



International Civil Aviation Organization

**The First Meeting of the APANPIRG ATM Sub-Group
(ATM /SG/1)**

Bangkok, Thailand, 20 – 24 May 2013

Agenda Item 5: ATM Coordination (Meetings, Route Development, Contingency Planning)

Arabian Sea Indian Ocean ATS Coordination Group (ASIOACG) and Indian Ocean Strategic Partnership to Reduce Emission – An update

(Presented by Airports Authority of India)

SUMMARY

This paper presents details of activities that ASIOACG-INSPIRE have undertaken to conduct demonstration and operational trial flights on User Preferred Routes (UPR) and establishment of a user Preferred Route Geographic Zone in the Arabian Sea and the Indian Ocean. A summary of discussions held on various issues in the combined meeting of ASIOACG/7- INSPIRE/3 held in December 2012 in Mumbai is also presented to the meeting.

This paper relates to –

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
- GPI-12 Functional integration of ground systems with airborne systems
- GPI-17 Data link applications

1. INTRODUCTION

1.1 ASIOACG is the Arabian Sea - Indian Ocean ATS Coordination Group of ANSPs. The group was established:

a) to facilitate the optimum provision of air traffic management (ATM) in the Arabian Sea and Northern Indian Ocean Region, through the development and near term implementation of improvements to ATM operational procedures; and

b) to implement technology developments available to ATM providers within the Arabian Sea and Northern Indian Ocean region.

1.2 ASIOACG provides an informal forum for ANSPs to consider various air traffic management strategies and to develop potential solutions to ATM issues in the Arabian Sea and Northern Indian Ocean Flight Information Regions. Airspace users, and industry stakeholders also participate in the meetings of ASIOACG.

1.3 INSPIRE - the Indian Ocean Strategic Partnership to Reduce Emission is a collaborative network of partners and peer organizations across the Indian Ocean and Arabian Sea Region dedicated to improving the efficiency and sustainability of aviation. The INSPIRE was founded by three ANSP partners viz The Airservices Australia, the Air Traffic and Navigation Services South Africa and Airports Authority of India in March 2011.

1.4 The ANSPs of Australia, South Africa, India, Sri Lanka, Maldives, Seychelles, Mauritius, French Réunion, Madagascar, Kenya, Ethiopia, Somalia, Sultanate of Oman, Abu Dhabi Department of Transport, Abu Dhabi Airports Company (ADAC), Dubai Air Navigation Services (DANS) and the United Arab Emirates General Civil Aviation Authority (UAE GCAC) participate in the activities of ASIOACG and INSPIRE. Starting with the founding participation of Emirates Airlines, Etihad Airways, Qatar Airways the group of participating airlines now includes Cathay Pacific Airlines, Singapore Airlines, Ethiopian Airlines, Kenya Airways, South African Airways, Virgin Australia and Qantas Airlines.

1.5 IATA through its offices in Delhi, Johannesburg and Singapore proactively participates in the ASIOACG-INSPIRE meetings and activities in identifying and supporting the initiatives for reducing emissions. IATA also provides valuable support by functioning as a vital link for coordination between ANSPs and airlines and arranging the teleconferences as and when required by INSPIRE.

2. DISCUSSION

2.1 In accordance with the ASIOACG terms of reference, all the participating ANSPs presented update on the development activities undertaken during 2012.

2.2 Through WP-12, IATA requested cancelation of FLAS in Mumbai airspace. It was discussed that the paradigm shift from the “**first come first serve**” to the “**best equipped and best-served**” or “**best equipped first served**” is gradually being adopted by all the ANSPs as even CANSO has also voiced the similar views in ANC/12. However, in view of the continued operation of legacy and narrow body aircraft through Mumbai Oceanic airspace and their inability to communicate position reports with Mumbai ATC due to inherent limitation of HF because of ionospheric effects, the current FLAS is being continued. India also invited the attention of participants to the busy traffic flows through southern portion of Arabian Sea in Mumbai FIR and Chennai FIR during Hajj season, which also necessitates increased safety nets for the flights crossing from Africa to Indian subcontinent and vice versa. Nevertheless, recognizing the need of operators to achieve more fuel efficient flight profiles, AAI undertook to review the FLAS and has assured to open one more window in which the FLAS would not be applicable.

2.3 On application of AIDC, two WPs were presented by Australia (WP-14) and India (WP-4). Australia informed that post FPL-2012 implementation some ATS systems have become incompatible to exchange AIDC messages. India team shared their experience in testing and implementation of AIDC messaging system. India and ASA proposed that ASIOACG should set up a programme for AIDC implementation in the region. The meeting agreed for the same and a process for setting up a AIDC task force for the region has been initiated.

2.4 Sri Lanka, Australia & Maldives informed the meeting that they have so far successfully addressed the ATM issues near the common FIR Boundary, for instance the UPR traffic via Way

Point 'SABEK' vis-à-vis other traffic along L897 between SUNAN and DADAR in particular, by proposing/implementing specific coordination procedures through LOAs.

2.5 In view of the inherent limitations of HF communication, India has established SATCOM communication. India has promulgated a SATCOM Number on which aircraft unable to pass their position reports on HF are encouraged to call Mumbai OCC and report their position. A similar facility is being used in North Atlantic Region also. India clarified that the purpose of the NOTAM on SATCOM was to increase surveillance through position reporting and also to facilitate transit of UPR flights through oceanic airspace. In case, airlines did not want to utilize this facility, it was up to them. SATCOM can always be used as a backup for DCPC or HFRT. Australia informed that Australian Regulator does not support use of SATCOM for position reporting and application of separation purpose. However, the meeting agreed that potential for using the SATCOM number for search and rescue purpose cannot be denied.

