

INTERNATIONAL CIVIL AVIATION ORGANIZATION



**REPORT OF THE SIXTH MEETING OF THE ATM SUB-GROUP OF APANPIRG
(ATM/SG/6)**

HONG KONG CHINA, 30 JULY – 03 AUGUST 2018

The views expressed in this Report should be taken as those of the Meeting and not the Organization

Approved by the Meeting
and published by the ICAO Asia and Pacific Office, Bangkok

ATM/SG/6
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INTRODUCTION

Meeting

1.1 The Sixth Meeting of the Air Traffic Management Sub-Group (ATM/SG/6) of the Asia Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG) was held at the Hong Kong Civil Aviation Department (CAD) Headquarters, Hong Kong, China from 30 July to 03 August 2018.

Attendance

2.1 The meeting was attended by 107 participants from 27 States, two Special Administrative Regions of China and six International Organizations, including Afghanistan, Australia, Bangladesh, Cambodia, China, Hong Kong China, Macao China, Fiji, India, Indonesia, Japan, Kiribati, Lao People's Democratic Republic (PDR), Malaysia, Maldives, Mongolia, Myanmar, Nepal, New Zealand, Pakistan, Philippines, Republic of Korea (ROK), Singapore, Sri Lanka, Thailand, Tonga, United Arab Emirates (UAE), United States of America (USA), Viet Nam, IATA, ICCAIA, IFALPA, IFATCA, SITA, and ICAO.

2.2 A list of participants is provided at **Appendix A** to this Report.

Officer and Secretariat

3.1 Mr. Kuah Kong Beng, Director (Special Project) Singapore Air Navigation Services Group Civil Aviation Authority of Singapore presided over the meeting throughout its duration as Sub-Group Chairman. He was assisted by ATM/SG Vice-chair Mr. Mukesh Chand Dangi, Executive Director (ATM-ASM) Airports Authority of India.

3.2 Mr. Len Wicks, Regional Officer Air Traffic Management (ATM), ICAO Asia and Pacific Office, was the Secretary for the meeting. He was assisted by Mr. Shane Sumner, Regional Officer ATM/AIM, ICAO Asia and Pacific Office, the ATM Secondment from China (Ms. Zhou Ying, Associate ATM/AIM Officer), Mr. Hiroyuki Takata, Regional Officer, Air Traffic Management ICAO Asia & Pacific Regional Sub-Office and Ms. Prakayphet Chalayonnawin, Programme Analysis Associate, Air Traffic Management.

Language and Documentation

4.1 The ATM Sub-Group met as a plenary throughout the meeting. The working language of the meeting was English for all documentation and this Report. A total of 47 Working Papers (WPs), 23 Information Papers (IPs) and twelve flimsies were considered by the meeting. The list of working and information papers is attached at **Appendix B** to this report (IP01).

Opening of the Meeting

Chairman of the ATM Subgroup

5.1 Mr. Kuah Kong Beng welcomed participants to the meeting.

ICAO Regional Office

5.2 On behalf of Mr. Arun Mishra, Regional Director of the ICAO Asia and Pacific Office, Mr. Len Wicks welcomed all the participants to the meeting.

Draft Conclusions, Draft Decisions and Decisions of ATM/SG – Definition

6.1 The ATM Sub-Group recorded its actions in the form of Draft Conclusions, Draft Decisions and Decisions within the following definitions:

- a) **Draft Conclusions** of the ATM/SG relate to matters that are not just of a purely technical or operational nature, which need to be considered by APANPIRG;
- b) **Conclusions** of the ATM/SG relate to matters of a purely technical or operational nature, which APANPIRG had delegated authority to ATM/SG to act upon;
- c) **Draft Decisions** relate solely to matters dealing with the internal working arrangements of the ATM/SG, which need to be considered by APANPIRG; and
- d) **Decisions** of the ATM/SG that relate solely to matters dealing with the internal working arrangements of the ATM/SG, which APANPIRG had delegated authority to ATM/SG to act upon.

List of Draft Conclusions and Decisions

7.1 List of ATM/SG/6 Draft Conclusions

Draft Conclusion ATM/SG/6-5: Transition Planning for RNP APCH CHART Identification from RNAV to RNP			
What:		Recognizing ICAO Circular 353, <i>Transition Planning for Change to Instrument Flight Procedure Approach Chart Identification from RNAV to RNP</i> will be finalized to provide guidance on the development of global, regional and State transition plans, and ICAO Regional Office is requested to develop a draft transition plan within twelve months of the final publication of the Circular, that: a) States begin internal coordination on the State transition plan and provide the number of RNP APCH procedures published and planned, and the time required to transition from RNAV (GNSS)/RNAV (RNP) to RNP chart identification; b) ICAO Regional Office drafts a regional transition plan on RNP APCH chart identification in coordination with relevant regional contributory bodes of APANPIRG, sub-regional ATM coordination groups and regional stakeholders; and c) ICAO Regional Office conducts a meeting or workshop to discuss the regional transition plan, after a regional transition plan template has been provided by the ICAO PBN Programme Office.	
		Expected impact: ☒ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical	
Why:		To commence preparation for the global regional and State planning for transition of approach chart identification from RNAV to RNP.	
		Follow-up: ☒ Required from States	
When:		5-Sep-18	
		Status: Draft to be adopted by PIRG	
Who:		☒ Sub groups ☒ APAC States ☒ ICAO APAC RO ☐ ICAO HQ ☒ Other: RSO	

