International Civil Aviation Organization

The Twenty-First Meeting of the Regional Airspace Safety Monitoring Advisory Group (RASMAG/21)

Bangkok, Thailand, 14-17 June 2016

Agenda Item 2:   Review Outcomes of Related Meetings

RELEVANT MEETING OUTCOMES

(Presented by the Secretariat)

SUMMARY

This paper presents information from other meetings relevant to RASMAG.

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1.   INTRODUCTION

1.1   The Second Meeting of the APANPIRG Contributory Bodies Structure Review Task Force (ABSRTF/2) was held from 24 to 25 June 2015.

1.2   The Third Meeting of the APANPIRG Air Traffic Management Sub-Group (ATM/SG/3) was held at Bangkok from 03 to 07 August 2015.

1.3   The Twenty-Sixth Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/26) was at Bangkok, Thailand from 07 to 10 September 2015.

1.4   The Fifty-Second Conference of Directors General of Civil Aviation, Asia and Pacific Regions (DGCA/52) was held at Manila, the Philippines from 26 to 29 October 2015.

1.5   The combined Sixth Meeting of the South Asia/Indian Ocean ATM Coordination Group (SAIOACG/6) and Twenty-Third Meeting of the South-East Asia ATM Coordination Group (SEACG/23) were held at Bangkok, Thailand from 29 February to 03 March 2016.

2.   DISCUSSION

ABSRTF/2

2.1   The ABSRTF/2 meeting reviewed the APANPIRG structure which provided for five APANPIRG Sub Groups (**Figure 1**), namely – Air Traffic Management Sub Group (ATMSG), Communications, Navigation and Surveillance Sub Group (CNSSG), Meteorology Sub Group (METSG), Aerodromes Operations and Planning Sub Group (AOPSG) and Regional Airspace Safety Monitoring Advisory Group (RASMAG).
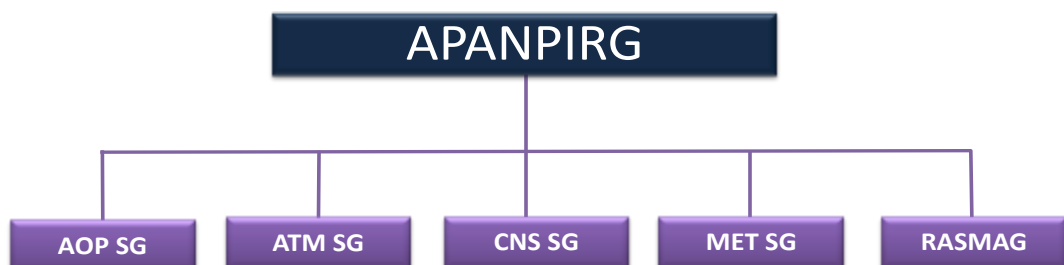
Figure 1: New APANPIRG Structure

2.2   The transitional structure from 2016 to 2017 is illustrated in **Figure 2**:
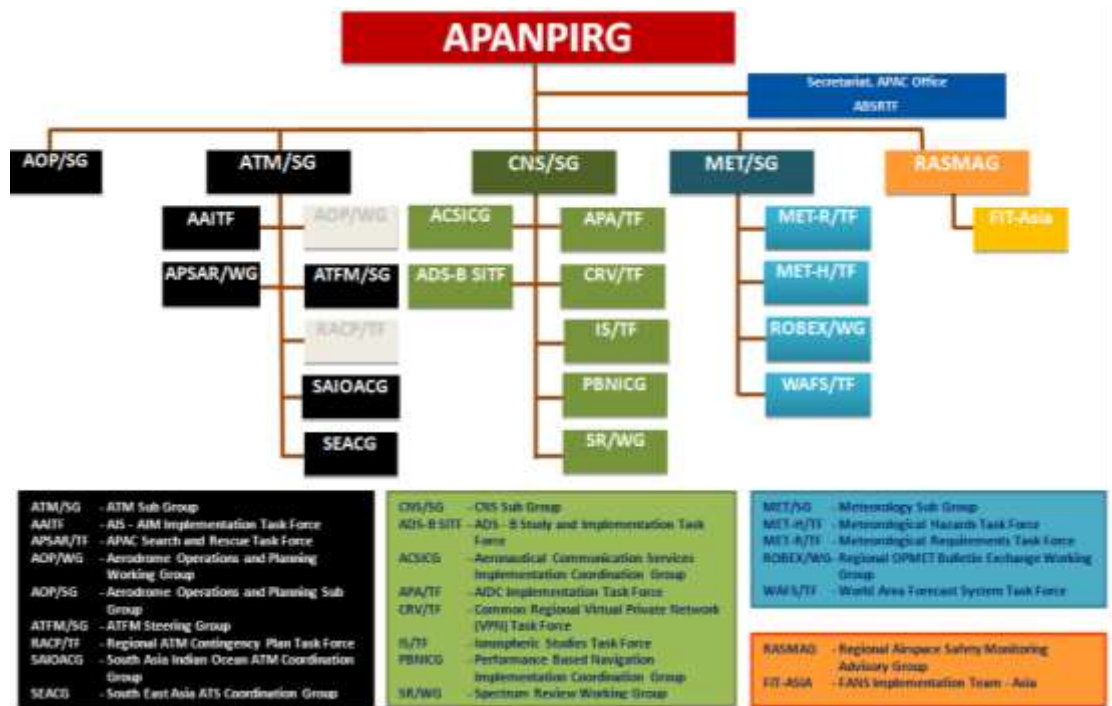
Figure 2: Transitional APANPIRG Structure (2016-2017, changes in grey)

2.3   The ABSRTF considered that RASMAG monitors air space safety, coordinates all the activities of the Region's designated monitoring agencies including undertaking aircraft height-keeping monitoring for RVSM, and submitted recommendations to APANPIRG to improve ATM operations. It was agreed that RASMAG should keep the subgroup status as it was, reporting directly to APANPIRG.

2.4   The meeting agreed that the Sub Groups should have the ability to adopt, without further APANPIRG endorsement, any Conclusion or Decision (especially those concerning guidance to States in the implementation of ICAO SARPs, GANP, RANP, Seamless ATM Plan) that does not have significant additional economic, environmental or political effects, which should be considered at a higher level at APANPIRG.

2.5   The meeting also agreed that Sub Groups should be empowered to adopt draft Conclusions/Decisions on behalf of APANPIRG, developed by their respective Working Groups and Task Forces. The meeting noted that the Secretariat in consultation with the ABSRTF members, develops clear principles and guidelines of the approval process by the Sub Groups to be included in the APANPIRG Procedural Handbook and the updated version shall be submitted to APANPIRG/27 for endorsement. The Terms of Reference for RASMAG were not amended by APANPIRG/26.

