

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

LOK SABHA
UNSTARRED QUESTION NO. 1057
TO BE ANSWERED ON 29.07.2024

Coastal Erosion

1057. SHRI VE VAITHILINGAM:

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

- (a) whether the Government studied the effect of sea erosion along the coastal area in Southern States;
- (b) the extent of damages caused to the fishing community due to sea erosion; and
- (c) the action taken to mitigate the coastal erosion and compensate/rehabilitation of affected fishermen in the Southern States including Puducherry?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(SHRI KIRTI VARDHAN SINGH)

(a) to (c)

Some stretches of India's shoreline are subject to varying degrees of erosion due to natural causes or anthropogenic activities. National Centre for Coastal Research, (NCCR), an attached office of the Ministry of Earth Sciences, Government of India has monitored the shoreline changes for entire Indian coastline using multi-spectral satellite images along with field-surveyed data for the period 1990-2018. It is observed that 33.6% of the Indian coastline was vulnerable to erosion, 26.9% was under accretion (growing) and 39.6% was in stable state.

Under the shoreline mapping system undertaken by NCCR, 526 maps were prepared for the entire Indian mainland coast for identifying vulnerable areas to coastal erosion in 1:25000 scale, along with 69 district maps, and 9 States and 2 Union Territory (UT) maps. A report on "National Assessment of Shoreline Changes along Indian Coast" was released in July 2018 and the report was shared with various Central and State Government agencies and stakeholders for implementing shoreline protection measures. An updated version of Atlas, along with a digital version of the report, containing all the maps, was released on 25th March 2022.

The study by NCCR reveals that the shoreline changes are combined effect of natural and human activities and the receding coastline will cause loss of land/habitat and the livelihood of fishermen in terms of losing the space for parking boats, mending nets and fishing operations.

Details of shoreline changes along the Coastal area in Southern States/UT are given below:

SI. No.	State/UT	Coast Length (km)	Erosion (km)	Erosion (%)
1	Karnataka	313.02	74.34	23.7
2	Kerala	592.96	275.33	46.4
3	Tamil Nadu	991.47	422.94	42.7
4	Puducherry	41.66	23.42	56.2
5	Andhra Pradesh	1027.58	294.89	28.7

Government of India has taken various measures for combating coastal erosion and for the benefit of the coastal communities including fishermen, some of which are as follows:

- i. Ministry of Environment, Forest & Climate Change (MoEFCC) has issued CRZ Notifications with a view to conserve and protect the unique environment of coastal stretches and marine areas, besides livelihood security to the fisher communities and other local communities in the coastal areas and to promote sustainable development based on scientific principles taking into account the dangers of natural hazards, sea level rise due to global warming.
- ii. As per CRZ Notification, 2019, measures for control of erosion are permissible activity in CRZ areas. Further, Hon'ble NGT vide order dated 11/04/2022 in O.A. No. 04 of 2013 and Appeal No. 18 of 2017 has directed that the approved CZMP shall contain the parameters as listed in the CRZ 2019 Notification including High, Medium and Low erosion stretches for such erosion prone areas and Shoreline Management Plan shall be prepared for such erosion prone areas. Accordingly, the Ministry has issued directions to Coastal States/UTs, including Puducherry, for incorporation of Shoreline Management Plan in CZMP of 2019.
- iii. MoEFCC has delineated the hazard line for the entire coast of the country. The hazard line is indicative of the shoreline changes, including sea level rise due to climate change. This line is to be used by agencies in Coastal States as a tool for Disaster Management including planning of adaptive and mitigation measures. The hazard line features in the new Coastal Zone Management Plans of the coastal States/Union territories approved by the MoEFCC.
- iv. Coastal erosion mitigation measures have been taken up at Puducherry and Chellanamin Kerala, which helped in restoration and protection of coastal areas lost at Puducherry and flooding at Chellanam Fishing Village. Technical support has been extended to the coastal States in the design of coastal protection measures at vulnerable stretches and preparation of Shoreline Management Plans.

- v. NCCR provides technical support to the coastal States in the design of coastal protection measures at vulnerable stretches of the respective coasts and preparation of Shoreline Management Plan (SMP) for Tamil Nadu, Andhra Pradesh, Puducherry and Kerala.
- vi. Government of Puducherry in collaboration with National Institute of Ocean Technology, MoES implemented Puducherry Beach Restoration Project using a Hybrid Solution which is first of its kind in the country. The project resulted in restoration of about 1.5 kms of beach stretch in Puducherry town.
- vii. Government of Puducherry has taken steps to implement Coastal Erosion Control Measures in Pillaichavady village and has prepared the detailed design through NCCR, Chennai.
- viii. The Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying supports the Coastal State Governments and Union Territories for development of fishing harbours and fish landing centres for creation of need based shelter basins, safe landing and berthing facilities and land based facilities for smooth conduct of fishers and fish relating activities at the identified locations. The fishing harbours and fish landing centres developed under the schemes, inter-alia, comprising of need based waterside and landside facilities like breakwaters, training walls and groynes primarily to create shelter and tranquil basin for smooth operations of fishery activities, protect the lives and assets of fishermen during the rough weather and natural calamities.
- ix. The Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying with effect from the financial year 2020-21 has been implementing a flagship scheme Pradhan Mantri Matsya Sampada Yojana (PMMSY) with an investment of Rs 20,050 crore for holistic development of fisheries and welfare of fishermen. Development of fisheries infrastructure in the form of fishing harbours and fish landing centres is one of the thrust areas envisaged and being supported under this Scheme. Such fisheries infrastructure projects are taken up on cost sharing basis between the Central and the concerned State Governments on 60:40 ratio and 100% central assistance for UTs.
- x. Ministry of Home Affairs, Government of India has issued Policy on 'Resettlement of displaced people affected by erosion under National Disaster Response Fund (NDRF)' to all States for necessary action at their end.
- xi. Coastal Protection Projects are Planned & Executed by respective Maritime States/ UTs. Coastal Protection Schemes are eligible for Central assistance under Flood Management & Border Area Program (FMBAP) of Department of Water Resources, River Development & Ganga Rejuvenation. As per information received from Central Water Commission, Ministry of Jal Shakti, no projects have been received for funding under FMBAP from Southern States for mitigation of coastal erosion in these areas.

- xii. Asian Development Bank assisted Sustainable Coastal Protection and Management Investment Programme (SCPMIP) was implemented in Karnataka. Ministry of Jal Shakti (MOJS) initiated the National Coastal Protection Project to coordinate coastal protection activities at the national and state levels. SCPMIP aims to address immediate coastal protection needs and coastal instability using environmentally and socially appropriate solutions, with a focus on softer options such as artificial reefs, beach nourishments, and dune management. The program also aims to protect the coastline from erosion which has an impact on income generation opportunities for coastal communities.
