

**GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
LOKSABHA
UNSTARRED QUESTION NO. 733
TO BE ANSWERED ON FRIDAY, 23RD JULY, 2021**

IMPACT OF REVISION SEA LEVEL ON INDIA

733. SHRI JAYANT SINHA:

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether the Ministry has undertaken any research on the impact of rise in sea level on India;
- (b) if so, the details thereof;
- (c) the expected sea level rise of the Indian Ocean over the next decade;
- (d) whether there are any ongoing or planned schemes to ensure protection and rehabilitation to those affected by a rise in sea level; and
- (e) 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.
- (b) Ministry has undertaken the research through Indian Institute of Tropical Meteorology (IITM) and Indian National Centre of Ocean Information Services (INCOIS) to measure the on-going sea level rise on Indian Coast and also plan to assess the future sea level rise due to land subsidence and global climate warming.

INCOIS had estimated the rate of change in the sea levels at 10 locations (major ports) on the Indian coast based on the long term data (monthly mean sea levels) obtained from the tide-gauges. Based on study by INCOIS as well as the studies published in the scientific literature, on average, the sea level along the Indian coast was observed to be rising at a rate of about 1.7 mm/year during the last century (1900–2000). Altimeter satellite record from 1993 indicates that the sea level has increased much rapidly at a rate of ~3.2 mm/year over the last 25 years. Recently, another study was carried out at INCOIS based on satellite altimetry and model simulations which showed that during 2003-2013, the north Indian Ocean experienced sea-level rise at a rate of 6.1 mm/year. The study concluded that thermosteric effect owing to the Indian Ocean warming is the primary process behind the recent rise in sea level of the north Indian Ocean.

- (c) It is expected that the sea level will continue to rise at a similar observed rate over the next decade. However, rising sea levels may exacerbate coastal inundation in low lying areas during extreme events such as tsunami, storm surge, coastal flooding and coastal erosion. A detailed investigation of the possible sea level rise over the next decade is not yet carried out.
- (d) Does not arise
- (e) Does not arise

