

**GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
RAJYA SABHA
UNSTARRED QUESTION No. 2085
TO BE ANSWERED ON THURSDAY, DECEMBER 17, 2015**

EXPANSION OF CYCLONES CENTRES

2085. SHRI AAYANUR MANJUNATHA:

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether Government proposes to expand the cyclone centres in various coastal States;**
- (b) if so, the details of such centres to be set up in the Twelfth Five Year Plan period in various coastal States, location-wise; and**
- (c) the steps taken so far in this regard?**

ANSWER

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

- (a-b) No Sir. Under the Earth System Science Organisation (ESSO), an integrated cyclone and associated storm surge warning system is made functional all along the coastal and island regions. Such an effort has resulted into the considerable demonstrated improvement of cyclone forecast in respect of the Phailin cyclone during 08-14 October 2013 and the Hudhud cyclone during 06-14 October 2014.**

For effective operational cyclone activities, an appropriate institutional mechanism comprising cyclone warning division at ESSO-India Meteorological Department (IMD), New Delhi and three Area Cyclone Warning Centers (ACWCs) at Kolkata, Chennai, Mumbai and Cyclone Warning Centers (CWCs) at Bhubaneswar, Vishakhapatnam and Ahmadabad are functional on 24X7 basis.

- (c) By leveraging all available modeling and observing systems along with persistent efforts, ESSO-IMD is able to increase the lead time forecast of cyclones up to 5-7 days and to reduce the track and landfall errors of cyclones by about 7% over the last 3-4 years. ESSO continuously guides the expansion; planning and augmentation of land, ocean and satellite based observing systems and implementation of advanced data assimilation forecast systems along with augmentation of high end computing, network, data reception and warning dissemination infrastructure.**
