



International Civil Aviation Organization

**Third Meeting of the ICAO Asia/Pacific Seamless ATM Planning Group
(APSAPG/3)**

Chennai, India, 21-25 January 2013

Agenda Item 4: Asia/Pacific Seamless ATM Status and Strategies

SEAMLESS ATM - A SUB-REGIONAL INITIATIVE

(Presented by India)

SUMMARY

This paper presents India's proposal on the Roadmap on application of seamless ATM principles on the block by block build up.

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-3 Harmonization of level systems
- 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
- GPI-17 Data link applications

1. INTRODUCTION

1.1 The goal of a seamless ATM implies creating an ATM environment for uniform application of Standards/separation and procedures in all phases of flight.

1.2 The Asia Pacific Region is a complex collection of airspaces with multiple players responsible for airspace, aerodromes, and regulatory services. The proposed task of ensuring a harmonized and consistent ATM to flights across the FIRs/State boundaries is therefore an onerous task. In order to realize the goal, it is proposed to subdivide the application of seamless ATM principles based on the phases of flight.

1.3 The objective of the exercise is to simplify the understanding of tasks involved and at the same time provide the APANPIRG with positive recommendations which are easily achievable in a definitive time frame.

2. DISCUSSION

2.1 The definition of seamless ATM refers to nil or minimum transitional issues both within and between FIRs. Plainly put, the adjacent TMAs and FIRs need to deliver an ATM environment for uniform application of Standards/separation and procedures in all phases of flight along with supporting CNS facilities in order to achieve “Seamless ATM”.

2.2 Since major traffic flows pass through number of states and ICAO Regions there is need to work across trans-regional boundaries for achieving Seamless ATM. The development of harmonized initiatives and operational procedures across states and ICAO regions is required for successful and cost effective implementation of a seamless ATM.

2.3 An informal ATS coordinating group namely, BOBASIO (Bay of Bengal Arabian Sea and Indian Ocean) has been formed consisting of States around Bay of Bengal, Arabian Sea and Indian Ocean in 2011.

2.4 The formation of BOBASIO sub-regional group was an initiative by India in bringing together States from APAC, MID and ESAF ICAO regions as a sub-group with the objective of arriving at decisions on ANS matters of common interest, benefit from expertise and capability of one another and implement ICAO air navigation plans with effective coordination with each other for seamless flow of traffic in the regions.

2.5 Considering the wide reach available to the members of BOBASIO group , India has taken initiatives to proactive application of the Seamless ATM principles like Reduced Horizontal Separation, AIDC, UPR among the States of the region.

2.6 India is also a member of Arabian Sea Indian Ocean ATS Coordinating Group (ASIOACG) which has been instrumental in demonstration flights of INSPIRE (Indian Ocean Strategic Partnership to Reduce Emissions) program . The successful UPR trials of long haul flights from Mid-East to Australia has led to the proposal of a UPR zone spread across Arabian Sea and Indian Ocean.

2.7 By developing a seamless coordinated system of air navigation services in the BOBASIO region, it will be possible to cope with the growth in traffic demand by improving upon the present levels of safety, regularity, efficiency and capacity of airspace and airports. This will in turn result in reduction in aircraft emissions, increasing the availability of user-preferred flight profiles; and minimize differing equipment carriage requirements.

Proposals by India:

2.8 In the Bay of Bengal & Arabian Sea and the Continental airspace, along the MTF routes the following separation may be introduced after due safety analysis:

- a) Mandating FANS 1/A equipage for aircraft operating on the declared ATS routes. The MTF Routes identified for this exercise are N571, M300 P574 & P570.
- b) Implementation of 10 NM ADS-B surveillance based separation across Continental Airspace and portion of Oceanic Airspace over Port Blair.

2.9 In addition to India, other member states who have suitable CNS/ATM capabilities may join to identify contiguous airspaces in which a working relationship to further the cause Seamless ATM that can be initiated.

2.10 Once the interoperability issues among different ATM automation systems are resolved, India intends to reduce the separation of 50 NM to 10 NM. In order to share the economic and environmental benefits with the entire member ANSPs India proposes that ICAO identify the major players having MTF Routes, vast Airspace and who can take other ANSPs along, to achieve 100 % Seamless ATM environment in the APAC region.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) urge States to participate in such collaborative initiatives so that an array of individual blocks between contiguous airspaces can be assembled to achieve Seamless ATM in the Bay of Bengal, Arabian Sea and Indian Ocean (BOBASIO) Sub-Region;
- c) consider ICAO to urge states to adopt such collaborative programs as a working model for demonstrating practical implementation of Seamless ATM across many States;
- d) note the contributions from such informal groups such as BOBASIO and INSPIRE; and
- e) discuss any relevant matters as appropriate.

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