



**Combined Fourth Meeting of Arabian Sea/Indian Ocean ATS Coordination Group
(ASIOACG/8) and Meeting of Indian Ocean Strategic Partnership to Reduce Emissions
(INSPIRE/4) –**

Melbourne, Australia 25th November – 28th November 2013

Agenda Item 3 – ATM Issues

Dynamic Airborne Rerouting Procedures in UPR zone

(Presented by Airports Authority of India)

SUMMARY

The ASIO UPR Zone has been established on 17th October 2013. The next step for improving safety, efficiency and reducing emissions is the Dynamic Airborne Reroute Procedures (DARP).

Relevant 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-5 RNAV and RNP (Performance-based navigation)

GPI-6 Air traffic flow management

GPI-7 Dynamic and Flexible ATS route Management

Aviation System Block Upgrade

1 INTRODUCTION

1.1 Dynamic Airborne Reroute Procedures (DARP) refers to an oceanic in-flight procedure whereby the lateral profile of a flight can be modified periodically in order to take advantage atmospheric conditions of updated forecasts. DARP allows aircraft operators to calculate revised profiles from the aircraft's present position to any subsequent point in the cleared route of flight in order to realize savings in fuel or time. This updated profile is coordinated by the Airline Operations Center (AOC) with the flight crew, and sent to ATC as a reroute request from the aircraft.

1.2 AAI proposes that INSPIRE may consider DARP as next step to achieve the INSPIRE objectives.

2 DISCUSSION

- 2.1 The ASIO UPR zone and trials prior to that have gained worldwide accolade and awards and set a shining example of collaboration and cooperation amongst 25 organizations.
- 2.2 The INSPIRE Strategic Plan lists DARPs as a recommended practice for enroute phase for reducing emissions. The DARP is a natural next step after UPRs which will help flights to further improve fuel efficiencies and reduce emissions. The DARP can be however little more complex than UPRs and will require elaborate planning and preparation. The methodology adopted however can be same as that adopted for UPR implementation.
- 2.3 In a working paper presented by IATA a tactical 50Nm offset routing procedure is proposed for climb to optimum levels. A DARP can facilitate in achieving this in addition the primary objective of taking advantage atmospheric conditions of updated forecasts.
- 2.4 However for the DARP to be more effective a 30 Nm horizontal separation will be far more advantageous. But a few FIRs in the UPR zone still use 50 Nm horizontal separation (e.g Mumbai). As a preparation for DARP implementation it would be better if all the FIRs can implement 30 Nm separation.
- 2.5 AAI proposes that the following programme may be discussed and considered by INSPIRE,
 - i) Implementation of 30 Nm horizontal separation for climb/descend of an ADS-C/CPDLC linked aircraft through the level of another ADS-C/CPDLC linked aircraft by March 2014 throughout the UPR zone airspace outside VHF/RADAR covered airspace (Within VHF/RADAR covered airspace of UPR zone lesser separations are being used).
 - ii) Paper Trials of Dynamic Airborne Reroute Procedures in February.
 - iii) Operational trials from March 2014
 - iv) Review and further plans in next working group meeting.
- 2.6 AAI is ready to work with IATA again in developing the detailed programme, Standard Operating Procedures and Coordination Procedures.
- 2.7 ANSPs may consider implementation of 30 Nm separation and DARP trials even beyond ASIO UPR airspace.

3 ACTION BY THE MEETING

- 3.1 The meeting is invited to discuss and consider:
 - a) the programme for DARP trials as proposed.