

**GOVERNMENT OF INDIA  
MINISTRY OF CIVIL AVIATION**

**Rajya Sabha**

**UNSTARRED QUESTION NO. : 2883**

**TO BE ANSWERED ON THE 27th March 2023**

**AIR NAVIGATION INFRASTRUCTURE**

**2883. SHRI AYODHYA RAMI REDDY ALLA**

**Will the Minister of CIVIL AVIATION be pleased to state:-**

**(a) the details of air navigation infrastructure developed in the country during the year 2021-22 and the details of advanced air navigation technology adopted and used in the country;**

**(b) whether it is a fact that Government approval processes frequently cause delays in the development of air navigation infrastructure, if so, the details thereof; and**

**(c) whether Government has taken any steps to improve the air navigation infrastructure and develop indigenous technologies with respect to the same, if so, the details thereof and if not, the reasons therefor?**

**ANSWER**

**Minister of State in the Ministry of CIVIL AVIATION (GEN.  
(DR) V. K. SINGH (RETD))**

**(a) to (c): Development of air navigation infrastructure at airports is a continuous process and is undertaken by the Airports Authority of India (AAI) from time to time depending upon commercial viability, traffic demand, availability of land etc.**

**AAI is the sole Air Navigation Service Provider (ANSP) in the country. Being the ANSP, AAI has procured advanced air navigation technology as detailed below to manage the Air Traffic in India:**

- 1. Installed state-of-the-art Air Traffic Service Automation System at 44 Airports across India for safe and efficient air traffic management.**
- 2. Installed seamless coverage of Surveillance (System Monopulse Secondary radar), Primary Surveillance Radar, Automatic Dependent Surveillance-Broadcast (ADS-B) (ground & space based) Equipment, Airport Surface Movement Ground Control Radar (ASMGCS), Navigation Equipment and Communication equipment for Air Traffic Control.**
- 3. Deployed Airport Collaborative Decision Making (ACDM) system at seven airports. The ACDM system enables optimal use of the runway and facilitates an efficient departure sequence of air traffic minimising delay at departure gate.**
- 4. Deployed Air Traffic Flow Management (ATFM) System to manage the nationwide flow of air traffic by monitoring air traffic demand at major airports and balancing with the capacity of those airports & airspace across the country. The ATFM along with ACDM systems help in assessing and reducing delays of air traffic across the country, thereby enhancing safety, saving fuel and reduction in CO2 emission.**
- 5. For indigenous development of Air Traffic System (ATS) Automation System under 'Make in India' initiative supporting 'Atmanirbhar Bharat' mission of Government of India, AAI and Bharat Electronics Ltd (BEL) have entered into an Memorandum of Understanding in March, 2022. A prototype ATM Automation system developed under MoU has been installed at Bhubaneswar Airport on 29.12.2022 on trial basis.**
- 6. IP Based VHF Communication is being used for seamless VHF coverage for aircraft.**
- 7. ATS Inter-facility Data Communication (AIDC).**
- 8. Air Space Management technique such as Upper Airspace Harmonisation (UAH), Flexible Use of Airspace (FUA) of military airspace and restructuring of air-routes, reduction of separation minima etc. are being applied to improve efficiency. As a result, 128**

**Conditional Routes have been established in coordination with Defence Authorities.**

**9. The GAGAN (GPS Aided Geo Augmented Navigation) system is a Space Based Augmentation System (SBAS) developed jointly by AAI and ISRO.**

**The details of Air navigation infrastructure installed in the country during the years 2021 and 2022 are given in Annexure.**

**The proposals for procurement of Air Navigation Infrastructure equipment, are processed in a time bound manner in accordance with the extant guidelines, which stipulate that, in order to promote self reliance, Make in India and to promote Micro, Small and Medium Enterprises, no Global Tender Enquiry (GTE) shall be invited for tenders upto Rs. 200 crore. The exceptional cases, where need is felt for GTE due to special reasons, are processed for seeking approval of the Competent Authority as per the prescribed procedure.**

**\*\*\*\*\***

**Annexure referred to in parts (a) to (c) of the reply to Rajya Sabha Unstarred Question No.2883 for 27.03.2023.**

**AIR NAVIGATION INFRASTRUCTURE IN THE COUNTRY**

**A. Installation of Instrument Landing System (ILS):**

S. No.	Year - 2021
1	Bhubaneshwar (Replacement)
2	Jharsuguda (New)
3	Trichy (Replacement)
4	Bhopal (Replacement)

S. No.	Year - 2022
1	Udaipur (Replacement)
2	Varanasi (Replacement)
3	Ranchi (Replacement)
4	Begumpet (Replacement)
5	Belgavi (New)
6	Hollongi (New)

**B. Installation of Doppler Very High Frequency Omni Range (DVOR):**

S. No.	Year - 2021
1	Bhopal (Replacement)
2	Goa (Replacement)
3	Bhavnagar (Replacement)
4	Baroda (Replacement)
5	Kancheepuram (Replacement)
6	Kadappa (New)
7	Tuticorin (New)
8	Coimbatore (Replacement)
9	Shimla (Replacement)

S. No.	Year - 2022
1	Jalgaon (Replacement)
2	Bellary (Replacement)
3	Kalaburgi (Replacement)
4	Madurai (Replacement)
5	Patna (Replacement)
6	Hollongi (New)
7	Kullu (New)

\*\*\*\*\*