

Installation of Doppler Weather Radars

3087. SHRI BAISHNAB PARIDA: Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether it is proposed to install Doppler Weather Radars in the country for accurate predictions of monsoons, cyclones and other weather-related phenomena, if so, the details with status of the project;
- (b) what is the length-capacity of a Doppler *i.e.* weather surveillance in the area;
- (c) whether it provides round the clock updates of clouds mass and rain patches with updates every 10 minutes; and
- (d) how far will this prove a boon to the farming community in the country?

THE MINISTER OF STATE OF THE MINISTRY OF EARTH SCIENCES (DR. JITENDRA SINGH): (a) As on today, 2 Nos. of polarimetric Doppler Weather Radar (DWR) systems at Delhi- Lodi Road and Jaipur, respectively, are functional along with 16 Nos. non-polarimetric DWR systems, respectively at Chennai, Sriharikota, Machilipatnam, Visakhapatnam, Kolkata, Mumbai, Bhuj, Hyderabad, Nagpur, Patiala, Delhi Palam, Lucknow, Patna, Mohanbari, Agartala and Bhopal, in other parts of the country. Installation of 3 Nos. of non-polarimetric DWRs at Paradip, Goa and Karaikal is taken up now. Based on scientific assessment of the needs for further augmentation of observing system network, comprising Doppler Weather Radars, rain radars, Automatic Weather Stations (AWSs), Automatic Rain Gauges (ARGs), Snow Gauges etc. has been formulated for western Himalayan States of Jammu and Kashmir, Himachal Pradesh and Uttarakhand.

Data generated from all observing systems *viz.* surface and upper air observations, satellite observations, aircraft observations, DWRs etc. are fully used by various forecast models to generate most representative initial state 3-D structure of the atmosphere and high resolution (9 km. grid scale) forecasts over India to predict heavy rainfall occurrences.

(b) Range of Doppler Weather Radar for surveillance is approximately 500 Kms. However, for quantitative rain estimation it is restricted to around 100 Kms. and for velocity it is around 200 Kms.

(c) Yes Madam, only if operated in rapid scanning cycle.

(d) DWR network is primarily employed to improve the severe weather surveillance capability including tropical cyclones and for operating now-casting (very short range up to 6h in advance) service (operated for about 140 locations across India).

Discovery of Stanford University scientists on Tsunami

3088. SHRI PALVAI GOVARDHAN REDDY: Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether it is a fact that Stanford University scientists have discovered ways to find out the Tsunami before 20 minutes of its occurrence, if so, the details thereof; and