2.6   The meeting formulated a draft Decision, which was adopted by APANPIRG/26.

> ***Decision APANPIRG/26/65 — Revised APANPIRG Structure, Terms of Reference and APANPIRG Sub Group Empowerment***
>
> *That, in accordance with APANPIRG Decision 25/50, and to promote a more project-management-driven approach to regional air navigation planning and implementation which is guided by and aligned with regional priorities and the Global Air Navigation Plan/ASBU Strategy:*
>
> *a) the new structure of the APANPIRG and its Sub Groups is adopted as presented in **Appendix B** to the Report on Agenda Item 5;*

*b) the revised Terms of Reference of APANPIRG Sub Groups placed at **Appendix C** to the Report on Agenda Item 5 is adopted;*

c) to enhance the efficiency of APANPIRG approval process, the Sub Groups are empowered to adopt Conclusions and Decisions on technical matters (especially those concerning guidance to States in the implementation of ICAO SARPs, GANP, RANP, Seamless ATM Plan) that do not have additional economic, environmental or political effects, which should be considered at a higher level at APANPIRG; and

*d) the APANPIRG Procedural Handbook be amended in accordance with the new APANPIRG Structure, Terms of Reference, project management principles [**Appendix D** to the Report on Agenda Item 5] and procedures to be followed for the processing of Sub Group- endorsed Conclusions and Decisions.*

Note: (1) the new structure of APANPIRG Sub Groups, revised Terms of Reference and empowerment shall become effective from 2017 meeting year with 2016 being used for transitional arrangement; the empowerment would be subject to further review in 2018 based on the experience gained in 2017; and (2) the amendment to the APANPIRG Procedural Handbook shall be submitted to APANPIRG/27 for endorsement.

APANPIRG Decision 26/66 – Review Terms of Reference of Contributory Bodies under the APANPIRG Sub Groups

That, the Secretariat, in consultation with Chairs of the existing Task Forces and Working Groups under the APANPIRG Sub Groups, reviews the TOR as necessary, and submits to the respective Sub Groups and APANPIRG/27 for further review and adoption.

2.7   APANPIRG/26 reviewed the draft electronic Air Navigation Plan (ANP) and adopted the following Conclusion:

Conclusion APANPIRG/26/2 — Adoption of the ASIA/PAC eANP

That, the following text parts and tables for Volume I and Volume II of the APAC e-ANP is endorsed and Volume III is adopted and invite ICAO to process the PfAs (Proposal for amendments) for Volume I and Volume II of e ANP in accordance with the established procedures:

a) In AOP field: Appendices A and B to WP/6;

b) In ATM field: Appendices E, G, H, K, L and P to WP/7;

c) In CNS field: Appendices R1, R2, R3, S1, S2, S3, S4, S5, S6 and S7 to WP/9;

d) In MET field: Appendices B & C to WP/10 plus updates provided in Flimsy no 1.

2.8   The eANP is temporarily at http://www.icao.int/APAC/Pages/APAC-eANP.aspx, but it is expected to be migrated to a HQ portal by the end of 2016.

ATM/SG/3

2.9   The ATM/SG/3 agreed to (or endorsed) the following relevant Conclusions and Decisions, which were endorsed by APANPIRG/26:

Conclusion APANPIRG/26/8 – Regional Cross-border ATFM Implementation Support

Conclusion APANPIRG/26/9 – Asia/Pacific Regional Framework for Collaborative ATFM

Conclusion APANPIRG/26/10 – ATFM Seminars/Workshops

Conclusion APANPIRG/26/11 – Implementation of FPL 2012 Capability

Conclusion APANPIRG/26/12 – Flight Plan Item 19 Information

Conclusion APANPIRG/26/13 – Consistent PANS-ATM Provisions for RNP 2/RNAV2

Conclusion APANPIRG/26/14 – Draft Regional ATM Contingency Plan

Draft Conclusion ATM/SG/3-17: eAIP from Digital Database

Draft Conclusion ATM/SG/3-18: Interim AIM Transition Guidance

Draft Conclusion ATM/SG/3-19: AIM Transition Seminars/Workshops

Conclusion APANPIRG/26/28 – Asia/Pacific LHD Hot Spot Action Plans

2.10   The ATM/SG/3 noted that the application of 50NM and 30NM horizontal standards met the regional Target Level of Safety (TLS).
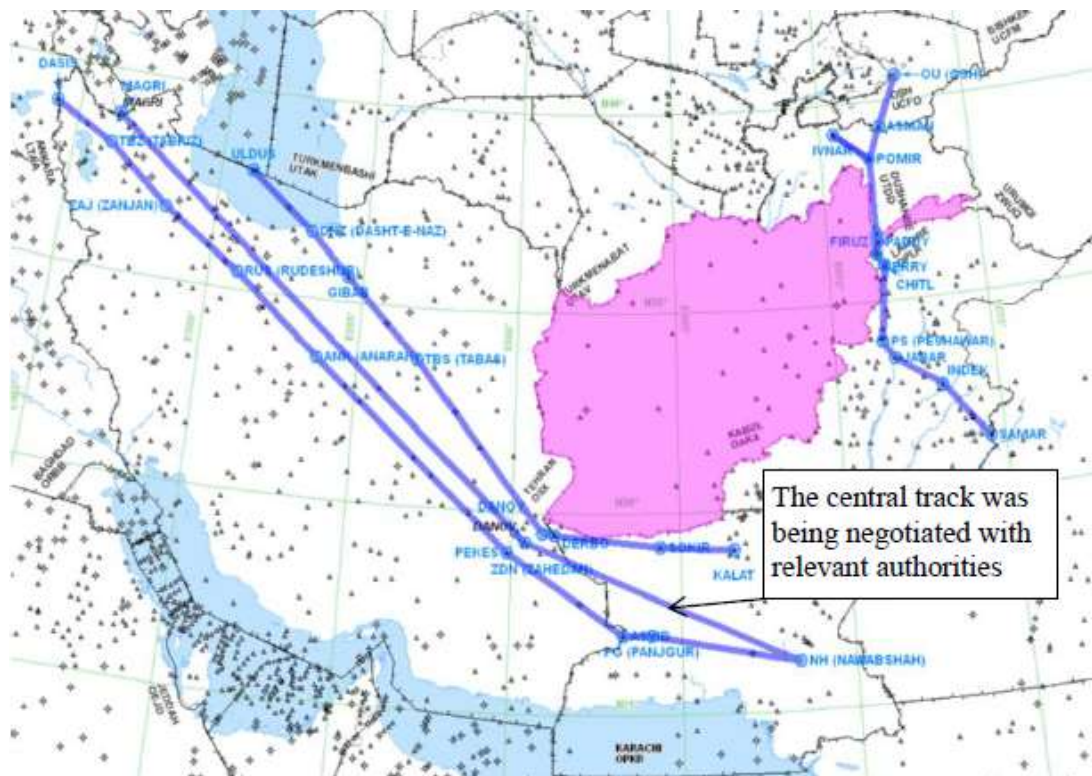
APANPIRG/26

2.11   IATA had presented an overview of issues faced by airlines due to the frequent closure of large portions of airspace for major rocket launches and space re-entry activity, and proposed certain measures to reduce the consequences for civil flights. To facilitate rocket launches, Air Navigation Service Providers (ANSPs) were required to create temporary danger areas that could affect several Flight Information Regions (FIRs). Airline experience indicated an urgent need to improve coordination among ANSPs, as well as airlines, which addresses the following areas:

a) appropriate advance notice;

b) accuracy and minimisation of launch windows;

c) timely NOTAM information from all affected States concerned about launch cancellations; and

d) launch timing windows not set during busy traffic hours.