Draft Conclusion ATM/SG/6-7: Proposal for amendment to PANS-ATM (Doc4444) on ADS-B related Phraseology			
What: Recognizing that: 1. where system functionality is derived from the same source for both MODE S SSR and ADS-B the phraseology used between ATC and pilots should be the same; 2. in almost all cases, the pilot interfaces with the ADS-B system through the SSR transponder interface; and 3. the use of ADS-B-specific phrases may cause confusion between pilots and ATC; ICAO be invited to amend PANS-ATM to remove the following phrases: 12.4.3.5 “RE-ENTER ADS-B AIRCRAFT IDENTIFICATION” 12.4.3.7 “TRANSMIT ADS-B IDENT” 12.4.3.10 “STOP SQUAWK TRANSMIT ADS-B ONLY” or “STOP ADS- B TRANSMISSION, SQUAWK (CODE) ONLY” 12.4.3.11 “TRANSMIT ADS-B ALTITUDE” 12.4.3.13 “STOP ADS-B ALTITUDE TRANSMISSION [(WRONG INDICATION, or reason)]”		Expected impact: ☒ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical	
Why: To remove phrases from PANS-ATM that cause confusion to pilots and ATC, recognizing that the greater majority of ADS-B installations in aircraft use the same pilot interfaces as the Mode S SSR transponder.		Follow-up: ☐ Required from States	
When: 5-Sep-18		Status: Draft to be adopted by PIRG	
Who: ☐ Sub groups ☐ APAC States ☒ ICAO APAC RO ☒ ICAO HQ ☐ Other:			

Draft Conclusion ATM/SG/6-8: Procedures for Ballistic Launch/Space Re-entry Management			
What: That, States are urged to: (1) ensure adoption and sensitisation of the ballistic launch/space re-entry expectations contained with the <i>Asia/Pacific Seamless ATM Plan</i> ; and (2) institutionalise the related guidance and State Planning Checklist provided at Appendix E to the Report .		Expected impact: ☒ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical	
Why: To improve State planning and preparation for ballistic launch and space re-entry activities, in order to reduce adverse effects on airspace users and Air Navigation Service Providers.		Follow-up: ☒ Required from States	
When:		Status: Draft to be adopted by PIRG	
Who: ☐ Sub groups ☒ APAC States ☒ ICAO APAC RO ☐ ICAO HQ ☐ Other:			

Draft Conclusion ATM/SG/6-9: Minimizing the Impact of Non-ICAO Procedures and Requirements for Military Activities Affecting Civil Aviation		
What: That, where the imposition of non-ICAO military requirements and procedures affecting international civil aviation is either planned or likely, States are urged to ensure that civil aviation interests are taken into account by: 1. ensuring military authorities are fully informed of the obligations of all States that are signatory to the Convention on International Civil Aviation; 2. conducting full and timely consultation with airspace users, adjacent States and ICAO; 3. implementing the capability to tactically share FPL and ATS messages, civil ATC surveillance data and other relevant information between the ANSP and military authorities; 4. implementing direct communications facilities between military organizations and the ANSP to permit the coordination of requests for information on any unknown aircraft; 5. establishing civil-military coordination functions within civil air traffic control centres; 6. promulgating timely, clear and unambiguous information on the requirements and procedures, and accurate, detailed charts in accordance with the requirements of ICAO Annex 4 and Annex 15; and 7. where pre-authorizations for individual civil flights in affected areas are necessary, States are urged to either consider: i) issuing authorizations with the seasonal schedule approval; or ii) developing and rigorously test clear and, ideally, automated procedures for compliance such as the use of flight plan data.	Expected impact: ☒ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical	
Why: To avoid confusion increased workload and increased risk of military intervention for civil flights operating in airspace where non-ICAO military requirements and procedures are imposed.	Follow-up: ☒ Required from States	
When: 7-Sep-18	Status: Draft to be adopted by PIRG	
Who: ☐ Sub groups ☒ APAC States ☒ ICAO APAC RO ☐ ICAO HQ ☐ Other:		

Note: Draft Conclusion ATM/SG/6-X: AKARA-FUKUE Air Corridor ATM Operation Normalisation was not agreed by the meeting

Draft Conclusion ATM/SG/6-13: ICAO Action to Provide Support and Guidance Material to Facilitate AIS – AIM Transition		
What: That, ICAO is urged to: 1. provide guidance on the best practice on the establishment of a support team, training and handling of data inconsistencies to facilitate digital eAIP implementation; and 2. provide guidance on best practices for implementing AIM Roadmap Phase 3 Steps P-19, P-20 and P-21.	Expected impact: ☒ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical	
Why: To respond to State concerns on the lack of guidance material for aeronautical information exchange and the need for advice on best practices in implementing AIM Roadmap Phase 3 transition steps.	Follow-up: ☐ Required from States	

