

GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

**RAJYA SABHA**  
**STARRED QUESTION NO. 193**  
TO BE ANSWERED ON 12/12/2024

**Erosion of beaches in Odisha**

\*193 DR. SASMIT PATRA:

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

- (a) the specific measures taken or being planned to prevent further erosion of beaches in Puri, Gopalpur, Chandipur and other prominent coastal areas;
- (b) whether Government has undertaken any coastal protection projects such as the construction of seawalls, groynes or beach nourishment at these locations; and
- (c) the steps being taken to restore coastal ecosystems such as mangroves and dunes in Odisha, particularly in areas facing acute erosion?

**ANSWER**

MINISTER FOR ENVIRONMENT, FOREST AND CLIMATE CHANGE  
(SHRI BHUPENDER YADAV)

(a) to (c): A statement is laid on the Table of the House.

**STATEMENT REFERRED TO IN REPLY TO PARA (a) TO (c) OF THE RAJYA SABHA STARRED QUESTION No. 193 DUE FOR REPLY ON 12.12.2024 REGARDING “EROSION OF BEACHES IN ODISHA” RAISED BY DR. SASMIT PATRA, HON’BLE MEMBER OF PARLIAMENT**

**(a) & (c)** Coastal protection projects in India are primarily planned, designed, and executed by the respective maritime states and union territories (UTs). The Central Government plays a promotional, advisory, and catalytic role in supporting these initiatives. Funding for such projects is generally provided through state funds, central assistance, or external sources. To address the issue of coastal erosion scientifically, the Department of Water Resources, River Development, and Ganga Rejuvenation (DoWR, RD&GR) launched the Coastal Management Information System (CMIS). This initiative aims to establish an integrated data repository to effectively address the challenges posed by climate change and coastal erosion. The CMIS involves setting up data collection sites along India's coastline to monitor and study coastal processes. The collected data is utilized to identify the root causes of erosion, design suitable coastal protection measures, and develop both short-term Coastal Protection Plans and long-term Coastal Management Plans. Currently, CMIS is operational at eight locations across India, with plans to extend its network. As part of the expansion, a new site is proposed near Puri, Odisha, to further enhance coastal monitoring and management capabilities.

The government has undertaken various measures to protect and enhance mangrove cover in the country through both promotional and regulatory approaches. Under the National Coastal Mission, as part of the Conservation and Management of Mangroves and Coral Reefs component, the Ministry has provided financial assistance to coastal states and union territories for mangrove conservation across nine coastal states and one union territory. In Odisha, the sites identified under this initiative include Bhitarkanika, the Mahanadi Delta, Subernarekha, Devi-Kadua Estuary, Dhamra, the Mangrove Genetic Resources Centre, and Chilika.

Mangrove and Casuarina plantations are being undertaken out of the budgetary provision every year to reduce beach erosion in suitable coastal areas of state.

The “Mangrove Initiative for Shoreline Habitats & Tangible Incomes” (MISHTI) program was launched in 2023 to restore and promote mangroves as unique natural ecosystems, aimed at preserving and enhancing the sustainability of coastal habitats. A total of ₹17.96 crores has been allocated to the states of Andhra Pradesh, Gujarat, Kerala, Odisha, West Bengal, and the Union Territory of Puducherry. MISHTI aims to restore and reforest mangroves across approximately 540 km<sup>2</sup>, spanning nine states and three Union Territories, over a five-year period starting from 2023–24.

Regulatory measures are implemented through Coastal Regulation Zone (CRZ) Notification (2011/2019) under the Environment (Protection) Act, 1986; the Wild Life (Protection) Act, 1972; the Indian Forest Act, 1927; the Biological Diversity Act, 2002; and rules under these acts as amended from time to time.

The CRZ Notification (2011/2019) under the Environment Protection Act, 1986, aims to protect and conserve coastal ecosystems, including mangroves and sand dunes. The notification prohibits construction activities within sensitive coastal areas, particularly where sand dunes and mangroves are located. In Odisha, efforts to establish shelterbelt plantations and promote mangrove vegetation in coastal areas, which support sand dune integrity, are important elements of coastal protection. Under the ICZM, Odisha has undertaken integrated conservation efforts

that include sand dune preservation as part of broader coastal zone management. These efforts aim to balance development and conservation, ensuring sustainable use of coastal resources. The ICZM project in Odisha, which includes the collection of baseline data and the preparation of management plans, works to conserve sand dunes and other important coastal ecosystems.

The Ministry of Environment, Forest and Climate Change (MoEF&CC) is implementing the Green Climate Fund (GCF) project, “Enhancing Climate Resilience of India’s Coastal Communities (ECRICC)”. This project integrates ecosystem-based and community-driven approaches to coastal management and planning. Its goal is to help the Government of India improve the resilience of vulnerable coastal communities to climate change through ecosystem-based adaptation (EbA). The project is being implemented in 24 target ecosystems across 12 coastal districts in Andhra Pradesh, Maharashtra, and Odisha. In Odisha, the project operates in four districts. The Forest, Environment & Climate Change Department of the Government of Odisha is the nodal agency for the ECRICC project, under the overall supervision of MoEF&CC. 773 hectares of mangrove plantation and 1,452 hectares of mangrove restoration is completed under the ECRICC project as on September 2024.

**(b)** To safeguard coastal areas from erosion, various initiatives have been implemented in Odisha, including mangrove plantations, shelterbelt plantations, and installation of geo-tubes, construction of seawalls and groynes, and drainage improvement at river mouths. In 2020, the Central Water Commission published guidelines titled “Protection and Control of Coastal Erosion in India” to provide preliminary design parameters for suitable coastal protection measures across different stretches of the coastline, including those in Odisha.

As per the information available from Government of Odisha, details of coastal protection measures executed and proposed in the State of Odisha are as shown below:

- i. Details of Coastal protection executed by the State of Odisha in the last 10 years as informed by Water Resources Department, Government of Odisha

S. No.	Name of Village/Taluka/ District	Type of Protect work
1.	At Pentha in Rajnagar block of Kendrapada	Geo textile tube Embankment work as Groynes (Coastal Protection)
2.	Udaipur-Talsari in Bhograi Block of Balasore	Sea Wall cum Service road (Coastal Protection)
3.	Chandrabali-Kirtania in Bhogral block in Balasore	Sea Wall (Coastal Protection)
4.	Chaulati-Kasatal in Basta block in Balasore	Sea Wall (Coastal Protection)
5.	Chandipur-Parikhi In Balasoresadar block of Balasore	Sea Wall (Coastal Protection)
6.	Kalamatiapahi & Talapada in Balasore district	Sea Wall (Coastal Protection)

- ii. The details of the other coastal protection works of Government of Odisha as per information provided by Water Resources Department, Government of Odisha is as follows:

S. No.	Name of Village/Taluka/ District	Type of Protection work
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1.	River mouth of Hansua in Rajnagar Block of Kendrapada District	Drainage improvement of River mouth against Sea erosion
2.	RamayapatanaChikiti Tehsil in Ganjam District	Sea Wall (Coastal Protection)
3.	Bahada Nalla in Haripur of Ganjam district	Drainage improvement of River mouth & River Training Wall & construction
4.	Bahana Nalla in Markandi in Ganjam District	Drainage improvement of River mouth & River Training Wall & Groynes construction

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