GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
RAJYA SABHA
UNSTARRED QUESTION No. **479**
TO BE ANSWERED ON THURSDAY, NOVEMBER 27, 2014

NASA AIRCRAFT FOR PREDICTION OF CYCLONES

479. DR. CHANDAN MITRA:

Will the Minister of **EARTH SCIENCES** be pleased to state:

(a) whether Government proposes to buy a NASA aircraft for prediction of cyclones/calamities;
(c) if so, the details thereof along with salient features of the aircraft; and
(c) the steps taken by Government to study wind pattern at high altitudes for better prediction of cyclones / calamities?

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

(a) No Sir.

(b) Does not arise.

(c) Earth System Science Organization –India Meteorological Department (ESSO-IMD) has installed Doppler Weather Radars network over the coastal areas of the country to identify zones of strong wind and heavy precipitation associated with cyclone as and when cyclone moves in to the 500 km radial coverage range. ESSO-IMD has established network of Automatic Weather Stations (AWS) and Automatic Rain Gauges (ARG) over the coastal districts to further authenticate the ground level impact associated with the cyclone landfall. High Performance Computing (HPC) systems have been used to enhance the weather forecasting capacities by assimilating all available global satellite data for forecast generation.

A full 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 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 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.

As far as the track and landfall forecasts of the tropical cyclones are concerned, the performance evaluation of the updated forecast systems for the past 5-years, have demonstrated enhanced forecast skill by about 18%.

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