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When: 3-Aug-18	Status: Draft to be adopted by PIRG
Who: ☐ Sub groups ☐ APAC States ☒ ICAO APAC RO ☒ ICAO HQ ☐ Other:	

Draft Conclusion ATM/SG/6-16: GADSS Aircraft Tracking Requirement

What: To support compliance with the Global Aeronautical Distress and Safety System (GADSS) aircraft tracking requirements applicable 08 November 2018 that: a) States should provide information to the ICAO APAC Regional Office where actual Air Traffic Control tracking capability does not meet the GADSS requirements in their area of responsibility, together with a timeline for promulgation of regulatory requirements for airlines to submit requests for variations and exemptions; and b) ICAO HQ be requested to ensure that other ICAO regions affected take action in accordance with a), and consolidate the information to make it available to all aircraft operators and States.		Expected impact: ☒ Political / Global ☒ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical
Why: The action requested is critical to support the GADSS aircraft tracking requirement to ensure airlines (and regulators) have a clear understanding of areas of responsibility, to enable compliance with the requirements applicable from 08 November 2018.	Follow-up: ☒Required from States	
When: 5-Sep-18	Status: Draft to be adopted by PIRG	
Who: ☐Sub groups ☒APAC States ☐ICAO APAC RO ☒ICAO HQ ☐Other:		

Draft Conclusion ATM/SG/6-17: SAR and GADSS in the GANP

What: That, Asia/Pacific States are urged to advocate for: a) inclusion of Search and Rescue (SAR) as a Basic Building Block (BBB) and the Global Aeronautical Distress and Safety System (GADSS) functions within the Sixth edition of the Global Air Navigation Plan (GANP) by - i) sending SAR experts; and ii) presenting SAR-related papers to the Thirteenth Air Navigation Conference (AN-Conf/13, Montreal, Canada, 9 – 19 October 2018); and b) greater resources within ICAO HQ to ensure an effective oversight of SAR.		Expected impact: ☒ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical
Why: APSAR/WG has noted systemic weaknesses in vital SAR focus areas and believes GADSS implementation will take much time and effort to be as beneficial as it should become.	Follow-up: ☒Required from States	
When: 5-Sep-18	Status: Draft to be adopted by PIRG	
Who: ☐Sub groups ☒APAC States ☐ICAO APAC RO ☒ICAO HQ ☐Other:		

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7.2 List of Conclusions

Conclusion ATM/SG/6-1: ATC Separations Standards Survey			
What: That, States are urged to study and respond to the ATC Separation Standards Survey, to be re-circulated by the ICAO APAC Regional Office State Letter.		Expected impact: ☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical	
Why: To enhance the level of reporting in order to improve the implementation of the Asia/Pacific Seamless ATM Plan's element on the application of appropriate ATC separation standards.		Follow-up: ☒ Required from States	
When: 3-Aug-18		Status: Adopted by Subgroup	
Who: ☐ Sub groups ☒ APAC States ☒ ICAO APAC RO ☐ ICAO HQ ☐ Other:			

Conclusion ATM/SG/6-2: Recommended CTOT Compliance Window			
What: That: 1. Asia/Pacific Administrations implementing Ground Delay Programs (GDP) for flights to capacity-constrained destination airports use a recommended compliance window of -5 to +10 minutes to measure compliance with Calculated Take-Off Times (CTOT); 2. CTOT compliance windows for individual departure airports be subsequently refined on the basis of post-operations analysis, taking into account the requirements at constrained destination airports and subject to the agreement of the Administration responsible for the departure airport; and 3. CTOT compliance windows other than the recommended compliance window be reported to the Air Traffic Flow Management Steering Group.		Expected impact: ☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical	
Why: To establish an initial metric for the analysis of compliance with ATFM measures (Ground Delay Programs - GDPs), to be further refined based on post-ops analysis results		Follow-up: ☒ Required from States	
When: 3-Aug-18		Status: Adopted by Subgroup	
Who: ☐ Sub groups ☒ APAC States ☒ ICAO APAC RO ☐ ICAO HQ ☐ Other:			