2.12   The outcomes of the Second Meeting of the Ad Hoc Afghanistan Contingency Group (AHACG/2, Istanbul, Turkey, 17-19 November 2014) and Third Meeting AHACG/3, Muscat, Sultanate of Oman, 11-14 May 2015) were reviewed by the ATM/SG/3 and APANPIRG/26.

2.13   Pakistan and India had agreed upon a contingency route structure that effectively extended the 'Royal Road' Organised Track System (OTS) that had been used within the Tehran FIR, providing a bypass south of the Kabul FIR. Pakistan had also recently optimized the route structure by providing an efficient connectivity from ATS Route L509 (SAMAR-LAJAK) north of the Kabul FIR through Tajikistan and Central Asia. A side meeting between Pakistan and India was held with ICAO at APANPIRG/26 to discuss current readiness for contingency operations.

2.14 In case of degradation or potential disruption of ATS or related services within the Kabul FIR, the AHACG/3 recognised that the provisions of the Afghanistan State Contingency Plan applied, but if these were not available, the meeting agreed on possible temporary provisions. The agreed contingency route system is illustrated in **Figure 2**:

Figure 2: Circumnavigation Routes (Extended Royal Road OTS)

2.15 The following APANPIRG discussion related to *Conclusion APANPIRG/26/28*:

3.3.28 The Philippines, Hong Kong China, China and Pakistan informed APANPIRG/26 of on-going work to implement technologies such as AIDC, ADS-C, CPDLC and ADS-B, in order to mitigate problems identified at the various hot spots. India requested Malaysia to sign the ATS Letter of Agreement (LOA) as soon as possible regarding AIDC implementation.

3.3.29 In particular, Hong Kong, China reported the follow up actions taken after the RASMAG/20 meeting and planned actions coordinated with relevant States to address LHD hot spot issues.

(i) Scrutiny group meeting for LHD was held in June 2015 between Hong Kong, China and China to identify the causes and discussed planned actions.

(ii) Hong Kong, China has briefed and issued instructions to remind controllers to maintain vigilance and awareness.

(iii) HK-Sanya AIDC had been in operation since 2007. AIDC technical tests with Guangzhou has been planned for Q1 2016

(iv) AIDC technical tests with Manila have been planned for end 2015 (which the Philippines also agreed and supported).

3.3.30 APANPIRG/26 discussed the problem of ANSPs not being informed until months after an LHD incident, when the recorded data was no longer available. ICAO informed the meeting that RASMAG had a clear policy on such incidents affecting two ANSPs, whereby the ACC supervisors must share information immediately after the incident is reported. Moreover, the meeting was informed that the matter would be raised again at the forthcoming RASMAG/Monitoring Agencies Working Group (MAWG/3) meeting, to be held in Australia in December 2015, with the intention that all RMAs remind their States of RASMAG's consistent policy on exchange of data.

2.16   APANPIRG/26 agreed to the following RASMAG-related Deficiencies (the full list of Deficiencies is at **Attachment A**:

*3.3.36 RASMAG/20 noted that only Bangladesh had a RASMAG-related APANPIRG Deficiency recorded regarding the requirement of Paragraph 3.3.5.1 of Annex 11 (provision of data for monitoring the height-keeping performance of aircraft). RASMAG/20 agreed to propose the deletion of Bangladesh's Deficiency, but proposed new Deficiencies for non-provision of RVSM approvals safety data by India and the Philippines (**WP08/Appendix C**).*

DGCA/52

2.17   The RASMAG/21 meeting should note the relevant Action Items from the DGCA/52 Conference at **Attachment B**.

SAIOACG/6 and SEACG/23

2.18   The meeting noted several operational issues addressed by Viet Nam, including the finalisation of operational Letters of Agreement (LOAs) for ATM contingency planning, non-coordinated traffic flow restrictions, the need to further reduce ATS surveillance spacing minima and unidentified aircraft affecting the safety of civil flights along ATS routes within the Ho Chi Minh FIR, according to Viet Nam.

2.19   Regarding the issue of unidentified aircraft, ICAO urged States to ensure that their aircraft were compliant with the flight plan provisions of Annex 2 and *Procedures for Air Navigation Services – Air Traffic Management* (PANS-ATM).

2.20   The SAIOACG6/SEACG23 meeting discussed the ATM difficulties mentioned by Viet Nam, which were caused by short notice operational restrictions in the area. Singapore, Hong Kong, Lao PDR and IATA all agreed that the issue continued to cause major disruptions within their airspace. Hong Kong, China stated that they had tried to have a meeting with Guangzhou and Shanghai Area Control Centres (ACCs) to discuss the issues but so far this had not been possible.

2.21   ICAO noted that similar concerns had been raised at past ATM/SG meetings, and urged States to use the opportunity to conduct a meeting to discuss this matter. It was recognised that this may be difficult at a civil level, given the civil/military issues that appeared to be a cause of the problems. China agreed to further analyse the issue but it was clear that this may not be solved without the involvement of senior military officers. ICAO would attempt to address this at a planned civil/military cooperation conference in China.

2.22   India highlighted major initiatives within the Chennai FIR to enhance safety, efficiency and airspace capacity within a Seamless ATM environment, new ADS-B sites, use of Mode S to display aircraft identification (and thus relieve the shortage of Mode A codes), new ATC sectors, implementation of 30NM separation, Departure Clearance (DCL), the Integrated ATS Simulator (IATS), and AIDC trials.

2.23   India confirmed that there were plans to install extra ADS-B stations, including at a naval base in Campbell Bay (Andaman and Nicobar Islands, India). There was also a discussion about the possibility of ADS-B installation on an Indian naval ship, using experience from the United States.

2.24   The Maldives discussed the implementation of ADS-B. In November 2012, four ADS-B stations were installed to enhance surveillance capability within Male FIR. In November 2013, the ADS-B facilities were integrated with the ATM system. ADS-B was approved for operational use on 07 January 2016, covering up to 90% of the Male FIR above FL290.

2.25   The Philippines was conducting ADS-C/Controller Pilot Datalink Communication (CPDLC) trials in the eastern portion of the Manila FIR. The first phase started on 20 July 2015, with CPDLC used as the primary means of communications and HF as secondary from 17 September 2015. Phase 2 covering the western portion of the Manila FIR will commence, as soon as technical issues were corrected. Problem Reports (PRs) were submitted to FIT-ASIA CRA for analysis. The meeting congratulated the Philippines for the progress.

2.26   Subject to the resolution of technical issues, trial operations of Phase 3 covering the North Sector and Phase 4 covering the South Sector should be accomplished by Q4 2016. With the completion of the New CNS/ATM Systems Development Project scheduled in 14 December 2016, full ADS/CPDLC services in the Manila FIR were anticipated by Q1 2017.

