

**GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
RAJYA SABHA
UNSTARRED QUESTION No. 3222
TO BE ANSWERED ON 31st March 2022**

EROSION OF INDIAN COASTLINE

3222. SHRI V. VIJAYASAI REDDY:

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether it is a fact that between 1990 and 2018, about 32 percent of the Indian coastline had eroded;
- (b) if so, the reasons for such coastal erosion;
- (c) whether Government proposes to undertake any mapping of such coastline erosion to study its causes, impact and solutions;
- (d) if so, the details thereof;
- (e) whether any mitigation efforts have been undertaken by Government to control such coastal erosion; and
- (f) 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. National Center for Coastal Research (NCCR), an attached office of MoES is monitoring the shoreline erosion since 1990 using remote sensing data and GIS mapping techniques. Totally, 6,632 km long Indian coastline of mainland has been analyzed from 1990 to 2018. It is noted that about 33.6 % of the coastline is under varying degree of erosion. 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 |

(b) The reasons for coastal erosions include increase in frequency of Cyclones and Sea level rise and anthropogenic activities such as construction of harbours, beach mining and building of dams.

(c) Yes, Sir.

(d) There are 526 maps prepared for entire Indian coast for identifying areas vulnerable to coastal erosion in 1:25000 scale along with 66 district maps, 10 state /UT maps. A Report on “National Assessment of Shoreline Changes along Indian Coast” is released in July, 2018 and shared with various Central and State government Agencies and Stakeholders for implementing shore line protection measures. The digital and hard copy of all the Maps is released on 25th March, 2022.

(e) Yes, Sir.

(f) Ministry of Earth Sciences (MoES) had successfully demonstrated innovative coastal erosion mitigation measures at two pilot locations.

(i) Puducherry Beach Restoration Project, Puducherry

The Submerged Reef has been implemented by MoES and beach nourishment is implemented by Govt of Puducherry. This helped in restoration of 1.5 km long city beach after 30 years and helped in improving tourism and fishing activities in addition to protection of coast during extreme cyclonic events.

(ii) Kadalur Periya Kuppam, Tamil Nadu

An Offshore submerged dyke was implemented. This helped in protection of three fishing Villages during extreme cyclonic events and restored lost beach that is being used for landing of fishing boats and other fishing activities.

In addition, NCCR is also providing technical support to state governments of Kerala (Chellanam, Kollamkode, Poonthura, Varkala and Shangumugham) , Odisha (Ramayapatnam, Puri, Konark and Pentha), Andhra Pradesh (Vishakapatnam) and Goa for implementation of coastal protection measures at vulnerable stretches.