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Conclusion ATM/SG/6-3: Proposed Air Navigation Plan Volume II Amendment			
What: That, a Proposal for Amendment (PfA) to the APAC Air Navigation Plan Volume II at Appendix C to the Report be submitted, withdrawing Mode A SSR Code A1000 from Table ATM II-APAC-2 and identifying it as the Mode S conspicuity code for the APAC Regions.		Expected impact: ☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical	
Why: Reserve this SSR code for future use as the non-discrete Mode S conspicuity code.	Follow-up: ☒ Required from States		
When: 3-Aug-18	Status: Adopted by Subgroup		
Who: ☐ Sub groups ☒ APAC States ☒ ICAO APAC RO ☐ ICAO HQ ☐ Other:			
Conclusion ATM/SG/6-4: Asia/Pacific Regional SID/STAR Phraseology Implementation Strategy			
What: That, 1. The Asia/Pacific Regional SID/STAR Phraseology Implementation Strategy at Appendix D to the Report be adopted, and uploaded to the ICAO Asia/Pacific Regional Office Website, together with an Appendix of information on lessons learned, updated on receipt of new information; and 2. All Asia/Pacific Administrations respond to a survey on the implementation status of the SID/STAR phraseology, and report final implementation of the phraseology to the ICAO Asia/Pacific Regional Office.		Expected impact: ☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical	
Why: The current non-harmonized implementation of Amendment 7 to PANS-ATM for new SID/STAR phraseologies gives rise to potential safety concerns in terms of confusion and misinterpretation of instructions.	Follow-up: ☒ Required from States		
When: 3-Aug-18	Status: Adopted by Subgroup		
Who: ☐ Sub groups ☒ APAC States ☒ ICAO APAC RO ☒ ICAO HQ ☐ Other:			
Conclusion ATM/SG/6-6: Revised ADS-B Version 2 ADS-B Out Forward Fit Equipage			
What: That, States/Administrations in APAC Region be strongly encouraged to mandate that registered aircraft with a maximum certified take-off mass exceeding 5 700 kg or having a maximum cruising true airspeed capability greater than 250 knots, with a date of manufacture on or after 1 January 2020 be equipped with ADS-B avionics compliant with Version 2 ES (equivalent to RTCA DO-260B) or later version. <i>This Draft Conclusion supersedes Conclusion APANPIRG 26/44.</i>		Expected impact: ☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical	
Why: To align Asia/Pacific Region ADS-B Version 2 forward fit equipage with the revised European Commission Regulation 2017/386.	Follow-up: ☐ Required from States		
When: 5-Sep-18	Status: Adopted by Subgroup		
Who: ☐ Sub groups ☒ APAC States ☐ ICAO APAC RO ☐ ICAO HQ ☐ Other:			

Conclusion ATM/SG/6-12: Multiple Line-Ups on Same Runway		
What:	That, considering the efficiency and environmental benefits, Asia/Pacific States are urged to support a proposal to include Multiple line-ups on same Runway within ICAO Doc. 7030 <i>Regional Supplementary Procedures</i> for the Asia and Pacific Regions, in accordance with Appendix H to the Report .	Expected impact: ☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical
Why:	To highlight the potential for this standard to be applied, as is currently the case in Europe under Doc. 7030.	Follow-up: ☒ Required from States
When:	5-Sep-18	Status: Adopted by Subgroup
Who:	☐ Sub groups ☒ APAC States ☒ ICAO APAC RO ☒ ICAO HQ ☐ Other:	

Conclusion ATM/SG/6-14: Management of NOTAMs		
What:	That, States are urged to take immediate action to reduce the large numbers of permanent, long duration NOTAMs by: 1. conducting a full review of all NOTAMs issued by the State; 2. expediting the transfer of valid permanent NOTAM information into AIP; 3. expediting the transfer of valid temporary NOTAM information of long duration into AIP SUP; and 4. cancelling the NOTAMs accordingly.	Expected impact: ☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical
Why:	To reduce the risks associated with the proliferation of PERM NOTAM and temporary NOTAM of long duration that have not yet been migrated into AIP.	Follow-up: ☒ Required from States
When:	3-Aug-18	Status: Adopted by Subgroup
Who:	☐ Sub groups ☒ APAC States ☒ ICAO APAC RO ☐ ICAO HQ ☐ Other:	

Conclusion ATM/SG/6-15: Asia/Pacific Regional Plan for Collaborative AIM		
What:	That, 1. the Asia/Pacific Regional Plan for Collaborative AIM Version 1.0 at Appendix I to the Report , be adopted and uploaded to the ICAO Asia/Pacific Regional Office eDocuments web-page; 2. the Regional AIM Implementation Status Reporting Form, provided at Appendix D to the AIM Plan, be separately uploaded to the Regional Office eDocuments web-page; and 3. Asia/Pacific Administrations utilize the Regional AIM Implementation Status Reporting Form to report their AIM implementation status at least once annually, by not later than 30 April each year.	Expected impact: ☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical

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Why: To provide a Regional AIM implementation plan together with guidance on priority aspects of AIM implementation, and information on processes for the management of Regional aeronautical data.	Follow-up: ☐ Required from States
When: 3-Aug-18	Status: Adopted by Subgroup
Who: ☐ Sub groups ☒ APAC States ☒ ICAO APAC RO ☐ ICAO HQ ☐ Other:	

7.3 List of ATM/SG/6 Draft Decisions

Draft Decision ATM/SG/6-10: AIRARD/TF Terms of Reference	
What: That, the Advanced Inter-Regional Air Traffic Services Route Development Task Force (AIRARD/TF) Terms of Reference at Appendix F to the Report be approved by the Asia/Pacific (APAC) Region.	Expected impact: ☐ Political / Global ☒ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical
Why: To endorse the AIRARD/TF Terms of Reference, as already approved by the MIDANPIRG.	Follow-up: ☐ Required from States
When: 5-Sep-18	Status: Draft to be adopted by PIRG
Who: ☐ Sub groups ☐ APAC States ☒ ICAO APAC RO ☐ ICAO HQ ☐ Other: MIDANPIRG, EANPG	

Draft Decision ATM/SG/6-11: Revised APUAS/TF Terms of Reference	
What: That, recognizing the scope of work on Unmanned Aircraft Systems (UAS), and particularly UAS Traffic Management (UTM) Systems being undertaken at the global level by the UAS Advisory Group, the revised APUAS/TF Terms of Reference at Appendix G to the Report .	Expected impact: ☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical
Why: To revise the scope of work of APUAS/TF, recognizing the work now being undertaken at the global level	Follow-up: ☐ Required from States
When: 5-Sep-18	Status: Draft to be adopted by PIRG
Who: ☐ Sub groups ☐ APAC States ☒ ICAO APAC RO ☐ ICAO HQ ☐ Other:	

7.4 List of Decisions

Nil.