2.27   AIDC tests had been conducted with Singapore, Ujung Pandang, and Taipei ACCs to check interoperability. The Philippines advised that operational trials with Singapore ACC would commence as soon as technical issues were resolved. Indonesia and Hong Kong, China advised their willingness to test AIDC when possible.

2.28   The Third meeting of the South China Sea Major Traffic Flow Review Group (SCS/MTFRG/3) was held from 25-27 February 2016 at Bangkok. The meeting was attended by 28 participants from eight States and administrations, and two International Organizations.

2.29   As one of the main objectives of the SCS/MTFRG/3 was to review the Flight Level Allocation Scheme (FLAS) to align it with the standard Flight Level Orientation Scheme (FLOS) in Annex 2. ICAO presented an overview of the existing non-standard FLAS /FLOS that had been in operation for many years. The meeting was of the opinion that this needed to be amended especially in the light of the safety issues caused by non-standard direction of flight, changes in traffic flows as well as the possibility to transition towards surveillance-based separation standards, supported by newer PBN navigation specifications.

2.30   The meeting discussed a proposed South China Sea Operational Concept, with an expected implementation of 09 November 2017 (**Attachment C**). The meeting noted that the principles of the Operational Concept could be amended to accommodate specific problems, and agreed it was a useful means of identifying a common vision that was in line with the Asia/Pacific Seamless ATM Plan.

2.31   SEACG/23 agreed to the following Draft Conclusion, for consideration by the ATM/SG/4:

Draft Conclusion SEACG/23 – 2 South China Sea Operational Concept	
That, the South China Sea (SCS) Operational Concept appended as **Attachment C to the Report** be adopted as planning guidance, and posted on the ICAO Regional Office website.	Expected impact: ☐ Political / Global ☒ Economic ☒ Environmental ☒ Ops/Technical
Why: to enhance safety and harmonise Air Traffic Management (ATM) procedures in accordance with the Seamless ATM Plan and take advantage of the communications and surveillance capabilities in the SCS.	
When: immediately upon adoption by APANPIRG/27.	Status: Open until posted on the Regional Office website.
Who: ☐States ☒APAC RO ☐ICAO HQ ☐Other:	

2.32   A workshop activity produced a very preliminary airspace design (**Figure 3**). Three areas were identified for more detailed considerations, with A1/A202 being assigned priority 1, L642/M771 priority 2 and A461/A583/N892/L625 as priority 3. The SEACG/23 meeting noted with appreciation the progress made by the Group.
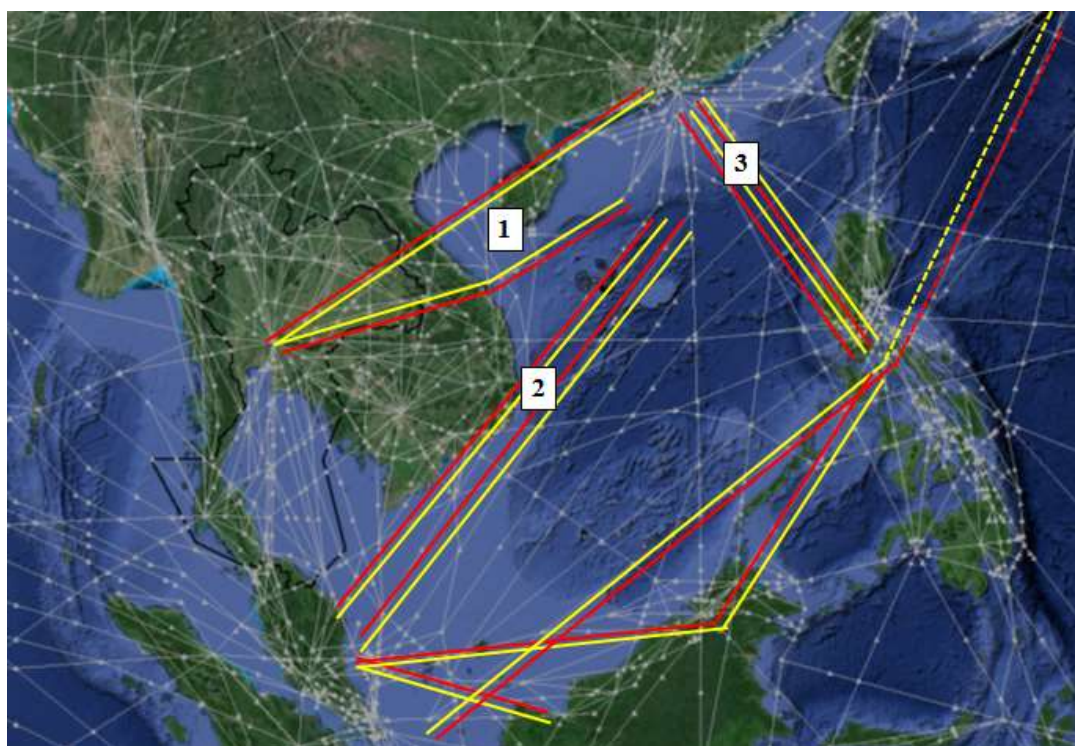
Figure 3: Potential SCS Route Restructuring Possibilities

2.33   ICAO presented an overview of issues affecting airlines, due to the poorly coordinated closure of large portions of airspace for rocket launches and space re-entry activities, caused by space and missile activities in Asia/Pacific Region. The meeting recalled the issues presented by IATA during ATM/SG/3 and presented draft guidance material on launch/re-entry activity for evaluation by SAIOACG/SEACG and the ATM/SG/4.

3.   **ACTION BY THE MEETING**

3.1 The meeting is invited to:

a)   note the information contained in this paper; and

b)   discuss any relevant matters as appropriate.

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ATM/AIM/SAR Deficiencies List (Updated 14 August 2015)

Identification		Deficiencies			Corrective Action			
Requirements	**States/ facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date for completion**	**Priority for action****
WGS-84								
Requirements of Paragraph 3.7.1 of Annex 15	Afghanistan	WGS-84 - Not implemented	24/6/2014			Afghanistan	TBD	A
	Bangladesh	WGS-84 - Not implemented	24/6/2014			Bangladesh	TBD	A
	Bhutan	WGS-84 - Not implemented	2/7/1999	Data conversion completed, but not published		Bhutan	TBD	A
	Brunei Darussalam	WGS-84 - Not implemented	24/6/2014			Brunei Darussalam	TBD	A
	Cook Islands	WGS-84 - Not implemented	24/6/2014			Cook Islands	TBD	A
	Kiribati	WGS-84 - Not implemented				Kiribati	TBD	A
	Marshall Islands	WGS-84 - Not implemented	24/6/2014			Marshall Islands	TBD	A
	Micronesia	WGS-84 - Not implemented	24/6/2014			Micronesia	TBD	A

