GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
LOK SABHA
UNSTARRED QUESTION No. 3040
TO BE ANSWERED ON FRIDAY, DECEMBER 06, 2019

COASTAL RESEARCH RELATED TO SHORELINE EROSION

3040. SHRI RAM MOHAN NAIDU KINJARAPU:
SHRI ACHYUTANANDA SAMANTA:

Will the Minister of EARTH SCIENCES be pleased to state:

(a)   the details of the progress made in the country in coastal research related to shoreline erosion and coastal vulnerability;

(b)   whether the Government is aware that according to a study conducted by the Centre for Coastal Research, Chennai – India has witnessed 33 per cent coastal erosion which has led to contamination of groundwater, displacement of people, loss of livelihood and many other such related damages;

(c)   if so, whether the Government intends to take action under its climate change action plan to prevent coastal erosion and protecting the coastal ecosystem, if so, the details thereof and if not, the reasons therefor;

(d)   whether the country has the required advanced technology for ocean State forecast and weather prediction; and

(e)   the details of ocean state forecast and weather prediction tools in operation for coastal Andhra Pradesh and the accuracy of such tools?

ANSWER
MINISTER FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND
MINISTRY OF EARTH SCIENCES
(DR. HARSH VARDHAN)

(a)   Yes Sir. National Center for Coastal Research (NCCR), an attached office of Ministry of Earth Sciences (MoES) undertakes research related to shoreline management, storm surge modeling, Tsunami modeling and vulnerability mapping at various locations along Indian coast to understand the issues related to shoreline erosion. Causes of coastal erosion and closure of tidal inlets were studied at most vulnerable sites along the Indian coast and 16 site specific shoreline/inlet management plans were prepared for coastal protection. Shoreline change maps at 1:25000 scale have been prepared for the period 1990-2016 and information has been disseminated to the coastal states. The Coastal Vulnerability Index (CVI) mapping has been undertaken for few hot-spot locations along the Tamil Nadu coast.

(b)   NCCR has analyzed the data of about 6632 km long mainland coastline for 26 years (1990-2016) and observed that about 2247 km (34%) of mainland coast is under varying degree of erosion i.e. low, moderate and high. The study of NCCR does not assess impact of coastal erosion on contamination of groundwater, displacement of people, loss of livelihood etc. for the entire coast of India.

(c)   Yes Sir. The Ministry of Environment Forest &Climate Change has issued the Coastal Regulation Zone (CRZ), 2019 Notification with a view to conserve and protect the unique environment of the coastal stretches and marine areas, besides livelihood security to the fisher communities and other local communities in the coastal areas. There is no specific mission to prevent coastal erosion and to protect coastal ecosystems under the National Action Plan on Climate Change (NAPCC).

(d)   Yes Sir.

(e)   The ocean state forecast and weather prediction provided to Andhra Pradesh are based on numerical models and High Performance Computing (HPC) systems. The ocean state forecasts on an average are accurate to 85-90% level while the Tsunami storm surge predictions are accurate at 90% level. The accepted accuracies by the international groups is 70%.The cyclone forecast accuracy has significantly improved in recent years resulting in drastic reduction in loss of life. For example, the cyclone landfall forecast errors were improved to 15.6, 15.6 and 46.7 km for 24, 48 and 60 hrs lead period from past five year (2013-17) average errors of 42.3, 94.8 and 115.4km respectively for the Titli cyclone in the year 2018. This cyclone had the track forecast errors of about 98, 114 and 113 km for 24, 48 and 72 hrs lead period against past five year (2013-17)average errors of 93, 144 and 201 km respectively.

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