SUMMARY

Flexible use of airspace is an airspace management concept, according to which airspace should not be designated as either purely civil or purely military airspace, but should rather be considered as one continuum in which all users’ requirements have to be accommodated to the maximum extent possible. Effective and harmonized application of FUA needs clear and consistent rules for civil-military coordination which should take into account all users’ requirements and the nature of their various activities. A great degree of civil military co-operation already exists in India, and the requirement of users, both civil and military, are being met to the maximum possible extent. Nevertheless, to make optimum use of the finite airspace resource, there is a need for greater synergy between civil and military users. While keeping in mind the special requirements of Defence operations, the positive economic impact of flexible use of airspace in terms of fuel savings and reduced emissions cannot be ignored. India has commenced the process of FUA implementation with the constitution of the national High Level Airspace Policy Body. This paper presents the status of FUA implementation in India. This paper relates to –

Relevant Strategic Objectives:

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-1 Flexible use of airspace
GPI-7 Dynamic and flexible ATS route management
GPI-8 Collaborative airspace design and management

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.

2.4 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.

2.5 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.

2.6 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.
2.7 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.

2.8 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)

2.9 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.

2.10 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 0740757.1E; 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.

2.11 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:
   i) Take note that India has commenced implementation of the Flexible Use of Airspace in a phased manner, leading to total B0-10 preparedness.
   ii) Share their experiences in the implementation of FUA in their airspace.
   iii) 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.