



International Civil Aviation Organization

The Second Meeting of the South Asia/Indian Ocean ATM Coordination Group (SAIOACG/2)

Bangkok, Thailand, 22 – 25 May 2012

Agenda Item 3: Review of Current Operations and Problem Areas

CAPACITY ENHANCEMENT TABLE

(Presented by the Secretariat)

SUMMARY

This paper provides a compilation of the planned capacity enhancements and current status for the region as reported at various regional meetings.

This paper relates to –

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-2 Reduced vertical separation minima

GPI-3 Harmonization of level systems

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

GPI-11 RNP and RNAV SIDs and STARs

GPI-17 Data link applications

GPI-22 Communication infrastructure

1. INTRODUCTION

1.1 The paper provides a compilation the capacity enhancements planned by States and ANSPs in the region and the current status as reported at various meetings.

2. DISCUSSION

2.1 An updated list will provide the meeting with a good overview of the current situation and enable it to make the appropriate decisions.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) Provide updates to the table; and
- b) discuss any relevant matters as appropriate.

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Capacity Enhancement Table SAIOACG/2 Updated on May 17, 2012

Capacity Enhancement	Action By	Estimated completion date	Completion date	Current Status
Implement ADS-C/CPDLC Datalink Communications				
Australia	Brisbane/Melbourne FIRs	Completed	1999	
India	Mumbai FIR Chennai FIR	Completed Completed	2006 2005	Mumbai: H24 in Oceanic airspace of the Mumbai FIR. Chennai: Route Specific as per NOTAM
Indonesia	Ujung Pandang FIR Jakarta FIR	October 2008 2009	Jakarta FIR update?	Trial operation 3 Jul – 3 October 2008. Trial procedures published by AIP Supplement 07/08. Ujung Pandang only?
Maldives	Male FIR	September 2009	???	Trials in progress
Mauritius	Mauritius FIR	Completed	2003	
Oman	Muscat FIR	Not Applicable	???	Full VHF coverage????
Seychelles	Seychelles FIR	Target 2010	Estimated 2010	Update?
Sri Lanka	Colombo FIR	Completed	2006	Update? Moving to new ACC?
Malaysia	Kuala Lumpur FIR Kota Kinabalu FIR	Completed Update on KK FIR	Completed Update on KK FIR	Update on Kota Kinabalu FIR
Thailand	Bangkok FIR	No Requirement		No Requirement Full VHF coverage
Myanmar	Yangon FIR	completed	Completed	Completed. Update on operational status?
Afghanistan	Kabul FIR	No requirement		No requirement .Full VHF coverage?
Pakistan	Karachi FIR Lahore FIR	No requirement No requirement		No Requirement. Full VHF coverage?
Singapore	Singapore FIR	Completed	Completed	South China Sea only
Implement 50NM Lateral Separation (RNP10 in Oceanic Airspace)				
Australia	Brisbane/Melbourne FIRs	Completed	1998 - 2001	
India	All Indian FIRs		2002	All RNAV Routes except UL425 and UM551 RNP10
Indonesia	Jakarta FIR Ujung Pandang FIR		2002	Over specified EMARSSH Routes

Maldives	Male FIR	July 2009		G465, R457 and M512 above FL280 and in consultation with India and Sri Lanka.
Mauritius	Mauritius FIR		2003	
Oman	Muscat FIR			Update
Seychelles	Seychelles FIR	TBN	??	Update
Sri Lanka	Colombo FIR		2002	Discussions taking place with Maldives
Malaysia	Kuala Lumpur FIR Kota Kinabalu FIR		2002	Update Update
Thailand	Bangkok FIR		2002	Not Applicable
Myanmar	Yangon FIR		2002	Update
Afghanistan	Kabul FIR		2002	Not applicable
Pakistan	Karachi FIR Lahore FIR		2002	Not Applicable
Singapore	Singapore FIR		2002	Update?
Implement 50NM Longitudinal Separation (RNP10 in Oceanic Airspace)				
Australia	Brisbane/Melbourne FIRs		1998 - 2001	
India	All Indian FIRs	2009		CRA established from September 2008. Implementation in accordance with ICAO Regional PBN Implementation Plan
Indonesia	Jakarta FIR Ujung Pandang FIR	TBN		To be reviewed after introduction of ADS/CPDLC
Maldives	Male FIR	2009		Update?
Mauritius	Mauritius FIR	TBN		Using RNAV 80 nm longitudinal
Oman	Muscat FIR	2009		Co-incident with India Implementation LOA?
Seychelles	Seychelles FIR	TBN		Regional implementation within AFI Region
Sri Lanka	Colombo FIR	2009		Subject to CRA
Malaysia	Kuala Lumpur			Update
Thailand	Bangkok FIR			Update
Myanmar	Yangon FIR			Update

