INTERNATIONAL CIVIL AVIATION ORGANIZATION

TWENTY-SECOND MEETING OF THE ASIA/PACIFIC AIR NAVIGATION PLANNING AND IMPLEMENTATION REGIONAL GROUP (APANPIRG/22)

Bangkok, Thailand, 5-9 September 2011

Agenda Item : **Performance Framework for Regional Air Navigation planning and Implementation**

3.4 **CNS/MET**

ADS-B IMPLEMENTATION PLAN

(Presented by India)

SUMMARY

This paper presents the ADS-B implementation plan of India to provide surveillance in remote areas, to cover existing Radar gaps and to provide complete surveillance over the continental airspace and around Port Blair for enhancing the safety and efficiency of aircraft operations.

This paper relates to –
Strategic Objectives:
- *A:* ***Safety*** *– Enhance global civil aviation safety*
- *C:* ***Environmental Protection and Sustainable Development of Air Transport*** *– Foster harmonized and economically viable development of international civil aviation that does not unduly harm the environment*

Global Plan Initiatives:
GPI-6 Air traffic flow management
GPI-7 Dynamic and flexible ATS route management
GPI-8 Collaborative airspace design and management
GPI-9 Situational awareness

1. INTRODUCTION

1.1 In accordance with the APANPIRG Conclusions (19/37) India has drawn an ambitious plan to enhance the surveillance through the use of ADS-B on major air routes and in terminal areas. India has planned to implement ADS-B at 14 locations, i.e., Jaipur, Lucknow, Calicut, Agartala Trivandrum, Ahmadabad, Guwahati, Port Blair, Nagpur, Mangalore, Coimbatore, Cochin, Varanasi and Amritsar for the purpose of supplementing the coverage of the existing enroute MSSRs initially in the low density traffic areas and progressively to other areas. In the abovementioned airports, ATS Automation Systems are under implementation and ADS-B sensor inputs into the Automation System would permit an efficient air traffic management system. At 10 out of the 14 Airports, ADS-B will be employed for the provision of ATC in Terminal Areas (where

procedural ATC is in vogue presently) thereby reducing delay for aircraft considerably. The ADS-B initiative will enable surveillance of aircraft even at Low altitudes and high terrain areas as well. In addition to the supplementary and redundant surveillance coverage in continental air space, implementation of ADS-B is planned at Port Blair, catering for increasing enroute traffic and consequent demand for optimum flight levels in the Bay of Bengal area. Analysis of upper air space around Port Blair for a distance of approximately 200 NM indicates that there are close to 200 aircraft over flying around Port Blair in addition to arrivals and departures at Port Blair. Implementing ADS-B at Port Blair will enable provision of efficient air traffic services on L759, P628, N877, P761 and L510 and aid the controllers in better conflict detection and separation over crossing points. The existing separation of 15 minutes over crossing points can be reduced to ATS surveillance separation minima allowing aircraft on crossing tracks to maintain optimum levels.

1.2 Further, India has successfully integrated all Radars in Chennai FIR in the first phase thus enabling seamless upper airspace with lower limit as FL 260. Introduction of ADS-B would contribute significantly to seamless surveillance.

1.3 India has planned to issue mandate of ADS-B in the entire Indian airspace and planning to operationalise ADS-B stations by Dec 2013 as per ICAO APAC regional plan.

1.4 India is also willing to actively support and participate in the "South-East Asia and Bay of Bengal Sub-regional ADS-B Implementation Working Group" proposed by ADSB TF 10/8.

2. BENEFITS

a) The integrated overlapping surveillance through Radar/ADS-B/ Multilateration will enable reduced separation between aircraft, implementation of Dynamic and flexible ATS route management and smooth implementation of regional integrated Air Traffic Flow Management and uniform application of Radar Separation across the FIRs.

b) Augmentation of Surveillance with ADS-B over entire continental airspace and automation of ATC system at 38 non Metro airports will improve the situational awareness at small airports, thereby enhancing safety, efficiency and regularity of flight operations.

c) The provision of ADS-B in Port Blair will permit efficient resolution of En route traffic particularly in the critical areas East of Port Blair.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) To note India's ADS-B implementation initiatives and India's willingness to share the data with its neighboring States in its pursuit for global harmonization; and

b) Impress upon operators to equip their aircraft suitably in a time-bound manner to facilitate implementation of ADS-B in APAC Region.

— END —