

**GOVERNMENT OF INDIA  
EARTH SCIENCES  
LOK SABHA**

UNSTARRED QUESTION NO:479  
ANSWERED ON:24.11.2011  
DETECTION OF CYCLONE IN COASTAL AREAS  
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**Will the Minister of EARTH SCIENCES be pleased to state:**

- (a) whether there is any mechanism to detect cyclones in coastal areas;
- (b) if so, the details thereof; and
- (c) the extent to which it has proved useful to the coastal population?

**Answer**

MINISTER OF STATE IN THE MINISTRY OF PLANNING, MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTER OF STATE IN THE MINISTRY OF EARTH SCIENCES (SHRI ASHWANI KUMAR)

(a) Yes Madam.

(b) A fail proof 24x7 operational cyclone detection and movement mechanism exists for the assessment of intensity, track and landfall over the coastal areas of the country. Details of such monitoring mechanism include:

- i) Genesis of the possible cyclonic circulation over the open seas is generated by the meso-scale short range (72hrs in advance) prediction models and global scale medium range(120hrs in advance) prediction models
- ii) Along with monitoring sea surface temperature and moisture convergence, satellite monitoring is pursued for detecting cyclogenesis and monitoring further intensity, movement and landfall of cyclones
- iii) Doppler Weather Radars network is being commissioned over the coastal areas of the country to capture damaging wind structure and zones of heavy precipitation associated with cyclone as and when cyclone moves in to the 500km radial coverage range.
- iv) Network of Automatic Weather Stations (AWS) and Automatic Rain Gauges (ARG) established over the coastal districts will further authenticate the ground level impact associated with the cyclone landfall.

By leveraging all available modeling and observing systems, IMD is able to reduce the track and landfall errors of cyclones by about 7% over the last 3-4 years due to the implementation of the phase-I of the IMDs modernization programme.

(c) A national level emergency response system, that is established by the Ministry of Home Affairs for effective coordination at state and district level administration for planning appropriate relief and relocation of affected communities, has drastically reduced the loss of life due to cyclones in the coastal areas.