mapping (high tide line, low tide line), beach profile (cross- shore profile), rainfall, temperature, suspended and seabed sediments are observed. Eight sites have been established under the CMIS for data collection, which support the measures to tackle coastal erosion in a scientific manner, keeping in view the long-term perspective and challenges of climate change. Data collected is shared with respective State Governments as per their requirement. There is no provision of undertaking study on coastal protection measures in the approved scheme under CMIS.

(d) Academic institutions have periodically conducted studies on conservation of coastal and marine species and their habitats in India. There is no specific report on loss of marine life species on western coast of the country, including the State of Karnataka. However, the Wildlife Department of Karnataka has taken the following steps for conservation of marine species, which includes:

- i. Establishment of Coastal and Marine Cell at Karwar and Mangaluru to protect and conserve marine species and their habitat with dedicated team of staff members.
- ii. Awareness programmes are carried out for local fishermen, general public, students' police, forest personnel, coast guard etc.
- iii. Beach cleaning drives involving school/college students, NGOs and other departments.
- iv. Rescue and rehabilitation of stranded animals.
- v. Protection of marine species is ensured through strict protection measures.
- vi. Research on the species recovery of Arabian Humpback whales is carried out.
- vii. Conservation activities for Olive Ridley Turtles are carried out annually. Incentives are given to local fishermen for identifying and supporting conservation of Olive Ridley Turtle in coastal areas.

- viii. The database on the stranded marine life is prepared.
- ix. Marine Park is established in Honnavar for conservation of marine species.
- x. Livelihood improvement activities such as Oyster cultivation, mud-crab culture, green mussel cultivation etc. are initiated for local people.

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