Identification		Deficiencies			Corrective Action			
Requirements	**States/ facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date for completion**	**Priority for action****
	Nauru	WGS-84 - Not implemented		Conferring with consultant		Nauru	TBD	A
	Pakistan	WGS-84 - Not implemented	24/6/2014			Pakistan	TBD	A
	Palau	WGS-84 - Not implemented	24/6/2014			Palau	TBD	A
	Philippines	WGS-84 - Not implemented	24/6/2014			Philippines	TBD	A
	Samoa	WGS-84 - Not implemented	24/6/2014			Samoa	TBD	A
	Thailand	WGS-84 - Not implemented	24/6/2014			Thailand	TBD	A
	Vanuatu	WGS-84 - Implemented at main airports	2/7/1999			Vanuatu	1999	A
<u>Airspace Classification</u>								
Requirements of Paragraph 2.6 of Annex 11	China	Airspace Classification - Not implemented	7/7/99		Difference to Annex 11 is published in AIP, China.	China	APANPIRG/19 updated, implementation planned by end 2010.	A

Identification		Deficiencies			Corrective Action			
Requirements	**States/ facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date for completion**	**Priority for action****
	Kiribati	Airspace Classification - Not implemented	7/7/99			Kiribati	TBD	A
	Nauru	Airspace Classification - Not implemented	7/7/99			Nauru	TBD	A
	Papua New Guinea	Airspace Classification - Not implemented	7/7/99			Papua New Guinea	Project in place	A
	Solomon Islands	Airspace Classification - Not implemented	7/7/99			Solomon Islands	TBD	A
AIP Format								
Requirements of Chapter 4 of Annex 15	Cook Islands	AIP Format - Not implemented	7/7/99			Cook Islands	ATM/AIS/SAR/G/16 (June 2006) updated - AIP COOK ISLANDS in new format in progress with assistance of New Zealand	A

Identification		Deficiencies			Corrective Action			
Requirements	**States/ facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date for completion**	**Priority for action****
	Kiribati	AIP Format - Not implemented	7/7/99			Kiribati	ATM/AIS/SAR/SG/ 18 (June 2009) was advised AIP in draft stage	A
	Nauru	AIP Format - Not implemented	7/7/99			Nauru	ATM/AIS/SAR/SG/ 18 (June 2008) was advised work soon to start	A
	Papua New Guinea	AIP Format - Not implemented	7/7/99			Papua New Guinea	TBA	A
AIS Quality Management System								
Requirements of Paragraph 3.2.1 of Annex 15 Quality Management System - Not implemented	Afghanistan	AIS Quality Management System - Not implemented	24/6/2014			Afghanistan	TBD	A
	Bangladesh	AIS Quality Management System - Not implemented	24/6/2014			Bangladesh	TBD	A
	Bhutan	AIS Quality Management System - Not implemented	24/6/2014			Bhutan	TBD	A
	Brunei	AIS Quality Management	24/6/2014			Brunei	TBD	A

Identification		Deficiencies			Corrective Action			
Requirements	**States/ facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date for completion**	**Priority for action****
	Darussalam	System - Not implemented				Darussalam		
	Cambodia	AIS Quality Management System - Not implemented	24/6/2014			Cambodia	TBD	A
	Cook Islands	AIS Quality Management System - Not implemented	24/6/2014			Cook Islands	TBD	A
	DPR Korea	AIS Quality Management System - Not implemented	24/6/2014			DPR Korea	TBD	A
	Indonesia	AIS Quality Management System - Not implemented	24/6/2014			Indonesia	TBD	A
	Kiribati	AIS Quality Management System - Not implemented	24/6/2014			Kiribati	TBD	A

Identification		Deficiencies			Corrective Action			
Requirements	States/ facilities	Description	Date first reported	Remarks	Description	Executing body	Target date for completion	Priority for action**
	Lao PDR	AIS Quality Management System - Not implemented	24/6/2014			Lao PDR	TBD	A
	Maldives	AIS Quality Management System - Not implemented	24/6/2014			Maldives	TBD	A
	Marshall Islands	AIS Quality Management System - Not implemented	24/6/2014			Marshall Islands	TBD	A
	Micronesia	AIS Quality Management System - Not implemented	24/6/2014			Micronesia	TBD	A
	Nauru	AIS Quality Management System - Not implemented	24/6/2014			Nauru	TBD	A
	Nepal	AIS Quality Management System - Not	24/6/2014			Nepal	TBD	A

Identification		Deficiencies			Corrective Action			
Requirements	**States/ facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date for completion**	**Priority for action****
		implemented						
	Pakistan	AIS Quality Management System - Not implemented	24/6/2014			Pakistan	TBD	A
	Palau	AIS Quality Management System - Not implemented	24/6/2014			Palau	TBD	A
	Papua New Guinea	AIS Quality Management System - Not implemented	24/6/2014			Papua New Guinea	TBD	A
	Philippines	AIS Quality Management System - Not implemented	24/6/2014			Philippines	TBD	A
	Samoa	AIS Quality Management System - Not implemented	24/6/2014			Samoa	TBD	A
	Solomon Islands	AIS Quality Management System - Not	24/6/2014			Solomon Islands	TBD	A

Identification		Deficiencies			Corrective Action			
Requirements	**States/ facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date for completion**	**Priority for action****
		implemented						
	Thailand	AIS Quality Management System - Not implemented	24/6/2014			Thailand	TBD	A
	Timor Leste	AIS Quality Management System - Not implemented	24/6/2014			Timor Leste	TBD	A
	Vanuatu	AIS Quality Management System - Not implemented	24/6/2014			Vanuatu	TBD	A
	Viet Nam	AIS Quality Management System - Not implemented	24/6/2014			Viet Nam	TBD	A

Identification		Deficiencies			Corrective Action			
Requirements	**States/ facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date for completion**	**Priority for action****
SAR capability								
Requirements of Annex 12	Afghanistan	SAR Capability Matrix	6/07/2015	SAR Capability (no data)		Afghanistan	2016	U
	Bhutan	SAR Capability Matrix	6/07/2015	SAR Capability (no data)		Bhutan	2016	U
	Cambodia	SAR Capability Matrix	6/07/2015	SAR Capability (14 of 20)		Cambodia	2016	U
	Cook Islands	SAR Capability Matrix	6/07/2015	SAR Capability (19 of 20)		Cook Islands	2016	U
	Cook Islands	Annex 12 requirements not implemented. No agreements with adjacent States.	31/1/95		Cook Islands - implement Annex 12 requirements and co-ordinate LOA with adjacent States ICAO - assist to develop SAR capability and to co-ordinate with adjacent States	Cook Islands	2009. SAR agreement with New Zealand completed 2007.	U
	DPR Korea	SAR Capability Matrix	6/07/2015		SAR Capability (15 of 20 elements non-compliant)	DPR Korea	2016	U

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Identification		Deficiencies			Corrective Action			
Requirements	**States/ facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date for completion**	**Priority for action****
	Fiji	SAR Capability Matrix	6/07/2015		SAR Capability (13 of 20 elements non-compliant)	Fiji	2016	U
	Kiribati	SAR Capability Matrix	6/07/2015		SAR Capability (no data)	Kiribati	2016	U
	Lao PDR	SAR Capability Matrix	6/07/2015		SAR Capability (10 of 20 elements non-compliant)	Lao PDR	2016	U
	Macau, China	SAR Capability Matrix	6/07/2015		SAR Capability (10 of 20 elements non-compliant)	Macau, China	2016	U
	Maldives	SAR Capability Matrix	6/07/2015		SAR Capability (9 of 20 elements non-compliant)	Maldives	2016	U

