International Civil Aviation Organization

The Fourth Meeting of the South Asia/Indian Ocean ATM Coordination Group (SAIOACG/4) and the Twenty first Meeting of the South East Asian ATM Coordination Group (SEACG/21)

Hong Kong, China, 24 – 28 February 2014

Agenda Item 7: ANSP Coordination and Civil/Military Cooperation

IMPLEMENTATION OF FLEXIBLE USE AIRSPACE IN INDIA

(Presented by Airports Authority of India)

SUMMARY

This paper presents the changes to the Indian Airspace and Air route structures in the period between July, 2012 and October, 2013. It further details the plans for near term, including the plan to introduce RNAV 2 ATS Routes between major airports including Delhi-Chennai, Delhi-Bengaluru, Mumbai-Kolkata, Delhi-Kolkata. It includes a brief on the Upper Airspace Harmonization Plan for the Delhi, Kolkata and Mumbai FIRs. The paper lists a few airspace structures which have been created for Special Use of the Military in line with the principles of Flexible Use of Airspace, however, limits it to this feature since the FUA implementation in India is presented exclusively through another working paper. This paper presents the proposal by India to implement 30 NM Longitudinal Separation between aircraft with FANS/1A data link capability on an opportunity basis in the Bay of Bengal Arabian Sea Indian Ocean Airspace in a Phased manner.

1. INTRODUCTION

1.1 Airspace is a national resource, which is limited and in that sense scarce. The single large contributor to the increase in airspace capacity in the level band of optimum flight levels of the modern jet aircraft has been the implementation of Reduced Vertical Separation Minima and the consequent introduction of six additional levels between FL 290 and FL 410. Whilst efforts to reduce Longitudinal Separation is paying sizeable dividends, India, in line with the Global Plan Initiative – 1, firmly believes that the implementation of FUA will significantly contribute to an increase in airspace capacity.

1.2 The Civil-Military Cooperation in India has always been effective through all three levels of Air Space Management (Strategic, Pre-tactical and tactical) and has provided efficient solutions to both civil and military airspace users. Nevertheless, to make optimum use of the finite airspace resource, there is a need for greater synergy between civil and military users and there is a realistic requirement of establishing a formal and systematic methodology for the Flexible Use of Airspace so that the users derive tangible benefits of the ability to plan and execute flights when special user airspace(s) are available conditionally. The FUA implementation will undoubtedly add effectiveness to the system.

2. DISCUSSION

2.1 On the 8th March, 2013, the Cabinet Committee on Security approved the proposal for FUA implementation in India and the constitution of a HLAPB.

2.2 A roadmap for the implementation of FUA has been submitted and accepted by the Ministry of Civil Aviation.

2.3 The National High Level Policy Body has been constituted and is well represented by all civil and military organizations which are either service providers or users of the airspace. Preliminary meetings between the ASM Directorate and the Military airspace users/service providers have been held to build mutual trust and consent to evolve an effective model of FUA in India.

2.4 The process to establish a dedicated FUA Secretariat has commenced and the FUA Secretariat will assist the NHLAPB and additionally be responsible to effect coordination between various stakeholders/agencies pertaining to all activities under FUA implementation and further be vested with documentation necessary for FUA implementation.

2.5 The National Airspace Management Cell will be established at New Delhi and the Regional Airspace Management Cells will be established at Chennai, Delhi, Kolkata, and Mumbai, with the progress of FUA implementation in a phased manner. The introduction of some of the domestic ATS Routes was necessitated by a demand to provide shorter connectivity to airports in the Central parts of India which are demonstrating increased passenger footfalls. Connectors have been provided in some cases to cater to accessibility to RNP and RNAV Routes so that the benefits of operating on these routes may be exploited by users. The introduction of L 518 has provided connectivity to Hyderabad from the APAC South East Asian States; L875 connectivity to Mangalore, Bengaluru and Chennai and L 756 connectivity to Male from Seychelles FIR (ICAO EASAF States). Excellent cooperation and timely coordination between India and Male made it possible to simultaneously promulgate the segments of the ATS Route L756 falling in the two FIRs. (Refer Annexure 1)

2.6 There is a near term plan to implement Central Air Traffic Flow Management System in India , in order improve the efficiency of the national AMC, a Centralized Airspace Data Function (CADF) within the Central Air Traffic Flow Management Unit (CATFM) will be established and integrated with the National AMC.

2.7 The time frame for implementation of FUA, as stated in the Roadmap, has three definitive phases, with the major objectives listed against timelines. Dec, 2013: Implementation of FUA in Upper Airspace (FL 260 and above) Jun, 2014: Implementation of FUA in Lower Airspace (FL 150 to FL 255) Dec, 2014: Implementation of FUA in terminal Airspace (below FL 150)

2.8 The Indian ANSP has already commenced the creation of flexible structures through the establishment of Temporary Reserved Areas (TRAs) and Temporary Segregated Areas (TSAs) based on airspace change proposals from military airspace users and has promulgated the information through AIP Supplements. The use of these TSAs or TRAs are subject to the provisions laid down in the Special Operating Procedures (SOPs) governing the operations.

2.9 The lowering of the vertical limit of a Naval firing range viz.,VOD 178, Pigeon Island which is a SUA with an area bounded by 140104.7N 0742757.1E; 135104.7N 0742757.1E; 135104.7N 0740757.2E; 141104.7N 0740757.2E; 140904.7N 0742257.1E; 140104.7N 0742757.1E, from 40000Ft to 28000 feet, to facilitate the introduction of a RNAV 5 city pair between Mumbai and Trivandrum (Q12 and Q13) with connectivity to five other international airports along the west coast of India, including Goa, Mangalore, Calicut, Cochin and Coimbatore is a successful effort under India’s FUA implementation

2.10 ASBU Module N° B0-10: Improved Operations through Enhanced En-Route Trajectories has three elements, including Airspace Planning, FUA and Flexible Routing. India has already established the UPR Geo Zones and has a robust PBN implementation plan under which RNP 10 routes with reduced Longitudinal Separation and RNAV 5 city pairs have been successfully introduced. With the implementation of FUA India will be addressing all the three elements under B0-10

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) Take note that India has commenced implementation of the Flexible Use of Airspace in a phased manner, leading to total B0-10 preparedness.

b) Share their experiences in the implementation of FUA in their airspace.

c) Suggest the possibilities of a joint action to establish FUA in Cross Border Areas (CBAs) so that an effective mechanism of designing ATS Routes in the region, beyond the national airspaces can be undertaken to provide for sustainable development of aviation and

d) discuss any relevant matters as appropriate.

…….