Afghanistan	Kabul FIR			Not Applicable
Pakistan	Karachi FIR Lahore FIR			Not Applicable
Singapore	Singapore FIR		Completed?	Update...SCS
Implement RNP4				
Australia	Brisbane/Melbourne FIR	2005		Available in Tasman Sea region (Aus/NZ) and planned for implementation in the Melbourne FIR on 12 th March 2009.
India	All Indian FIRs			
Indonesia	Jakarta FIR	TBN		
Maldives	Male FIR	TBN		
Mauritius	Mauritius FIR	TBN		
Oman	Muscat FIR	Not Applicable		RNP5 currently available throughout Muscat FIR. Once RNP4 is implemented in the Mumbai FIR, then Muscat FIR will be able integrate with Mumbai.
Seychelles	Seychelles FIR	TBN		
Sri Lanka	Colombo FIR			
Malaysia	Kuala Lumpur FIR			
Thailand	Bangkok FIR			
Myanmar	Yangon FIR			
Afghanistan	Kabul FIR			
Pakistan	Karachi FIR Lahore FIR			
Singapore	Singapore FIR			
Implement 30/30 Separation Standards in Oceanic Airspace (based on RNP4)				
Australia	Brisbane/Melbourne FIRs			Tasman Sea region implemented and planned for implementation in the Melbourne FIR on 12 th March 2009.
India	All Indian FIRs	TBN		
Indonesia	Jakarta FIR Ujung Pandang FIR			
Maldives	Male FIR	TBN		

Mauritius	Mauritius FIR	TBN		
Oman	Muscat FIR	TBN		
Seychelles	Seychelles FIR	TBA		
Sri Lanka	Colombo FIR	TBA		
Malaysia	Kuala Lumpur FIR Kota Kinabalu FIR			
Thailand	Bangkok FIR			
Myanmar	Yangon FIR			
Afghanistan	Kabul FIR			
Pakistan	Karachi FIR Lahore FIR			
Singapore	Singapore FIR			
Implementation of Flex Tracks & Connector Routes				
Australia	Melbourne FIR		27 June 2005	Implementation of AUSOTS Additional tracks added since ASIOACG/1 Other options under consideration.
India	Mumbai FIR	2008 2009	2005	UM551 implemented between Mumbai and Muscat FIRs KITAL direct ELKEL to be implemented 12 March 2009 Flex Tracks to be evaluated for phased implementation – commencing in Southern portion of Mumbai FIR
Indonesia	Jakarta FIR Ujung Pandang FIR	2007 2009	2007 TBA	Southern connector routes implemented March 2007 Western connector routes subject to further discussion
Maldives	Male FIR	Completed	June 2004	Connector routes established between Male FIR and Melbourne FIR. December 2008 additional implemented Male/Melbourne FIR now CMB/MLE FIR done – 2 routes and currently evaluating 3 more connector routes MLE/CMB/MEL
Mauritius	Mauritius FIR	Completed	.	Connector routes established between Mauritius FIR and Melbourne FIR. Currently using UPRs.
Oman	Muscat FIR	N/A		
Seychelles	Seychelles FIR	N/A		