Identification		Deficiencies			Corrective Action			
Requirements	**States/ facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date for completion**	**Priority for action****
	Maldives	Annex 12 requirements not implemented. No agreements with adjacent States.	24/4/97	SAR services and facilities provided (details to be confirmed). SAR agreements with neighbouring States under development	Maldives - implement Annex 12 requirements and co-ordinate LOA with adjacent States ICAO - assist to develop SAR capability and to co-ordinate with adjacent States	Maldives	2009	U
	Marshall Islands	SAR Capability Matrix	6/07/2015		SAR Capability (no data elements non-compliant)	Marshall Islands	2016	U
	Micronesia	SAR Capability Matrix	6/07/2015		SAR Capability (20 of 20 elements non-compliant)	Micronesia	2016	U
	Myanmar	SAR Capability Matrix	6/07/2015		SAR Capability (17 of 20 elements non-compliant)	Myanmar	2016	U
	Nauru	SAR Capability Matrix	6/07/2015		SAR Capability (no data elements non-compliant)	Nauru	2016	U
	Nepal	SAR Capability Matrix	6/07/2015		SAR Capability (12 of 20 elements non-compliant)	Nepal	2016	U
	New Caledonia	SAR Capability Matrix	6/07/2015		SAR Capability (8 of 20 elements non-compliant)	New Caledonia	2016	U

Identification		Deficiencies			Corrective Action			
Requirements	**States/ facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date for completion**	**Priority for action****
	Palau	SAR Capability Matrix	6/07/2015		SAR Capability (no data)	Palau	2016	U
	Papua New Guinea	SAR Capability Matrix	6/07/2015		SAR Capability (11 of 20 elements non-compliant)	Papua New Guinea	2016	U
	Philippines	SAR Capability Matrix	6/07/2015		SAR Capability (12 of 20 elements non-compliant)	Philippines	2016	U
	Samoa	SAR Capability Matrix	6/07/2015		SAR Capability (no data elements non-compliant)	Samoa	2016	U
	Solomon Islands	SAR Capability Matrix	6/07/2015		SAR Capability (no data)	Solomon Islands	2016	U
	Timor Leste	SAR Capability Matrix	6/07/2015		SAR Capability (no data)	Timor Leste	2016	U
	Tonga	SAR Capability Matrix	6/07/2015		SAR Capability (18 of 20 elements non-compliant)	Tonga	2016	U
	Vanuatu	SAR Capability Matrix	6/07/2015		SAR Capability (no data)	Vanuatu	2016	U

Identification		Deficiencies			Corrective Action			
Requirements	**States/ facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date for completion**	**Priority for action****
Non Provision of Safety-related Data								
Requirement of Paragraph 3.3.5.1 of Annex 11 (provision of data for monitoring the height-keeping performance of aircraft)	India	Annex 11 requirement not implemented.		Established by RASMAG/20- failure to provide RVSM approvals summary data	Lack of	India		U
Requirement of Paragraph 3.3.5.1 of Annex 11 (provision of data for monitoring the height-keeping performance of aircraft)	Philippines	Annex 11 requirement not implemented.		Established by RASMAG/20- failure to provide RVSM approvals summary data		Philippines		U
Data Link Performance Monitoring and Analysis								
Requirements of Paragraph 2.27.5 of Annex 11 not met.	China	Post-implementation monitoring not implemented	29/5/2015	Problem Reports not provided to CRA		China	TBD	A

Identification		Deficiencies			Corrective Action			
Requirements	States/ facilities	Description	Date first reported	Remarks	Description	Executing body	Target date for completion	Priority for action**
	Indonesia	Post-implementation monitoring not implemented	29/5/2015	Problem Reports not provided to CRA. Performance monitoring and analysis not reported to FIT.		Indonesia	TBD	A
A	Malaysia	Post-implementation monitoring not implemented	29/5/2015	Problem Reports not provided to CRA. Performance monitoring and analysis not reported to FIT.		Malaysia	TBD	A
A	Myanmar	Post-implementation monitoring not implemented	29/5/2015	Problem Reports not provided to CRA. Performance monitoring and analysis not reported to FIT.		Myanmar	TBD	A

Identification		Deficiencies			Corrective Action			
Requirements	States/ facilities	Description	Date first reported	Remarks	Description	Executing body	Target date for completion	Priority for action**
	Maldives	Post-implementation monitoring not implemented	29/5/2015	Problem Reports not provided to CRA. Performance monitoring and analysis not reported to FIT.		Maldives	TBD	A
A	Sri Lanka	Post-implementation monitoring not implemented	29/5/2015	Not registered with competent CRA. Problem Reports not provided to CRA. Performance monitoring and analysis not reported to FIT.		Sri Lanka	TBD	A
A	Viet Nam	Post-implementation monitoring not implemented	29/5/2015	Performance monitoring and analysis not reported to FIT.		Viet Nam	TBD	A

List of Action Items Arising From the 52nd Conference of Directors General of Civil Aviation Asia and Pacific Regions

Discussion Paper No.	Action Item	Agenda Item 3.1 - Theme Topic
DP/3.1/1 & DP/3.1/4	Action item 52/1	**New Generation Aviation Professionals initiatives** Noting the need for quality training institutions in APAC, the Conference encouraged: 1) States in the region to identify their future manpower requirements for aviation professionals and promote investments in modern training institutions/facilities; 2) States to promote collaboration, cooperation and coordination amongst States to nurture and promote the next generation of aviation professionals; and 3) States to give equal attention to the academic input and creating/sustaining a culture of quality within their training organizations.
DP/3.1/2	Action item 52/2	**New Generation Aviation Professionals Programme** Recognizing that enough qualified and competent aviation professionals will be needed to operate, manage and maintain the future international air transport system the Conference urged States to: a) support the work of the ICAO NGAP Programme by providing resources; b) consider providing data to ICAO to populate the NGAP index; and c) provide a focal point from each organization supporting NGAP activities.
DP/3.1/7 and 3.1/8	Action Item 52/3	**Competency Based ATSEP Model** Noting the criticality of ATM systems and operations, the Conference encouraged States/Administrations to: 1) adopt ICAO's new recommendation in the PANS-Training on competency of Air Traffic Safety Electronic Personnel (ATSEP); 2) encourage ANSPs to implement competency based ATSEP scheme to better support the safety critical ATM/CNS equipment operations; 3) support technical staff of NGAP to pursue professional qualification as well as career development in the aviation discipline.

