

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

RAJYA SABHA
UNSTARRED QUESTION NO. 842
TO BE ANSWERED ON 19.09.2020

Rising sea level and sea erosion in Odisha's coastline

842. DR. AMAR PATNAIK:

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

- (a) Steps taken by Government under climate change action plan to address the rising sea levels and sea erosion taking place in Odisha's coastline, mainly stretches in Puri, Kendrapara and Ganjam districts;
- (b) whether Government has conducted any study or collected any data to understand the causes of such rising sea levels and sea erosion in Odisha's coastline and its linkage to climate change;
- (c) if so, the details thereof;
- (d) if not, the reasons therefor; and
- (e) steps taken by Government to address the concerns of the coastal communities in Odisha, especially concerns related to reduction in available farm land and increasing salinity in soil?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(SHRI BABUL SUPRIYO)

(a) The Government is implementing National Action Plan on Climate Change (NAPCC) which provides an overarching policy framework for climate actions in the country with eight Missions including mitigation, adaptation and other climate actions. To support the objectives of NAPCC, 33 States and Union Territories, including Odisha have already prepared their State Action Plan on Climate Change (SAPCC) to address state specific actions.

The Odisha State Action Plan has identified 'Coasts and Disasters' as one of the key priority areas to address climate change vulnerability. The interventions identified in the state action plans under the priority sectors are implemented by various nodal departments of the State Government with support from various line departments.

The Integrated Coastal Zone Management Project (ICZMP) was launched with a purpose of protecting and conserving coastal and marine environment of the country in three pilot States viz., Gujarat, Odisha and West Bengal. The National Centre for Sustainable Coastal Management (NCSCM), Chennai has studied the shoreline changes for identification of high erosion, medium erosion and low erosion / stable coastal stretches of the country. Also, the Survey of India has mapped and demarcated the Hazard line along the mainland of the Indian coast to enable MoEFCC plan against natural hazards such as storm surges, tsunami and cyclone and to prepare disaster management plans for the coastal environment, including planning for adaptive and mitigation measures.

(b) to (d) Indian Space Research Organisation (ISRO) Centres have carried out studies related to shoreline changes and associated changes. Space Applications Centre (SAC), ISRO, Ahmedabad in collaboration of Coastal Erosion Directorate, Central Water Commission has carried out shoreline mapping on 1:25,000 scale for the entire Indian coast based on multi date satellite data for 1989-1991, 2004-2006 and 2014-16 time frames, to find out the changes in shore line and associated changes. The change analysis for the Odisha coast based on 2004-06 and 2014-16 time frame shoreline data has shown that 145 km stretch of the coast is under erosion (840 ha), 98 km of the coast is under accretion (751 ha) and 202 km of the shoreline is stable in nature.

The case study carried out by National Remote Sensing Centre (NRSC) on estimation of shoreline change along the Odisha and Andhra Pradesh Coast using Landsat satellite data for the period of 2004-2017 showed that about 38.5 % of coastal stretch of Ganjam district is under erosion, 39.9% accretion and 21.5% is stable.

(e) According to information provided by Department of Science and Technology (DST), studies on regional coastal processes carried out by State Integrated Coastal Zone Management Project (ICZMP) and Indian Institute of Technology Kharagpur suggest that main stretches of Puri, Kendrapara and Ganjam districts are vulnerable to coastal erosion and frequency and erosion potential have increased in recent years due to flooding induced by cyclones. Under the State Climate Action Plan of Odisha, existing saline embankment to resist saline water ingress are strengthened along with 100 flood embankments to protect against sea surges and to enable to make flood and cyclone resistant houses within 5 Km buffer from the sea coast in these areas.

For coastal erosion protection, mangrove plantations and shelter belt plantations have been undertaken in identified coastal stretches of Odisha, along with a pilot 'Geo-tube' embankment project for erosion prevention in eroding coastal stretch of Pentha village in Odisha under the ICZMP of the Ministry.
