GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
RAJYA SABHA
UNSTARRED QUESTION No. 1071
TO BE ANSWERED ON MONDAY, MARCH 05, 2018

PREDICTION OF COASTAL NATURAL CALAMITIES

1071. SHRI RAJKUMAR DHOOT:

Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether Government has set up Research Centres to study and predict earthquakes, high tides and floods, storms, cyclones and Tsunami to caution States and UTs for combating any such natural calamities;
(b) if so, the details thereof; and
(c) the steps Government has taken to provide timely warnings about high tide and floods, storms, cyclones etc. to coastal Maharashtra and other coastal States in the country ?

ANSWER
MINISTER OF STATE FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTRY OF EARTH SCIENCES
(SHRI Y. S. CHOWDARY)

(a) Yes, Sir. The National Centre for Seismology (NCS), maintains a country wide national seismological network, to detect and locate earthquakes occurring in and around the country. However to date, there is no proven scientific technique available, anywhere in the world, to predict the occurrence of earthquakes with reasonable degree of accuracy with regard to space, time and magnitude.

The Indian National Centre for Ocean Information Services (INCOIS) established at Hyderabad under the Ministry of Earth Sciences (MoES) is providing advisory and warning services on Tsunami, Storm Surge, Fisheries, Ocean State Forecasts and High Wave Alerts.

The operational forecasting of tropical cyclones is the mandate of the India Meteorological Department (IMD).

(b) Indian Tsunami Early Warning Centre (ITEWC) established at INCOIS provides tsunami early warnings. It comprises of real-time seismic monitoring and sea-level (Tsunami buoys and Tide gauges) network. In addition, INCOIS also takes the help of numerical model to assess the tsunami potential at different locations on the coast. The ITEWC is capable of detecting tsunamigenic earthquakes occurring in the Indian Ocean as well as in the Global Oceans within 10 minutes of the occurrence of the earthquake and disseminates the advisories to the concerned authorities through email, fax, SMS, GTS and website. In October 2012, Intergovernmental Oceanographic Commission (IOC) of UNESCO has designated ITEWC as the Tsunami Service Provider (TSP) for the entire Indian Ocean Region. Since then, ITEWC is providing tsunami advisories and related services to all countries on the Indian Ocean rim countries.

INCOIS is also providing operational services on Storm Surge Early Warnings.

INCOIS is also providing Ocean State Forecast services which include the information on tides for the benefit of the fishermen community and coastal population on daily operational basis.

IMD has one of the best forecasting systems for predicting tropical cyclones using high resolution advanced mathematical models and a suite of quality observations from Satellites, Radars and conventional and automatic weather stations. IMD has a defined Standard Operating System for monitoring, predicting and forecasting cyclones and informing the concerned authorities on time.

IMD has Area Cyclone Warning Centres (ACWC)at Kolkata, Chennai and Mumbai and Cyclone Warning Centres (CWC) Visakhapatnam, Bhubaneswar and Ahmedabad. These centres perform the operational work of issuing the cyclone bulletins and warnings to the various user agencies.In addition, there is a Cyclone warning Research Centre in Chennai which deals with Research and development in Tropical Cyclones.

(c) The Ocean State Forecast services are being disseminated in local language through mobile phones- SMS & voice calls, email, Electronic Display Boards (EDB), website etc. INCOIS has collaborations with various NGOs to disseminate the advisories on a daily basis to fishermen and coastal community.

Reliance Foundation is the strong collaborator in the state of Maharashtra for wide dissemination of the forecasts and to conduct user interaction and awareness programmes, and also to collect the feedbacks from the users. Apart from this, there are 7339 direct registered users from the state of Maharashtra, who receive ocean state forecast services directly to their mobile numbers in the form of local language SMSs. Two buoys, one off Ratnagiri and another off Versova of Maharashtra state are deployed and maintained to fine tune the forecasts and also to study the wave characteristics for Maharashtra coast.

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