

**GOVERNMENT OF INDIA  
MINISTRY OF EARTH SCIENCES  
LOK SABHA  
UNSTARRED QUESTION NO. 2361  
TO BE ANSWERED ON WEDNESDAY, 21<sup>ST</sup> DECEMBER 2022**

**RISING SEA LEVELS**

**2361** SHRI D.K. SURESH:  
SHRI RATTAN LAL KATARIA:  
SHRIMATI SUMALATHA AMBAREESH:

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether it is true that the sea level has been rising over the past century and the rate has accelerated in recent decades;
- (b) if so, whether incidents of coastal erosion is rising due to rise in the sea level;
- (c) if so, the details thereof along with the steps taken by the Government to check it;
- (d) whether the country has lost any coastal areas in the last fifteen years, if so, the details thereof; and
- (e) whether the Union Government along with various State Governments is preparing any action-plan to assist and rehabilitate persons displaced or compelled to migrate due to cyclones in the sea and if so, the details thereof?

**ANSWER**

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR  
MINISTRY OF SCIENCE AND TECHNOLOGY  
AND EARTH SCIENCES  
(DR. JITENDRA SINGH)

- (a) Yes sir. The recent report from Intergovernmental Panel for Climate Change (IPCC-AR6 WG1) has noted that the global mean sea level has been rising at an unprecedentedly rapid pace in recent decades. The average sea level rise increased from 1.3 mm/year between 1901-1971 to 3.7 mm/year between 2006-2018.
- (b) Yes, Sir.
- (c) & (d) National Centre for Coastal Research (NCCR), Chennai an attached office of the Ministry of Earth Sciences (MoES) is monitoring the shoreline erosion since 1990 using remote sensing data and GIS mapping techniques. 6,632 km long Indian coastline of mainland has been analyzed from 1990 to 2018. It is noted that about 33% of the coastline is under varying degree of erosion, 26 % is of accreting nature and the remaining 41% is in a stable state. The observed changes may be induced by natural processes including Sea level rise and anthropogenic activities.

The state wise details are given below:

S.No	State	Coast Length (in km)	Erosion		
			Km	%	
1	West Coast	Gujarat	1945.60	537.5	27.6
2		Daman & Diu	31.83	11.02	34.6
3		Maharashtra	739.57	188.26	25.5
4		Goa	139.64	26.82	19.2
5		Karnataka	313.02	74.34	23.7
6		Kerala	592.96	275.33	46.4
7	East Coast	Tamil Nadu	991.47	422.94	42.7
8		Puducherry	41.66	23.42	56.2
9		Andhra Pradesh	1027.58	294.89	28.7
10		Odisha	549.50	140.72	25.6
11		West Bengal	534.35	323.07	60.5
Total		6907.18	2318.31	33.6	

- (e) The Cyclone Warning Division (CWD) at India Meteorological Department (IMD), New Delhi acts as a Regional Specialised Meteorological Centre for monitoring, predicting and issuing warning services on tropical cyclones developing over north Indian Ocean. IMD has three Area Cyclone Warning Centres at Chennai, Kolkata & Mumbai and four Cyclone Warning Centres at Ahmedabad, Bhubaneswar, Thiruvananthapuram and Visakhapatnam for carrying out operational warning activities at state level and to carry out related research & development activities.

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