

**GOVERNMENT OF INDIA
EARTH SCIENCES
LOK SABHA**

UNSTARRED QUESTION NO:5399
ANSWERED ON:28.04.2010
IMPACT OF RISING SEA LEVEL
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Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether the Government has assessed the impact of rising sea level on coastal areas including Kerala and Lakshadweep coast;
- (b) if so, the details thereof; and
- (c) the action taken by the Government in this regard including the monitoring station established to check the rising sea level?

Answer

THE MINISTER OF STATE (INDEPENDENT CHARGE) MINISTRY OF SCIENCE AND TECHNOLOGY, MINISTRY OF EARTH SCIENCES, MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE, MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PUBLIC GRIEVANCES & PENSIONS AND MINISTER OF STATE IN THE MINISTRY OF PARLIAMENTARY AFFAIRS (SHRI PRITHVIRAJ CHAVAN)

(a)-(b) The holistic data of sea level reveals a high variability along the Indian coast line. The analysis of past tide gauge records for the Indian coastline regions gives an average sea level rise of 1.29 mm/year for the last 40 years. The local sea level rise at various places from the Indian Tide gauge data indicated the observed trends during the past century, details of which are given below:

- i. Cochin (1939-1991) = 1.2 mm/year
- ii. Vishakhapatnam (1937-1991) = 0.9 mm/year
- iii. Mumbai (1870-1990) = 0.8 mm/year
- iv. Sunderban (1985-2000) = 3.14 mm/year

Sea level rise is a relatively slow phenomenon occurring in the background of more dramatic manifestations like storm surges and tidal variations, normal deltaic subsidence, coastal erosion and siltation of river channels along the coastline. The Kerala coast and Lakshadweep islands have been facing coastal erosion. However, it has not been established that this erosion is only due to rise in sea level.

(c) Survey of India has established 26 tide gauges that includes 2 gauge stations respectively along the Kerala coast and the Lakshadweep Islands. All of these tide gauge stations are transmitting data in real time to the Indian National Centre for Ocean Information Services (INCOIS), Hyderabad under the Ministry of Earth Sciences (MoES). Appropriate protection measures arising out of the coastal erosion are addressed jointly by respective state governments and the Central Water Commission.