Sri Lanka	Colombo FIR	30 Sep 2006 Point 3 – TBA		<ol style="list-style-type: none"> 1. Connector routes between Colombo and Jakarta FIRs pending - Implemented 2. Connector routes between Colombo and Chennai FIRs pending – Implemented 3. Connector routes between Colombo and Melbourne FIRs pending – Study ongoing
Malaysia	Kuala Lumpur FIR Kota Kinabalu FIR	N/A		
Thailand	Bangkok FIR	N/A		
Myanmar	Yangon FIR	N/A		
Afghanistan	Kabul FIR	N/A		
Pakistan	Karachi FIR Lahore FIR	N/A		
Singapore	Singapore FIR	N/A		
TMA Procedures PBN Based (RNP/RNAV Approaches, SIDS & STARS)				
Australia	Melbourne/Brisbane FIRs			
India	All Indian FIRs			Developed and promulgated by AIP for Mumbai, Delhi and Ahmedabad. Subject to authorization by regulatory authority of use of GNSS. 2008 implemented at Mumbai, Delhi and Ahmedabad and under development for Chennai.
Indonesia	Jakarta FIR			
Maldives	Male FIR	Implemented 2005		Developed for Male International and Gan International Airport and seeking Regulatory Approval
Mauritius	Mauritius FIR	December 2008		GNSS (RNAV) SIDSs & STARs available
Oman	Muscat FIR	Implementation by Dec 2008		GNSS Approaches for Muscat and Salalah International Airports are being developed and will be operational by September 2009.
Seychelles	Seychelles FIR	April 2008		GNSS (RNAV) SIDSs & STARs available
Sri Lanka	Colombo FIR	In progress – implementation TBA		
Malaysia	Kuala Lumpur FIR			
Thailand	Bangkok FIR			

Myanmar	Yangon FIR			
Afghanistan	Kabul FIR			
Pakistan	Karachi FIR Lahore FIR			
Singapore	Singapore FIR			
Implement AIDC Messaging				
Australia	Melbourne	2006		Mauritius operational with Melbourne
India	Mumbai FIR	TBA		Trial operations with Muscat expected to commence in March 2009
Indonesia	Ujung Pandang FIR Jakarta FIR	2008 TBA	2009 TBA	Ujung Pandang – Brisbane FIRS under trial since May 2008 Jakarta FIR – After introduction of new “JATS” System
Maldives	Male FIR			Not Applicable
Mauritius	Mauritius FIR		2003	Implemented with Melbourne
Oman	Muscat FIR	2009	2009	OLDI trials with Bahrain in 2008 AIDC Trials with India expected March 2009
Seychelles	Seychelles FIR			Not Applicable
Sri Lanka	Colombo FIR	2006		
Malaysia	Kuala Lumpur FIR Kota Kinabalu FIR			
Thailand	Bangkok FIR			
Myanmar	Yangon FIR			
Afghanistan	Kabul FIR			
Pakistan	Karachi FIR Lahore FIR			
Singapore	Singapore FIR			
Implement ADS-B Surveillance system				
Australia	Brisbane/Melbourne FIR	2009		NFRM issued for mandate above FL290 with implementation proposed for 12 September 2013
India	Chennai FIR	Trials completed		
Indonesia	Jakarta FIR Ujung Pandang FIR	TBN		Under review by Indonesia DGCA

Maldives	Male FIR	TBN		MSSR implemented 2009 with ADS-B Phased implementation program under consideration.
Mauritius	Mauritius FIR	TBN		Pending trial results from Reunion Island
Oman	Muscat FIR	2012		Subject to MID Regional Plan
Seychelles	Seychelles FIR	Program scheduled for 2009		
Sri Lanka	Colombo FIR	2010		
Malaysia	Kuala Lumpur FIR Kota Kinabalu FIR			
Thailand	Bangkok FIR			
Myanmar	Yangon FIR			
Afghanistan	Kabul FIR			
Pakistan	Karachi FIR Lahore FIR			
Singapore	Singapore FIR			

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