DP/3.1/10	Action Item 52/4	**Regional Cooperation for the Training of ATM Professionals** The Conference recognized the importance of seamless performances of ATM professionals along with the modernization of services and facilities based on APAC seamless ATM plan, and urged States: a) to strengthen regional cooperation for the trainings for ATM professionals: and b) to share each State's information and best practices about the education and trainings.
DP/3.1/5	Action Item 52/5	**Compliance with PANS Aerodromes** The Conference encouraged States to recognize the importance of complying with the PANS–Aerodromes (Doc 9981) which would become applicable in November 2016.
Agenda Item 3.3 : Air Navigation matters		
DP/3.3/1	Action Item 52/6	**Outcomes of APANPIRG/26** The Conference noted that APANPIRG/26 has empowered its Sub Groups to adopt technical Conclusions/Decisions to enhance the efficiency of approval process and reiterated that the decision should be reviewed by APANPIRG in 2017 for appropriate further action and the DGCA Conference be informed on the action taken.
DP/3.3/2 & 3.3/11	Action Item 52/7	**Airport Disaster Management Concept** The Conference encouraged States prone to natural disasters to: a) consider the airport mutual aid concept of operations to restore airport functions in an efficient and expeditious manner following a disaster; b) consider to stock spare CNS equipment to secure ATC functions in order to maintain continuity of operations.
DP/3.3/4	Action Item 52/8	**Rocket Launch Airspace Closures** The Conference urged States to assist the ATM Sub-Group of APANPIRG to develop guidance material for management of situations related to space rocket launches/reentry activity.
DP/3.3/5	Action Item 52/9	**Volcanic Ash Events** Noting that volcanic events could impact the safety of aircraft operations, the Conference urged States to: a) establish a mechanism to provide regular and timely communications during a volcanic event to ensure all stakeholders are up to date with current information, decision making, planning and situation reports; b) consider establishing an internal crisis management

		centre where applicable to support the collaborative sharing of information during volcanic events or other crises; and c) participate as necessary in the upcoming ICAO APAC volcanic exercises noting that the next exercise is tentatively scheduled for February 2016.
DP/3.3/6	Action Item 52/10	**Measuring ATM Performance** The Conference recognized the importance of Measuring ATM Performance and encouraged States and ANSPs to avail themselves of the following two CANSO publications in their deliberations on ATM performance measurement: *Global ANS Performance Report 2014* and *Recommended KPIs for measuring ANSP Operational Performance.*
DP/3.3/7	Action item 52/11	**ASBU Concept** Recognizing the importance of the ICAO Aviation System Block Upgrades (ASBU) concept which provided a strategic framework to develop and evolve the air traffic management capabilities while ensuring regional and global harmonization and interoperability of the aviation system, the Conference encouraged States to: a) avail themselves of the CANSO ASBU guidance publication; and b) participate in the upcoming "Methodology and Best Practices for ASBU Implementation Course" to be held in August 2016 in Singapore.
DP/3.3/8	Action Item 52/12	**ADS-B implementation Plans** The Conference encouraged States with ADS-B implementation plans to explore ADS-B data sharing arrangements with their neighbors; and to expedite implementation of similar ADS-B collaboration over the areas of major traffic flows, remote and oceanic areas such as Bay of Bengal and the rest of the South China Sea.
DP/3.3/9	Action Item 52/13	**Regional RPAS Collaboration** Noting the challenges faced by aviation regulators in the face of the rapid emergence of remotely piloted aircraft systems, the Conference agreed: a) to Singapore hosting an Asia-Pacific Regional RPAS information sharing forum in 2016; and b) for APRAST/RASG to consider establishing a RPAS Task Force and coordinate with appropriate bodies responsible for safety and security in respect of on-going Regional RPAS collaboration and information sharing.
DP/3.3/12	Action Item 52/14	**Mini Global Demonstration Project** Recognizing the need to promote understanding of System Wide Information Management (SWIM) in the Asia

		Pacific Region, the Conference encouraged States to participate in the Mini Global II demonstration Project and the ICAO APAC SWIM workshop in 2016.
DP/3.3/13	Action Item 52/15	**Guidance Material on acceptance of CNS Systems** The Conference recognized the challenges faced by some States in the acceptance of CNS systems in respect of ICAO compliance and invited the CNS Sub Group of APANPIRG to examine the feasibility for development of a Guidance Material on a common methodology for acceptance and report the progress made to the 53rd DGCA Conference.
DP/3.3/14	Action Item 52/16	**Guidance Material on RNAV visual procedures** Noting the benefits of PBN implementation by States the Conference invited the expeditious progress by ICAO working groups on the RNAV to visual and PBN to ILS procedures guidance material.
DP/3.3/21	Action Item 52/17	**Degradation in the performance of the CNS equipment** Recognizing that the development of infrastructure projects at or in the vicinity of airports may lead to degradation in performance of the CNS equipment which would ultimately affect normal operations of Air Traffic Control (ATC) the Conference urged States to: a) note the on-going developments at or in vicinity of an airport which will constitute changes to the operating environment of CNS equipment and which may cause impact to the normal operations of CNS equipment if not properly managed; b) note the importance in having close cooperation between infrastructure project owners and CAAs/ANSPs to perform assessment on potential impacts to CNS equipment due to such changes and incorporate mitigating measures in the early planning stage; and c) support grooming the next generation aviation professionals specialized in CNS equipment safeguarding.
DP/3.3/20	Action Item 52/18	**Cross Border ATFM Implementation** Recognizing that ATFM is one of the key elements in the Asia Pacific Seamless ATM Plan, the Conference encouraged States to: a) participate and commit the necessary resources in the cross-border ATFM Operational Trials; b) Maintain close engagement between the aeronautical MET- and ATFM-service providers to ensure development and supply of the MET information necessary to support ATFM; and

		c) consider developing a regional strategy through the ICAO ATFM Steering Group as the next step towards cross-border ATFM implementation in the Asia and Pacific Regions.
DP/3.3/22	Action Item 52/19	**Transition from AIS to AIM** Noting the hurdles experienced by States in the AIS-AIM transition the Conference urged States to: a) share the experience in e-AIP implementation and the use of ICARD system; b) share the major challenges of transition from AIS to AIM and the tackling strategy;
DP/3.3/23	Action Item 52/20	**GNSS Technology** Taking note of the emerging GNSS technology and adoption of GAGAN/SBAS by India, the Conference urged States to: a) adopt SBAS in the Asia Pacific Region as an enabler for PBN operations; b) make use of existing GNSS/SBAS technology in the Region.
DP/3.3/42	Action Item 52/21	**Seamless ATM Implementation Progress** Noting that the Asia/Pacific Seamless ATM Reporting process (implemented since November 2014) together with the regional picture as of 15 October 2015 was monitoring the implementation progress of Air Navigation Improvements in APAC Region against the objectives set forth by the GANP ASBU Block 0 and Seamless ATM plan v1.0 the Conference urged States to: a) nominate their Points of Contact and report on their Seamless ATM implementation progress at least once a year through the ICAO online reporting process; b) analyze the first Regional Picture, seek any clarification and record gaps of implementation for States' further action.
DP/3.3/43	Action Item 52/22	**ATM modernization Plan** The Conference encouraged States to recognize ICAO recommendations in GANP on ATM Modernization and tailor a modernization plan to meet their individual and regional requirements.
DP/3.3/44	Action Item 52/23	**AIM Implementation** Recognizing that all aspects of air navigation services are heavily dependent on timely and high quality aeronautical information the Conference urged States to: a) ensure that the necessary organizational direction, support and resources are applied to strengthen States AIS capability and the transition to AIM;