2.6 India briefed the meeting that the Central Air Traffic Flow Management (C-ATFM) project being implemented in accordance with the ICAO GPI and assured that air traffic flow management tool would serve the sub regional flows of air traffic. It is further envisaged that the C-ATFM system will also address most of the flow related issues and the constraints of major traffic flow towards Europe transiting through India and Kabul FIR which will provide optimum benefits to both domestic and international traffic. In this regard, Virgin Australia requested to keep business rules for the ATFM tool as simple and as practicable possible. IATA suggested that a pre-implementation meeting with the airlines to assess their preparedness will go a long way in achieving better usage of ATFM tool. India informed the meeting that the C-ATFM would be able to support the traffic flows from the neighbouring participating FIRs also.

2.7 INSPIRE Programme:- Encouraged by the fuel savings and carbon emission reductions achieved for the INSPIRE demonstration green flights conducted in March 2011 (between Perth and Johannesburg) and July 2011 (between the Middle East and Australia via Mumbai and most of the other FIRs encompassed within UPR Geographic Zone), the INSPIRE decided to pursue the challenging task of establishing the UPR geographic zone as a project to contribute to protection of environment. The User Preferred Route Geographic Zone identified by INSPIRE spans fifteen FIR and the three ICAO regions i.e. APAC, the MID East and the AFI. As of today, operational flight trials of UPRs are being conducted in the proposed Arabian Sea - Indian Ocean UPR Geographic Zone which is spread over approximately 13 million NM square of the Arabian Sea and Indian Ocean.

2.8 IATA which has been collecting and analysing the data for the UPR flights informed the meeting that the reports received from 107 UPR flights have demonstrated CO2 emission savings of 240 tonnes and time savings of 7Hrs and 15 minutes. The highest fuel savings have been reported by Africa – South East Asia flights (Kenya Airways) and lowest by flights on South Asia – South Africa (Singapore Airlines). UPR ops trial data indicated that earlier estimated potential saving of 500 tonnes of carbon emissions per flight per year was achievable. The meeting agreed to continue the UPR trials with 52 weekly flights till 29th March 2013 and thereafter in Summer Schedule 2013 the airlines will plan in advance the UPR flights for whole of the schedule and ANSPs will facilitate the UPR flights throughout the summer schedule.

2.9 The meeting discussed the current developments in ATM environment with every participating ANSP presenting an IP on updates regarding CNS/ATM developmental activities. The meeting discussed and adapted a new format of capacity enhancement table and suggested the participants to produce the co-ordinated development plan based on ASBU. The meeting noted that

ASBU provides a guiding road map for states and ANSPs that provides guidance for development of operational procedures to ensure seamless and harmonized realisation of its benefits for both ANSPs and operators. The ASIOACG secretariat will maintain the capacity enhancement table which will act as a road map to achieve the desired goals. It was also observed by the meeting that the ASBU modules are to be implemented by individual ICAO region / State based on the regional / national needs and all the modules need not be implemented by every State.

2.10 Work Programme for 2013:- The meeting decided that establishment of UPR Geo Zone would be the key initiative to be pursued during the year 2013. The following was decided;

- a) The five days a week UPR trial flights will continue till March 2013 and thereafter for summer schedule 2013.
- b) During this period a standard template for AIP supplement to be promulgated by each ANSP for the airspace in its FIRs falling in the proposed UPR Geo Zone will be developed.
- c) Each ANSP will complete safety assessment by this period and obtain approval from regulator.
- d) At the end of March a teleconference will be held to review the progress and decide upon the establishment of UPR Geo zone.
- e) The target date for establishment of UPR Geo Zone is June 2013.

2.11 In the agenda item “initiatives by ANSPs” AAI had informed the meeting about Continuous Descent operations trials in Mumbai TMA. It was reported to the meeting that an estimated 500 flights have been facilitated with such CDO so far. The fuel savings data received from 174 flights indicates a total fuel savings of 32 tonnes and emission savings of 100 tonnes. It was decided that in the work programme for 2013, ANSPs may also consider CDO trials wherever possible and AAI will commence CDO operations in as many TMAs as possible. ANSPs should report environmental benefits of CDO or other such initiatives in the INSPIRE 4 meeting. The meeting also discussed expansion of UPR zone and Dynamic Airborne Reroute Procedures as further future enhancements to its UPR programme.

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2.12 Air Services Australia will Chair INSPIRE and Airports Authority of India will chair the ASIOACG for the year 2013 meetings. The meeting decided to have a working group meeting in May 2013 in Dubai and the meetings of ASIOACG/8 and INSPIRE/4 in Australia in November 2013 respectively.

3. ACTION BY THE MEETING:

3.1 The meeting is invited to note :

- a) the success of the informal group ASIOACG and INSPIRE partnership in bringing together ANSPs and Airspace users together and forging a very successful work programme through efficient collaboration of various stake holders;
- b) that the Air Navigation Commission Conference of ICAO was informed of the project by AAI in November 2012 and received wide support from ANC members for the UPR Geo Zone project; and
- c) that the UPR project under INSPIRE also won Global excellence award for “Strategic advancement in Air Transport” at ATC Global, Amsterdam in March 2013 which is a testimony for collaborative efforts of ANSPs,Airlines,IATA and other stake holders..

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