REPORT ON AGENDA ITEMS

Agenda Item 1: Adoption of Provisional Agenda

1.1 The Provisional Agenda (WP01) was adopted by the meeting, which noted the Tentative Order of Discussion (OOD), and the List of Tentative Working and Information Papers (IP01).

Agenda Item 2: Review of Related High Level Meetings

APANPIRG Outcomes (WP02)

2.1 The meeting was informed of relevant outcomes from the Twenty-Eighth Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/28, Bangkok, Thailand, 11 – 14 September 2017).

2.2 APANPIRG/28 noted that, given the increasing air traffic, Asian States should recognise the problem and establish policies, rules and procedures for Air Navigation Service Providers (ANSPs) to improve the benefits from technology, including training for senior managers to minimise the gap between current and best practices in terms of using Air Traffic Control (ATC) separations.

2.3 IATA had expressed concern about the number of Flight Plan (FPL) messages that were not available to ATC in China. IATA had expressed support for ICAO policies and procedures regarding the addressing of FPL and Air Traffic Services (ATS) messages, as they formed the foundation of ATM, ensuring consistency and standardization.

2.4 ICAO had stated that civil/military cooperation remained one of the highest priorities in the Asia/Pacific Region, as stated in the *Asia/Pacific Seamless ATM Plan*. Recalling that civil/military cooperation issues had been reported in parts of the Asia/Pacific for some years, ICAO noted that the Regional Office continued to receive reports from States and IATA of major delays and arrangements and procedures that should be improved.

2.5 APANPIRG/28 had urged Afghanistan, India, Iran and Pakistan to enhance capacity for daily improvement, not just contingency –including the urgent implementation of at least 20 NM (Nautical Mile) longitudinal spacing along the axis formed by Iran-Pakistan-India and Afghanistan/Pakistan/Indian routes.

2.6 The meeting noted the outcomes of the Asia Pacific Ministerial Conference on Civil Aviation. The *Beijing Declaration* had committed Ministers to implement the APANPIRG-endorsed *Asia/Pacific Seamless ATM Plan* by 2022, with the following elements selected as a priority:

- Aeronautical Information Management (AIM);
- Performance-based Navigation (PBN);
- common ground/ground telecommunication infrastructure;
- civil/military cooperation;
- ATS surveillance, including Automatic Dependent Surveillance-Broadcast (ADS-B);
- Air Traffic Flow Management/Collaborative Decision Making (ATFM/CDM);
- National Air Navigation Plans;
- Aeronautical Search and Rescue (SAR); and
- Meteorological Services for International Air Navigation (MET).

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2.7 After discussions about the Ministerial Declaration's priorities, the meeting agreed that an effective means of monitoring would be a publically-available implementation progress report.

RASG and APRAST Meeting Outcomes (WP03)

2.8 The meeting was briefed on relevant outcomes from the Seventh Meeting of the Regional Aviation Safety Group – Asia and Pacific Regions (RASG-APAC/7, Bangkok, Thailand, 03 – 05 July 2017), the Eleventh Meeting of the Eleventh and Twelfth Meetings of the Asia Pacific Regional Aviation Safety Team (APRAST/11 and APRAST/12, Bangkok, Thailand, 20 – 24 November 2017 and 28 May – 01 June 2018 respectively).

2.9 APRAST/11 had suggested the need for development of a performance-based manual for safety oversight of ANSPs. The meeting noted that the intention was to consult APANPIRG, as APRAST may not have the necessary expertise to develop such a manual.

2.10 A total of 21 States and Administrations had responded to the airspace safety reporting survey. **Table 1** provided a summary of the airspace safety reporting survey results.

Safety Reporting Issue	Result
1. Protection for Personnel Reporting Safety Incidents or Concerns	79.4%
2. Punitive Action for Personnel <u>Not</u> Reporting Safety Incidents or Concerns	76.2%
3. Written policies and rules to ensure managers are not rewarded specifically for the level of reported incidents	9.5%

Table 1: Airspace Safety Reporting Survey Summary

Conference of Directors General of Civil Aviation Outcomes (WP04)

2.11 WP04 described outcomes from the Fifty-Fourth Conference of Directors General of Civil Aviation, Asia and Pacific Regions (DGCA/54, Ulaanbaatar, Mongolia, 07 – 11 August 2017).

Pacific Islands Forum Airspace Policy (IP02)

2.12 Information was provided on the Forty-Eighth Meeting of the Pacific Islands Forum (PIF) and the associated meeting of the Small Island States (SIS) concerning the forum's policy on airspace in the Pacific, including relevant sections of the Communique of the Meeting.

