INSPIRE INDIAN OCEAN STRATEGIC PARTNERSHIP TO REDUCE EMISSIONS	AIRPORTS AUTHORITY OF INDIA

Combined Third Meeting of Arabian Sea Indian Ocean ATS Coordination Group ASIOACG/7 and Indian Ocean Strategic Partnership to Reduce Emissions (INSPIRE/3) – Mumbai, India, 11 – 14th December 2012

Agenda Item 2: Update from ANS Providers, Airspace Users and other industry organizations

Update from Australian ANS provider

(Presented by Airservices Australia)

SUMMARY

The past 12 months have seen significant changes within Australian airspace to to reduce risk and efficiently respond to the changing operational requirements within the Upper Airspace Services area of responsibility. This paper provides an update on Airservices' activities.

1.   **INTRODUCTION**

1.1   At the At the ASIOACG/6 and INSPIRE/2 meeting in Cape Town in 2011, and through various other forums, Airservices Australia (Airservices) has consulted with peers and customers to ensure the evolution of the Air Traffic Management Service is aligned with their expectations.

1.2   Furthermore, as part of ongoing risk management Airservices frequently reviews the risk profile of the air traffic operations.

1.3   Over the past 12 months Airservices has been implemented a multi-faceted program of activity to reduce risk and efficiently respond to the changing operational requirements within the Upper Airspace Services area of responsibility. This program of activity was a response to the constant and significant growth in air traffic in the Upper Airspace Services (UAS) area (15% per annum for the past three years), and the expectations of our customers.

1.4   The Airservices program of activity has delivered a range of improvements across the Oceanic and Continental regions of the Australian airspace.

2.   **DISCUSSION**

2.1   Oceanic Airspace

2.1.1   The User Preferred Routes trials which have occurred since June 2012, as part of the work to implement the UPR geographic zone, have been used by Airservices to evaluate the impact of expanding the availability of User Preferred Routes in the Melbourne (YMMM) FIR. As a direct result of the trials there have been a number of improvements delivered.

2.1.2   Increased UPR Options

2.1.2.1   Flex track procedures for YMMM oceanic have been updated. Flights may now plan User Preferred Routes in YMMM Oceanic and then upon entering continental airspace join the flex track. This is in addition to the existing option to plan User Preferred Routes and join the fxied route structure upon entering continental airspace.

2.1.3   SABEK

2.1.3.1   Airservices and Airport & Aviation Services (Sri Lanka) Ltd. (AASL) have developed new procedures to allow the use of waypoint SABEK which lies on the FIR boundary between Colombo and Melbourne and is nearby to the Male FIR. The use of SABEK has been incorporated into the UPR geographic zone UPR trial.

2.1.3.2   The review of the use of SABEK has determined that a connector route must be defined with in the YMMM FIR to ensure that conflicts with parallel traffic can be managed effectively.

2.1.3.3   SABEK is expected to become available for daily use early in 2013.

2.1.4   SEA/AFR UPRs

2.1.4.1   Following the conclusion of the trial of UPRs between South East Asia and Africa, UPRs on this traffic flow within YMMM will be available on a permanent basis.

2.2   Continental Airspace

2.2.1   Airservices program of activity to reduce risk and respond to the changing operational requirements was focussed upon the continental airspace in Western and Central Australia. It is this area that has seen th most significant increase and the volume and complexity of air traffic.

2.3   The Airservices program of activity included:

   a)   a refined sectorisation,

   b)   additional controller workstations, and

   c)   the commissioning of new surveillance facilities.

   Supplementary changes included the reconfiguration of the voice communication systems, the reconfiguration of the automation system, refinements to the Air Traffic Controller endorsements, and the development of new procedures.

2.4   Implementation of the program changes began during October 2012 and the majority were completed with effect 15 November 2012. The current program will be completed with an upgrade to the voice communications system on 10 December 2012.

2.5   **Commissioning of new surveillance**

2.5.1   A Mode S Secondary Surveillance Radar was commissioned at Paraburdoo (PBO) in Western Australia on 1 November 2012. The radar allows surveillance services to be provided in an area bounded by Karratha, Port Hedland, Newman and Meekatharra.

2.5.2   The additional surveillance supports safe and efficient service to what has become a complex and busy area of air traffic. The surveillance is also a key enabler for the rollout of connector routes in Western Australia.

2.6   **Airspace restructure**

2.6.1   An extensive program of airspace redevelopment has taken place in the West and Central Australian continental airspace. The purpose of this was to address capacity issues associated with 15% year on year traffic growth in this area, while also taking advantage of new surveillance capability, and improving access to flexible routing.

2.6.2   The majority of the air traffic control sectors have been refined, a number of new sectors have been introduced and related controller endorsements have been changed.

2.6.3   The changes to sectorisation align airspace structure with changing traffic flows, and provide flexibility in sectorisation to assist with ensuring the safe distribution of ATC workload.

2.6.4   The airspace changes were implemented with effect 15 November 2012.

2.6.5   The airspace changes required significant reconfigurations to the voice communication and automation systems

2.7   **Additional controller workstations**

2.7.1   To allow the effective application of the new sectorisation three additional air traffic controller workstations are required. This will take the total workstation allocated to UAS in the YMMM FIR to thirteen.

2.7.2   Two of the required three consoles were commissioned in November 2012 utilising spare consoles from other ATS units.

2.7.3   The third console will be delivered as part of console procurement project and should be commissioned prior to June 2013.

2.8   **Transition to ADS-B blacklist**

2.8.1   Airservices was an early adopter of ADS-B with a national network of ADS-B ground stations commissioned some time ago. At the time of commissioning a significant number of ADS-B equipped airspace users were broadcasting erroneous ADS-B data. Consequently Airservices established a 'whitelist' of aircraft which had had the integrity of there ADS-B data confirmed. Only ADS-B data from whitelist aircraft was made visible to the air traffic controllers.

2.8.2   Overtime the number of ADS-B aircraft and the average quality of ADS-B data being broadcast has increased significantly. These changes lead Airservices to review the usefulness of the whitelist.

2.8.3   In the past few months Airservices has transitioned from the white-list to a 'black-list' system whereby erroneous ADS-B reports are captured and airspace users who fail to correct their data output are blacklisted. Their ADS-B data is filtered from the air traffic system. This has significantly increased the number of aircraft to whom surveillance services are now available and consequently improved service provision.

2.8.4   The Upper Airspace (FL290 and above) ADS-B mandate in Australian airspace is effective from 13 December 2013.

2.9   **UPR connector routes**

2.9.1   The first of three packages of UPR connector routes in Western and Central Australia were implemented on 15 November 2012. Publication of additional connectors routes and UPR gates is planned continue in the first calendar quarter of 2013.

2.10   **Adelaide Flex Track transition airspace and gates**

2.10.1   With effect 11 October 2012 new Adelaide transition airspace and gates were implemented to enable airlines to utilise existing flex tracks for arrivals and departures at Adelaide (YPAD).

3.   **ACTION BY THE MEETING**

3.1   The meeting is invited to note the range of changes introduced by Airservices Australia to improve safety and the efficiency of our customers in the past 12 months.