

GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

**RAJYA SABHA**  
**UNSTARRED QUESTION NO. 857**  
TO BE ANSWERED ON 09.02.2023

**Erosion of India's coasts**

857. DR. C.M. RAMESH:

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

- (a) whether it is a fact that according to a study of satellite data, one-third of India's coast is eroding at varying rate of changes, if so, the details thereof; and
- (b) the details of the steps taken by Government to examine the coastal stretch which is under very high coastal vulnerability?

**ANSWER**

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE  
(SHRI ASHWINI KUMAR CHOUBEY)

(a): National Centre for Coastal Research, (NCCR), an attached office of the Ministry of Earth Sciences, Government of India has been monitoring the shoreline changes for entire Indian coastline using multi-spectral satellite images along with field-surveyed data for the period of 28 years (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. Findings of shoreline changes for 1990-2018 for Indian coast and results are given in the table below:

**Shoreline changes for 1990-2018 for Indian Coast**

S. No.	Coast	State / UT	Coast length (in km)	Coast Length					
				Erosion		Stable		Accretion	
				km	%	km	%	km	%
1	West Coast	Gujarat	1945.6	537.5	27.6	1030.9	53	377.2	19.4
2		Daman& Diu	31.83	11.02	34.6	17.09	53.7	3.72	11.7
3		Maharashtra	739.57	188.26	25.5	477.69	64.6	73.62	10.0
4		Goa	139.64	26.82	19.2	93.72	67.1	19.1	13.7
5		Karnataka	313.02	74.34	23.7	156.78	50.1	81.9	26.2
6		Kerala	592.96	275.33	46.4	182.64	30.8	134.99	22.8
7	East Coast	Tamil Nadu	991.47	422.94	42.7	332.69	33.6	235.85	23.8
8		Puducherry	41.66	23.42	56.2	13.82	33.2	4.42	10.6
9		Andhra Pradesh	1027.58	294.89	28.7	223.36	21.7	509.33	49.6

10		Odisha	549.5	140.72	25.6	128.77	23.4	280.02	51.0
11		West Bengal	534.35	323.07	60.5	76.4	14.3	134.88	25.2
Total			6907.18	2318.31	33.6	2733.86	39.6	1855.03	26.8

(b): The Government is committed for taking proactive steps in combating sea erosion and protection of India's coastal areas and the coastal communities. Some of the measures taken are as follows:

- (i) 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.
- (ii) The Ministry of Environment, Forest and Climate Change (MoEFCC) has notified Coastal Regulation Zone 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.
- (iii) MoEFCC has framed a national strategy for coastal protection along with guidelines has been framed for all Coastal States and Union Territories.
- (iv) The Flood Management Scheme of Ministry of Jal Shakti, including anti-sea erosion schemes, are planned and executed by the State Governments with their own resources as per priorities of States. Union Government renders assistance to states which is technical, advisory, catalytic and promotional in nature.
- (v) Considering the importance of collection of data on coastal processes towards coastal protection measures, a new component "Coastal Management Information System (CMIS)" was initiated under the Central Sector Plan Scheme "Development of Water Resources Information System". CMIS is a data collection activity carried out to collect near shore coastal data which can be used in planning, design, construction and maintenance of site specific coastal protection structures at vulnerable Coastal stretches. Establishment of three sites each in the State of Kerala, Tamil Nadu and Puducherry has been completed.

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