Agenda Item 3: Performance Frameworks and Metrics

FIT-Asia and RASMAG Outcomes (WP05)

3.1 The ATM/SG/5 meeting reviewed relevant major outcomes from the Seventh and Eighth Meetings of the Future Air Navigation Services (FANS) Interoperability Team – Asia (FIT-Asia/7 and FIT-Asia/8, Bangkok, 11 – 13 December 2017 and 26 to 29 June 2018 respectively) and the Twenty-Third Meeting of the Regional Airspace Safety Monitoring Advisory Group (RASMAG/23, Bangkok, 02 – 06 July 2018).

3.2 Regarding Performance-Based Communications and Surveillance (PBCS), the meeting noted the revised Asia/Pacific PBCS Transition Strategy and the PBCS Charter for providing an alternate means of compliance with Communication Service Provider (CSP) contractual requirements at the following website: <http://www.fans-cra.com/>.

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3.3 The ATM/SG/6 also noted that planning had been undertaken to amend the Terms of Reference (TORs) of the Regional Monitoring Agencies (RMAs) to manage reports of PBCS non-compliance, and associated records of Required Communications Performance (RCP) and Required Surveillance Performance (RSP) authorizations issued by States.

3.4 In response to a query relating to a PBCS mandate, ICAO reiterated the Regionally agreed policy that no Asia/Pacific State would implement PBCS-exclusionary airspace. ANSPs would manage the mixed mode environment (PBCS-authorized versus non-authorized aircraft) to ensure, as far as possible, there were no restrictions on flight operations applied to those aircraft that were awaiting State authorization or Statements of Compliance for PBCS.

3.5 The ATM/SG/6 noted the RASMAG PBCS reporting and compliance Conclusions that required actions by ANSPs. Moreover, the meeting noted:

- the need for performance-based separations to be enabled by a Doc. 7030 (*Regional Supplementary Procedures*) authorisation within high seas airspace; and
- that while the reporting of datalink performance data had improved, the actions taken by States to determine causes of performance not meeting the criteria, or of actions taken to rectify performance deficiencies were not clear.

3.6 The meeting reviewed the vertical safety hot spots that had been identified by RASMAG, and in particular the estimated vertical risk of reported Large Height Deviations (LHDs) for the South Asia/Indian Ocean area. This had increased substantially to 62.4×10^{-9} , which was an order of magnitude above the Target Level of Safety (TLS).

3.7 A major reduction of reported non-Reduced Vertical Separation Minimum (RVSM) airframes was noted as being attributable to the efforts of Regional Monitoring Agencies (RMAs), ANSPs and States responding to Conclusion APANPIRG/28/12 *Management of Non-RVSM Aircraft*.

3.8 Regarding airspace safety reporting, it was observed by the ATM/SG that States needed to continually monitor their reporting culture and systems to optimise reporting.

3.9 IFATCA stated that the South China Sea (SCS) Modified Single Alternate Flight Level Orientation Scheme (FLOS) mentioned in WP05 must be normalised to a standard FLOS, as the current airspace arrangement had significant safety risks with controllers having to transition aircraft, and the added workload. IFATCA noted that the SCS Traffic Flow Review Group (SCSTFRG) needed to work on this aspect as a matter of safety priority.

Seamless ATM Reporting and Monitoring Update (WP06)

3.10 WP06 presented the status of the Seamless ATM reporting, reflecting the implementation progress of air navigation improvements in the Asia/Pacific (APAC) Region against the objectives set out in the *Asia/Pacific Seamless ATM Plan V2.0*.

3.11 The 16 administrations that had failed to submit any reports (*or Points of Contact) were:
Afghanistan*, Brunei Darussalam, Cook Islands*, Kiribati, Marshall Islands*, Micronesia* (Federated State of), Myanmar, Nauru*, Palau*, Papua New Guinea, Samoa*, Solomon Islands, Timor-Leste, Tonga, Tuvalu* and Vanuatu*.

3.12 WP06 noted that States had been urged by APANPIRG/27 to give higher priority at Civil Aviation Authority (CAA) and ANSP levels, and to mobilize human and financial resources to complete implementation of Phase I objectives. Notwithstanding this, Phase I was far from being implemented, even three years after the initial target. Hong Kong, China commented that the low implementation rate of some items such as Optimised Wake Turbulence Separations could be due to lack of guidance.

3.13 Moreover, the meeting noted that in 2019, States were expected to start implementing Phase II elements, which were aligned with the Global Air Navigation Plan (GANP) Aviation System Block Upgrade (ASBU) Block 1. **Figure 1** indicates Seamless ATM implementation (July 2018).

