GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
LOK SABHA
UNSTARRED QUESTION NO. 2781
TO BE ANSWERED ON WEDNESDAY, 20TH DECEMBER, 2023

INSTALLATION OF C-BAND RADAR

2781. SHRI BIDYUT BARAN MAHATO:
MS. LOCKET CHATTERJEE:
SHRI SUDHAKAR TUKARAM SHRANGARE:
SHRI SHIVAKUMAR C. UDASI:
SHRI RANJEETSINGH NAIK NIMBALKAR:

Will the Minister of EARTH SCIENCES be pleased to state:

(a) the details of the implementation of Doppler Weather Radar (DWR) Network throughout the Country, State-wise particularly in Jharkhand, North Karnataka and Aurangabad in Maharashtra;
(b) the difference between C-Band and X-Band radars along with the coverage range of each of the C and X-bands;
(c) the reasons for which C-Band radar is proposed to be installed instead of X-Band Doppler Weather Radar (DWR);
(d) the present status of the implementation of the project along with the details of sites selected for the purpose, State-wise; and
(e) the fresh steps taken by the Government to install X-Band Doppler radars at suitable sites in various States in order to provide correct weather information to the farmers of the country?

ANSWER
THE MINISTER OF EARTH SCIENCES
(SHRI KIREN RIJIJU)

(a) Currently, there are 39 Doppler Weather Radars (DWRs) installed at various locations and are well distributed across the country. The details are provided in Annexure-I. Currently, there is no radar in the North Karnataka and Jharkhand. The procurement of DWRs to be installed at Mangalore and Bangalore in the State of Karnataka; Ranchi in Jharkhand and Aurangabad in Maharashtra has been initiated.

(b)-(c) The C-Band Radar has a greater range (250 km) than the X-Band Radar (100 km) due to its better propagation characteristics. The C-Band Radar antennas are larger than the X-Band Radar antennas, so they usually demand a higher investment.

(d)-(e) The locations of these DWRs have been distributed in the best possible way to monitor severe weather conditions across multiple States of the Indian region. Some of the regions are not covered by the present network and hence steps have been initiated for procurement of additional 12 C-Band DWRs to be installed at Aurangabad, Port Blair, Ranchi, Ahmedabad, Mangalore, Balasore, Malda, Agatti, Bangalore, Sambalpur, Raipur, Aaloand 16 X-Band DWRs to be installed in North East region at Guwahati, Jorhat, Tezpur, Silchar, Imphal, Aizawl, Dimapur, Dhubri, Seppa, Miao and urban regions of Pune, Varanasi, Kolkata, Kozhikode, Bhubaneswar and Purnea.

Annexure-1

DWR network over India with location names and name of states

S. No.	States	Name of Station	DWR type
1.	West Bengal	Kolkata	S-Band
2.	Andhra Pradesh	Machilipatnam	S-Band
3.		Visakhapatnam	S-Band
4.		Hyderabad	S-Band
5.		Sriharikota (ISRO),	S-Band
6.	Delhi	Palam	S-Band
7.		HQ New Delhi	C-Band (Polarimetric)
8.		Aya Nagar	X-Band
9.	Maharashtra	Nagpur	S-Band
10.		Mumbai	S-Band
11.		Mumbai Veravali	C-Band
12.		Solapur	C-Band
13.	Tripura	Agartala	S-Band
14.	Bihar	Patna	S-Band
15.	Uttar Pradesh	Lucknow	S-Band
16.	Punjab	Patiala	S-Band
17.	Assam	Mohanbari	S-Band
18.	Madhya Pradesh	Bhopal	S-Band
19.	Odisha	Paradip	S-Band
20.		Gopalpur	S-Band
21.	Tamil Nadu	Karaikal	S-Band
22.		Chennai NIOT	X-Band
23.		Chennai	S-Band
24.	Goa	Goa	S-Band
25.	Gujarat	Bhuj	S-Band
26.	Rajasthan	Jaipur	C-Band (Polarimetric)
27.	Jammu & Kashmir	Srinagar	X-Band
28.		Jammu	X-Band
29.		Banihal Top	X-Band
30.	Kerala	Kochi	S-Band
31.		VSSC (ISRO) Thiruvananthpuram	C-Band
32.	Uttarkhand	Mukteshwar	X-Band
33.		Surkanda Devi	X-Band
34.		Lansdowne	X- Band
35.	Ladakh	Leh	Transportable X-Band
36.	Himachal Pradesh	Kufri	X-Band
37.		Jot	X-Band
38.		Murari Devi	X-Band
39.	Meghalaya	Cherapunji (ISRO)	S-Band

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