

GOVERNMENT OF INDIA  
MINISTRY OF EARTH SCIENCES  
**RAJYA SABHA**  
**UNSTARRED QUESTION NO. 2129**  
ANSWERED ON 07/08/2025

**MARINE ECOSYSTEM STUDIES ON ODISHA COAST**

2129. SHRI SUBHASISH KHUNTIA:  
SHRI MUZIBULLA KHAN:

Will the Minister of **Earth Sciences** be pleased to state:

- (a) the number of institutes involved in marine research;
- (b) the details of sea level and salinity data and biodiversity observations and its impact on fisheries; and
- (c) the details of research collaborations?

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

- (a) The institutes involved in marine research under Ministry of Earth Sciences (MoES) are (i) National Centre for Coastal Research (NCCR), (ii) Indian National Centre for Ocean Information and Services (INCOIS), (iii) National Institute of Ocean Technology (NIOT) (iv) Centre for Marine Living Resources & Ecology (CMLRE) and (v) National Centre for Polar and Ocean Research (NCPOR). In addition, other research institutes such as (i) National Centre for Sustainable Coastal Management (NCSCM) under Ministry of Environment and Forest & Climate Change (MoEF&CC), (ii) National Institute of Oceanography (NIO) under Council of Scientific and Industrial Research (CSIR) and (iii) Central Marine Fisheries Research Institute (CMFRI) under Indian Council of Agricultural Research (ICAR) are engaged in marine research.
- (b) INCOIS has installed tide gauges all along the Indian coast, including Odisha coast to monitor sea level changes for forewarning the occurrences of Tsunami/storm surges. Sea level in the Indian Ocean rose at 1.7 mm/year during 1900–2000, accelerating to 3.3 mm/year in the North Indian Ocean from 1993–2015. Recent studies show significant variation along the Indian coastline. At Paradip, based on the gridded satellite altimeter data (1993–2020) indicate a rise of 4.43 mm/year. Under the Seawater Quality Monitoring (SWQM) program by NCCR, the salinity data is being collected along the Odisha coast for four transects (off-Gopalpur, off-Chilka Lake, off-Paradip and off-Dhamra) upto 5km from the coast including other biological parameters. The 'National Policy on Marine Fisheries, 2017 notified by the Department of Fisheries (DoF), Government of India, provides guiding principles for conservation and optimum utilization of fisheries resources for ensuring sustainability. Department of Fisheries, Government of India is implementing fishing ban in India's EEZ along the east and west coast during the major breeding season of the commercial fish species to ensure successful spawning and for sustaining the fisheries. On the east coast, including the coasts of Odisha, the fishing ban is implemented annually from April 15th to June 15th. The Government of Odisha, through the Orissa Marine Fisheries Regulation Act, 1981, also regulates fishing activities in the state's territorial waters to support the sustainable management of fisheries along the Odisha coast.

- (c) NCCR through MoES undertakes need based collaborative research with local institutions like Berhampur University, Berhampur, CSIR-IMMT, Bhubaneswar, Chilika Development Authority (CDA), Bhubaneswar under various projects, such as seawater quality monitoring, ecosystem modelling, shoreline change studies, and pollution assessments etc. In addition, the following projects have been funded by Ministry of Earth Sciences to carry out the marine research by Odisha institute/universities.

| S.No. | Project Title                                                                                                                                                                | Affiliation.                                             |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| 1     | Understanding the marine bacterial biofilm community structure and harnessing the extracellular polymeric substances (EPS) of biofilm for bioremediation and bioprospecting" | National Institute of Technology (NIT), Rourkela, Odisha |
| 2.    | 'Exploring the Marine Ecosystems for Novel Bioresources with Human Health and Industrial Significance'.                                                                      | ILS (Institute of Life Sciences) Bhubaneshwar            |

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