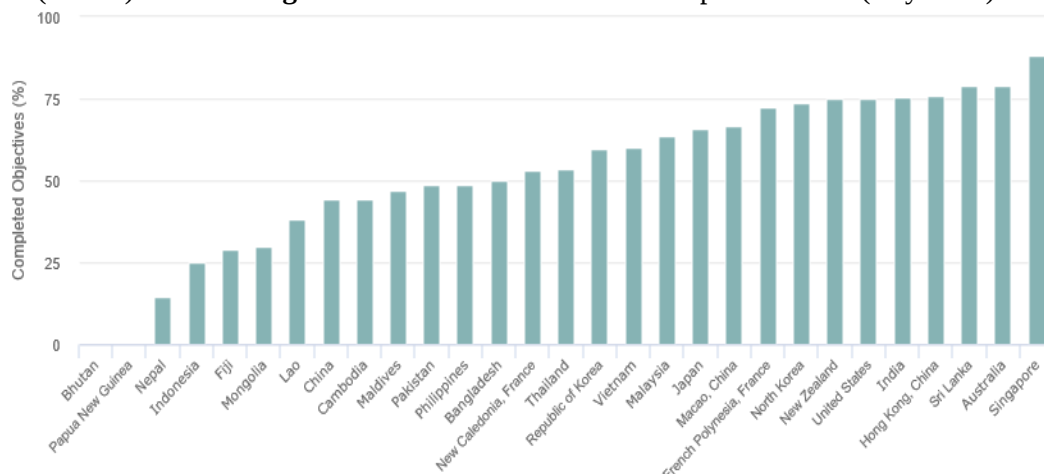


Figure 1: Percentage of Completed Applicable Phase I Seamless ATM Elements

Reaping the Benefits of Performance Measurement (WP07)

3.14 EUROCONTROL, Japan, Singapore and the USA briefed the Subgroup on progress by the Performance Benchmarking Work Group (PBWG), which described the benefits of performance measurement and benchmarking. Noting the Regional ATM Performance Measurement Framework Small Working Group (RAPMF/SWG) had been created to develop a common regional framework, the paper suggested that ATM/SG/6 could select Key Performance Indicators (KPIs) from the ICAO GANP for performance measurement in Asia/Pacific Region and the RAPMF/SWG could work with the PBWG to progress the selection of KPIs for the Regional Performance Measurement Framework.

RAPMF/SWG Outcomes (WP08)

3.15 On behalf of ICAO RAPMF/SWG, China presented the work and outcomes of this group. In accordance with the RAPMF/SWG TOR, the paper introduced the Performance Measurement Framework (PMF), including five main KPAs, and detailed definition and computation methods for various KPIs. In order to implement the PMF to improve the ATM performance in the Asia-Pacific region, an operational concept and a three phase implementation plan was proposed. China emphasised the importance of starting the work as soon as possible.

3.16 The meeting stressed the importance of regional collaboration, and urged all participants to take active part in the work of RAPMF/SWG. Hong Kong, China suggested there was no need to have two groups. Singapore noted that PBWG was not an ICAO working group. The meeting was informed that CANSO would host a CANSO APAC Operational Performance Metrics Workshop (Singapore, 19 – 20 September 2018). A RAPMF/SWG meeting would take place in November 2018 in Nanjing, China.

3.17 In this regard, the ATM/SG/6 suggested the RAPMF/SWG collaborate with the PBWG to develop the final draft *Asia/Pacific Air Traffic Management Performance Indicator Framework and Implementation Plan* to improve the ATM performance in the region. The *Asia/Pacific Air Traffic Management Performance Indicator Framework and Implementation Plan* should be submitted for the ATM/SG's consideration by the RAPMF/SWG before 01 July 2019.

ANS USOAP Update (WP09)

3.18 ICAO provided an update on the Universal Safety Oversight Audit Programme (USOAP) Continuous Monitoring Approach (CMA). The meeting noted that the 2017 edition of the USOAP CMA Protocol Questions (PQs) that were now applicable excluded aspects related to the State Safety Programme (SSP), and there were now 179 PQs compared to 191 PQs in the 2016 version.

3.19 The meeting was informed that two States had undergone a voluntary SSP assessment – China and France, while Singapore had also volunteered for an assessment in April 2018.

3.20 WP09 indicated that globally, ANS was one of the lowest-performing USOAP fields at 63%, whereas the average was 65.03%. The meeting noted that USOAP focussed on regulatory capability.

Agenda Item 4: ATM Systems (Modernisation, Seamless ATM, CNS, ATFM)

ASEAN ATM Master Plan (IP03)

4.1 An overview of the Association of Southeast Asian Nations (ASEAN) *ATM Master Plan* was provided by Singapore, on behalf of the ASEAN Secretariat. The Plan was a collaborative effort by ASEAN in support of the *Asia/Pacific Seamless ATM Plan (ATM/SG/6 IP03 Attachment 1)*, providing the technical roadmap to support ASEAN Member States' efforts to achieve a Seamless ASEAN Sky.

4.2 India congratulated ASEAN Member States for preparing the *ASEAN ATM Master Plan*. As India shared airspace boundaries with Myanmar, Malaysia and Indonesia, and several elements of the *ATM Master Plan* may impact the flow of international traffic via the Kolkata and Chennai FIRs, India requested ASEAN to engage with India in planning, and assured its fullest cooperation.

Pearl River Delta Region ATM and Airspace Reform (IP04)

4.2 IP04 provided an overview of developments in the Pearl River Delta (PRD) region. With five large airports (Guangzhou, Shenzhen, Zhuhai, Hong Kong, and Macau) and military aerodromes within 100 kilometres, China detailed airspace reform, integration of ATM system data (including civil and military flight plans, flight information, surveillance data, etc.), and civil/military cooperation as strategies to improve capacity. Hong Kong, China commented that they welcomed the initiative and looked forward seeing to the benefits to all airports in the PRD Region.