Discussion Paper No.	Action Item	b) share information and experience in AIM transition through collaborative bi-lateral or multi-lateral arrangements and through active and regular participation in the AIM transition information sharing website; c) note the need for collaboration among APAC States in terms of AIM implementation.
Discussion Paper No.	Action Item	Agenda Item 3.4: Economic Development of Air Transport
DP/3.4/3	Action Item 52/24	**Core Principles on Consumer protection** The Conference encouraged States to apply ICAO Core principles on consumer protection that has been adopted by the ICAO Council.
DP/3.4/4	Action Item 52/25	**ICAO policies on charges(Doc 9082)** Noting the importance of raising awareness of ICAO policies on charges in Doc 9082 and their implementation in APAC Region, the Conference a) urged States to ensure that ICAO's policies on charges in Doc 9082 are implemented so that the determination and allocation of airport and air navigation charges is transparent and equitable; b) encouraged States of the Asia & Pacific Regions who are members and observers in the Joint Airport Economics Panel and Air Navigation Services Economics Panel (AEP-ANSEP) to actively participate and ensure that ICAO's policies on Doc 9082 remain accurate, valid and responsive to the needs of States and of the industry.
DP/3.4/5	Action Item 52/26	**Proliferation of Taxes** Noting the growing proliferation of taxes outside the scope of Doc 8632 the Conference urged States to update the concerned authorities within their administration to take the ICAO policies on taxation into consideration.

DP/3.4/9	Action Item 52/27	**Economic Development of Air Transport**
		Noting the follow-up work to the Sixth Worldwide Air Transport Conference (ATConf/6) with outcomes of the Air Transport Regulation Panel (ATRP) and Airport Economics Panel and Air Navigation Services Economics Panel (AEP-ANSEP) concerning policies and regulation the Conference urged States to:
		a) support ICAO's work for Economic Development of Air Transport;
		b) apply and follow ICAO's policies and guidance in the air transport field in their regulatory practices, including the long-term vision for liberalization and core principles on consumer protection;
		c) contribute to ICAO's ongoing work on aviation satellite account methodology;
		d) coordinate with ICAO in meeting States needs of data analysis to promote air transport development in the region;
		e) access and use the ICAO Data Plus and business analysis tools; and
		f) contribute to the voluntary Air Transport Fund.
DP/3.4/10	Action Item 52/28	**Fast Travel Concepts**
		Noting that the Fast Travel initiative responds to passengers' demand for greater convenience the Conference urged States to consider explicitly authorizing Fast Travel concepts, or address any regulatory obstacles at national level through the National Air Transport Facilitation Committee.
		Agenda Item 3.5: Aviation and Environment
DP/3.5/1	Action Item 52/29	**Airport Carbon Accreditation**
		The Conference noted the benefits and importance of *Airport Carbon Accreditation* and urged States to:
		a) encourage their aerodrome operators to use ACI guidance materials and training for greenhouse gas emission reduction; and
		b) include *Airport Carbon Accreditation* into their next update of State Action Plans.
DP/3.5/6	Action Item 52/30	**International Aviation and climate change**
		Noting the developments on the actions requested by the 38th Session of the ICAO Assembly in the field of international aviation and climate change, the Conference urged States to:
		a) develop, update and submit their action plans by the end of 2015;
		b) continue to consider environmental issues in the planning and implementation of regional air

		navigation systems;
		c) promote the use of IFSET to estimate the fuel savings and corresponding environmental benefits from the implementation of operational improvements, as part of the development of States' Action Plans;
		d) note the availability of further assistance by ICAO in the preparation and submission of States' action plans;
		e) express a clear concern, through the UNFCCC process, on the use of international aviation as a potential source for the mobilization of revenue for climate finance to the other sectors, in order to ensure that international aviation would not be targeted as a source of such revenue in a disproportionate manner; pursuant to Assembly Resolution A38-18, paragraph 30; and
		f) to attend next GLADS in first half of 2016.
DP/3.5/7	Action Item 52/31	**Alternative Aviation Fuels** The Conference recognized the importance of the cooperation of industry, academia, and government as one of the efforts to promote the use of alternative aviation fuels and urged States to: a) recognize the necessity of collaboration between the various stakeholders in order to promote the use of alternative aviation fuels; and b) consider the establishment of discussion fora in which various stakeholders participate in as appropriate, taking their own circumstances into consideration.
		Agenda Item 3.6: Technical and Regional Cooperation
DP/3.6/2	Action Item 52/32	**Flight Procedure Programme** The Conference noted with appreciation the significant accomplishments of the FPP in 2015 and a) urged States to continue their support of the FPP into Phase 3 (2018-2022) of the Programme and to endorse its Strategy Forward; b) urged States who are not yet a member of the FPP to consider becoming Active Participating States or User States; and c) urged current User States of the FPP to consider upgrading their participation status to Active Participating States and to become part of the FPP Steering Committee.
DP/3.6/3	Action Item 52/33	**Regional Training Road Map** The Conference encouraged States to use the regional Training Road Maps (TRMs) developed by Singapore for aviation safety regulators in the areas of Personnel Licensing (PEL), Aircraft Operations (Ops) and aircraft accident and incident investigation (AIG) for areas of improvement in their safety oversight capabilities; and

		supported Singapore's continued efforts in the development of the TRMs for the other key job functions under the rest of the USOAP audit areas; Recognizing the need for greater collaboration in the capability development of regulators in the Asia Pacific Region, the Conference encouraged States to contribute to the development of the next regional TRM.

South China Sea Operational Concept

Expected Implementation: 09 November 2017

Communication: VHF, either direct or using a shared facility (therefore States are encouraged to provide shared transceivers where they are required)*

Navigation: using the Seamless ATM Plan's expectations:

- RNAV 2/ RNP 2 – near parallel or parallel routes spaced 20NM apart for the major traffic routes to increase capacity where required (note: this is a procedural separation, and is not the determinant of the ATC separation, which is based on ATS surveillance);

- implementation of extra RNAV 2/ RNP 2 routes where required which are not necessarily based on existing routes; and

- the new routing structure to be based on the most direct routes possible, using key entry/exit waypoints to/from the South China Sea, or SID/STAR waypoints.

Surveillance: using the Seamless ATM Plan's expectations:

- coverage by ADS-B and SSR*;
- ADS-B data to be shared wherever this data is required.

ATM: using the Seamless ATM Plan's expectations:

- operationalization of 5-10NM ATC separation;

- 10-20 NM separation at Transfer of Control Points (TOC);

- removal of the Flight Level Allocation Scheme (FLAS);

- ATFM measures such as Miles-in-Trail or Minutes-in-Trail to be applied where required for tactical capacity/demand balancing; and

- an update of ATC LOAs and contingency plans as required.

ICAO encourages states to share surveillance and communications capabilities wherever possible, and in instances where necessary, establish new capabilities to plug the gaps in surveillance and VHF communications within the South China Sea. It is suggested that 09 November 2017 be set as preliminary target for full surveillance and communications within the South China Sea area.