

**GOVERNMENT OF INDIA
CIVIL AVIATION
LOK SABHA**

UNSTARRED QUESTION NO:3509

ANSWERED ON:04.08.2014

NAVIGATION SYSTEM FOR AIRPORTS

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Will the Minister of CIVIL AVIATION be pleased to state:

- (a) whether the Airports Authority of India has developed a modern navigation system named as GPS Aided GEO Augmented Navigation (GAGAN) for improving Civil Air Navigation over Indian Air Space;
- (b) if so, the details thereof including its features and the names of the airports in the country where this system has been installed along with the expenditure incurred thereon;
- (c) whether there is any proposal for utilising the GAGAN system for non-aviation purposes and if so, the details and the present status thereof;
- (d) the names of the airports where Monopulse Secondary Surveillance Radar system has been set up/proposed to be set up in the country along with the expenditure incurred thereon; and
- (e) the operationalisation status of Shri Shaheed Bhagat Singh International Airport in Mohali?

Answer

Minister of State in the Ministry of CIVIL AVIATION (Shri G.M. Siddeshwara)

(a): Yes, Madam.

(b): GPS aided Geo Augmented Navigation System (GAGAN) is a Satellite Based Augmentation System, which takes the navigational aid from the core GPS (Global Positioning System) constellation and augments it through the GEO stationary satellite for providing better accuracy, integrity and continuity of service for its application in civil aviation. GAGAN system comprises of Ground segments as per the list provided in Annexure-A.

Space segment, comprising of two satellites (GSAT 8 and GSAT 10) has been provided by ISRO. GAGAN project has been implemented at a cost of 774 crores.

(c): GAGAN is a precise positioning system, therefore the system can be utilized in various non-aviation fields like Vehicle tracking, Intelligent highway system, Railways, Disaster Management, Search and Rescue, Surveying, Land Management through terrestrial mapping, Marine, Precision farming and several other research applications. In order to promote the usage of GAGAN in non-aviation sector, Airports Authority of India and Indian Space Research Organisation have organised two user meets.

Govt has constituted an Inter-ministerial group to promote the various non-aviation usages of GAGAN.

(d): The Monopulse Secondary Surveillance Radar (MSSR) which are recently installed at airports namely Chennai, Bhopal, Porbander, Udaipur, Vizag, Jharsuguda, Kaithar, Kolkata. The cost incurred for the above MSSR was INR 56.00 crore (approx.). The other MSSR available at Baharampur (Orissa), Varanasi, Nagpur, Mangalore airports, which were installed 12-15 years before.

(e): The construction of New Integrated Terminal Building at Mohali airport has been commenced with completion in June 2015.