



*International Civil Aviation Organization*

**THE NINTH MEETING OF THE SOUTHEAST ASIA AND BAY OF BENGAL  
SUB-REGIONAL ADS-B IMPLEMENTATION WORKING GROUP  
(SEA/BOB ADS-B WG/9)**

Beijing, China, 30 October - 1 November 2013

---

**Agenda Item 3: Updating implementation and co-ordination activities**

**ADS-B IMPLEMENTATION IN INDIA – AN UPDATE**

(Presented by India)

**SUMMARY**

This paper provides an insight into the status of ADS-B implementation in India. The Indian ADS-B plan aims at providing redundancy where Radar coverage exists and also fill the surveillance gaps. This paper also presents the possible exchange of ADS-B data between India and its neighboring States.

**1. INTRODUCTION**

1.1 In line with ICAO Global Plan Initiative and Aviation System Block Upgrades (ASBU), India has taken the initiative to provide seamless surveillance coverage by augmenting the existing radar coverage through the installation of fourteen ADS-B ground stations at strategic locations.

1.2 ADS-B Implementation was consistent with ICAO APAC Regional implementation plan in terms of augmentation of surveillance coverage and adherence to time-lines.

**2. DISCUSSION**

2.1 India is committed to seamless ATM and has committed its willingness for resource sharing at ICAO meetings. In the SITF/11 and BOBASIO/2 meetings as well as APANPIRG/22 and APANPIRG /23 India expressed its willingness to share ADS-B data with Myanmar, Maldives, Sri Lanka, Malaysia and Indonesia.

2.2 The site acceptance test (SAT) has been successfully carried out at all the fourteen stations, including Agartala, Amritsar, Jaipur, Lucknow, Varanasi, Ahmedabad, Nagpur, Guwahati, Calicut, Cochin, Coimbatore, Mangalore, Port Blair and Trivandrum.

2.3 In addition to the fourteen stations, India plans to install 7 ADS-B ground stations, by mid 2013, at Patna, Bhubaneswar, Jaisalmer, Srinagar, Trichy, Vijayawada and Dibrugarh1 (ADS-B Coverage diagram attached as **Appendix 1**). This plan is consistent with the Upper Airspace Harmonization plan of Kolkata and Delhi FIRs, and to supplement surveillance coverage in the Kolkata and Chennai FIRs.

2.4 The ATS Automations systems at major ATC Centers, viz., the 12 ACCs are capable of processing ADS-B data and providing the information on Situation Data Displays either as standalone ADS-B tracks or reinforced position symbols (fused with radar tracks).

2.5 The Indian ANSP is monitoring the airframes (ADS-B tracks) on stand-alone monitors as well as Situation Data Displays and studying the integrity of the ADS-B information and evaluating the use of ADS-B in both Non-Radar and Radar environment for Air Traffic Control purposes.

2.6 The process to obtain regulatory approval has commenced and Stake holder meetings have been conducted in Dec, 2012 and Jan, 2013 to detail the business case and to spread the awareness about the mutual benefits that will accrue to both the ANSP and the Airline Operators by their participation.

2.7 The Indian ANSP has already commenced the process of acquiring approval from the Government and Regulatory agencies for ADS-B data sharing with neighbours.

2.8 In the recently concluded ATS Coordination meeting of the Bay of Bengal Arabian Sea Indian Ocean Region States, India and Myanmar discussed the status of implementation of ADS-B in the respective States. India had presented a detailed paper in the meeting and updated the house that as many as 14 ADS-B stations in phase- I and 5 stations in phase – II have been installed and awaiting regulatory approval for the operational use of the ADS-B data. Myanmar updated the meeting that it had procured 2 ADS-B receivers and installed one at Sittwe and planned the installation of the other receiver at Coco Island after the monsoons. The agreement for data sharing between Myanmar and India may be executed as planned before December, subject to State approval(s), or latest by the first quarter of 2014, which will also coincide with the completion of installation and commissioning of the Myanmar ADS-B stations.

2.9 Airports Authority of India, the Indian ANSP conducted a one day ADS-B workshop with the support of IATA through their member airlines on 25<sup>th</sup> October, 2013 for the benefit of aviation professional including the Regulator, Flight crew, Aircraft Maintenance Engineers, Flight Dispatchers, CNS Engineers and Air Traffic Controllers which was also attended by delegates from Bangladesh, as a part of the stake holder engagement leading to awareness ahead of ADS-B implementation in India.

### **3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) discuss any relevant matters as appropriate

-----

Appendix – 1

