

**GOVERNMENT OF INDIA  
MINISTRY OF EARTH SCIENCES  
RAJYA SABHA  
UNSTARRED QUESTION No. 2569  
TO BE ANSWERED ON THURSDAY, DECEMBER 08, 2016**

**INSTALLTION OF DRSs**

**2569. SHRI PARIMAL NATHWANI :**

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

- (a) the details of the Doppler Radar System (DRSs) installed in various parts of the country at present as well as the timelines drawn for commissioning latest DRSs;**
- (b) whether various DRSs including the one in Delhi is not functioning for a long time;**
- (c) if so, the details thereof and the reasons therefor; and**
- (d) the funds incurred on their installation and recent repair as well as arrangements made for annual maintenance contracts for their smooth functioning?**

**ANSWER**

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

- (a) The details of Doppler Weather Radar (DWR) systems installed in Country (State wise) is enclosed at Annexure-I. Augmentation of the observing system networks including DWR, in IMD is a continuing process that shall be taken up as per the emerging needs from time to time.**
- (b) Currently only one Doppler Weather Radar at Delhi (Palam) is under service for want of spare parts.**
- (c) Supply Order for import of required spares has already been placed on 18.11.2016.**
- (d) Funds incurred towards installation and repairs & maintenance of all DRSs is Rs 252.0 crores since 2002.  
Comprehensive Annual Maintenance Contract (CAMC) for 02 C-band Vaisala (Finland) and 09 S-band Metstar (China) DWRs has been given to the service provider which includes repair & maintenance, replacement and service of radar equipments by the firm and make the radars operational ( Annexure-II). Remaining 04 DWRs from Gemtronik, Germany, 02 from Bharat Electronics Ltd, Bangalore, 01 X-band from ECIL, Hyderabad and 03 S band of Metstar are not covered under CAMC and these are being maintained in house by IMD. Sri Harikota DWR is under upgradation at present. A detail of breakup expenditure incurred for installation and recent repairs is mentioned in Annexure-III.**

**Annexure-I****List of Doppler Weather Radars in India Meteorological Department's Radar Network**

<b>S.No.</b>	<b>Name of Station</b>	<b>Doppler Weather Radar</b>	<b>Commissioned on</b>	<b>Radar status</b>
1	Chennai (Tamil Nadu)	S-Band	22.02.2002	Installed & functional
2	Kolkata (West Bengal)	S-Band	29.01.2003	Installed & functional
3	Machilipatnam (Andhra Pradesh)	S-Band	08.12.2004	Installed & functional
4	Visakhapatnam (Andhra Pradesh)	S-Band	27.07.2006	Installed & functional
5	Delhi (Palam) (Delhi)	S-Band	22.04.2010	Installed & functional
6	Hyderabad (Telangana)	S-Band	16.07.2010	Installed & functional
7	Nagpur (Maharashtra)	S-Band	28.02.2011	Installed & functional
8	Agartala (Tripura)	S-Band	13.03.2011	Installed & functional
9	Patna (Bihar)	S-Band	27.05.2011	Installed & functional
10	Lucknow (Uttar Pradesh)	S-Band	16.08.2011	Installed & functional
11	Patiala (Punjab)	S-Band	13.10.2011	Installed & functional
12	Mohanbari (Assam)	S-Band	02.06.2012	Installed & functional
13	Bhopal (Madhya Pradesh)	S-Band	06.11.2013	Installed & functional
14	Paradip (Odisha)	S-Band	19.11.2015	Installed & functional
15	Karaikal (Puducherry)	S-Band	29-10-2015	Installed & functional
16	Goa (Goa)	S-Band	27.11.2016	Installed & functional
17	Mumbai (Maharashtra)	S-Band	25.08.2015	Installed & functional
18	Bhuj (Gujarat)	S-Band	17.08.2016	Installed & functional
19	(Mausam Bhawan (Delhi)	C-Band/ Polarimetric	19.12.2011	Installed & functional
20	Jaipur (Rajasthan)	C-Band/ Polarimetric	28.01.2012	Installed & functional
21	Srinagar (J&K)	X-Band Polarimetric	01-05-2015	Installed & functional
22	Sri Harikota (AP)	S-Band	Under Upgradation	

**Annexure-II****Expenditure on Comprehensive Annual Maintenance Contract (CAMC) for 02 C-band Vaisala (Finland) and 09 S-band Metstar (China) DWRs**

<b>S.No.</b>	<b>Type of Radar</b>	<b>Make</b>	<b>Numbers</b>	<b>Amount incurred</b>
<b>1</b>	<b>CAMC of C-Band DWR</b>	<b>Vaisala</b>	<b>02 Nos.</b>	<b>3.0 Crores</b>
<b>2</b>	<b>CAMC of S-Band DWR</b>	<b>Metstar</b>	<b>09 Nos.</b>	<b>5.0 Crores</b>

**Annexure-III****Funds incurred for installation and recent repairs of DWR**

<b>S.No.</b>	<b>Type of Radar</b>	<b>Make</b>	<b>Numbers</b>	<b>Amount incurred</b>
<b>1</b>	<b>S Band Radars</b>	<b>Metstar</b>	<b>12 Nos.</b>	<b>102.0 Crores</b>
<b>2</b>	<b>S Band Radars</b>	<b>Bel</b>	<b>02 Nos.</b>	<b>025.0 Crores</b>
<b>3</b>	<b>C Band Radars</b>	<b>Vaisala</b>	<b>02 Nos.</b>	<b>018.0 Crores</b>
<b>4</b>	<b>S Band Radars</b>	<b>Gematronik</b>	<b>04 Nos.</b>	<b>77.0 Crores</b>
<b>5</b>	<b>X Band Radar</b>	<b>Toshiba</b>	<b>01 No.</b>	<b>3.0 Crores</b>
<b>6</b>	<b>S Band Radar</b>	<b>Sri Harikota</b>	<b>01 No.</b>	<b>9.0 Crores</b>
<b>7</b>	<b>72 Spare Parts</b>	<b>Gematronik</b>		<b>7.5 Crores</b>
<b>8</b>	<b>62 Spare Parts</b>	<b>Metstar</b>		<b>2.5 Crores</b>
		<b>Total</b>	<b>-----</b>	<b>244.0 Crores</b>