4.3 The meeting congratulated China in this effort, noting that the *Asia/Pacific Seamless ATM Plan* had urged China to implement 'metroplex' planning of this nature. In particular, ICAO expressed appreciation to China for its emphasis on plans to enhance civil/military cooperation.

4.4 IATA congratulated China for this initiative. However, IATA stressed that more engagement with the international airline community would be appreciated, as the airlines were ready to assist China.

Introduction to the US-China Aviation Cooperation Project (IP05)

4.5 China described the United States – China Aviation Cooperation Project, which had the objective of optimising aviation operational efficiency at Shanghai Pudong and Hongqiao international airports, through cooperation between US aviation experts and a Chinese team.

Application of ATC Separation Standards (WP10)

4.6 ICAO presented information on a Seamless ATM survey conducted to determine which ATC separation standards were being applied within the Asia/Pacific Region. **Figure 2** indicated the efficiency of ATC separations, as theoretically applied (July 2017).

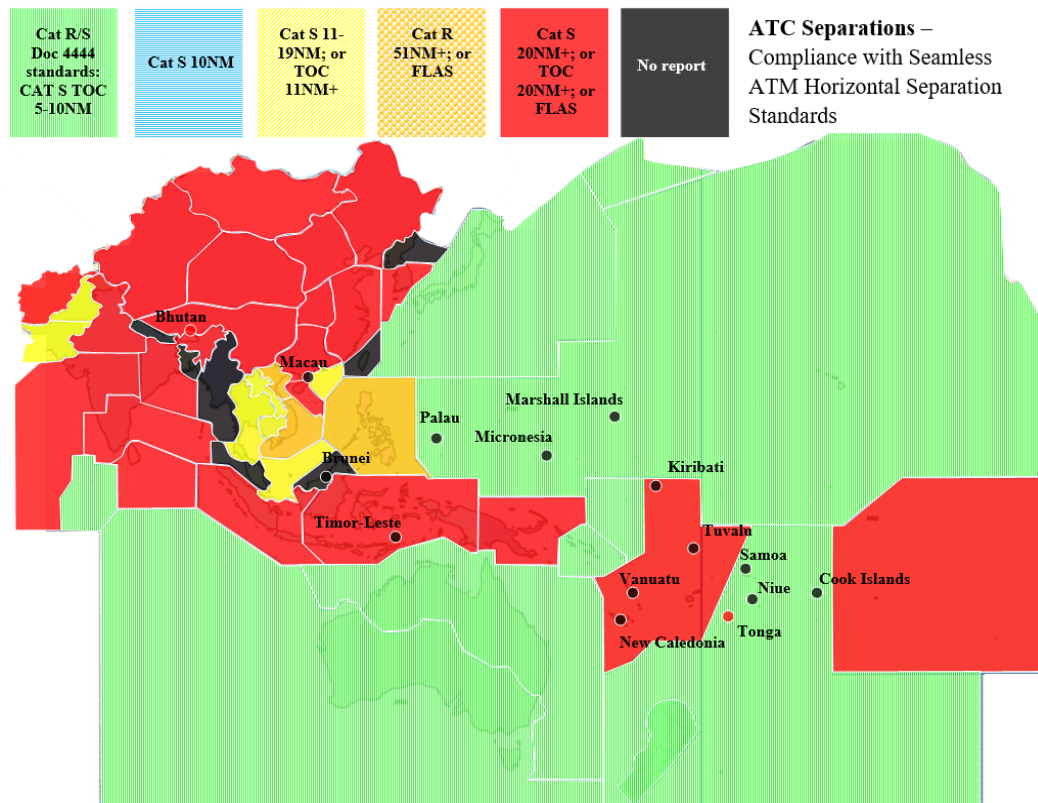


Figure 2: Seamless ATM Horizontal Separation Standards Compliance (July 2018)

4.7 The meeting noted ICAO's comments that in general, several States were not applying ATC standards correctly, preferring to use larger, less efficient separations, which also affected safety due to the increased ATC workload managing larger spacing, and more conflicts. In this case, ATC had not optimised service levels that new systems were capable of under the *Asia/Pacific Seamless ATM Plan*.

4.8 The Combined Eighth Meeting of the South Asia – Indian Ocean ATM Coordination Group and Twenty-Fifth Meeting South East Asia ATS Coordination Group (SAIOACG/8 and SEACG/25, Siem Reap, Cambodia, 26 – 30 March 2018) had been concerned that only 45% of administrations had responded to the survey related to ATC separations.

4.9 The following Conclusion was developed by the meetings and agreed by the ATM/SG/6:

Conclusion ATM/SG/6-1: ATC Separations Standards Survey

That, States are urged to study and respond to the ATC Separation Standards Survey, to be re-circulated by the ICAO APAC Regional Office State Letter.

Separation Standards Planned for Auckland Oceanic FIR (IP06)

4.10 New Zealand provided information on planning for enhanced separation standards in the Auckland Oceanic Flight Information Region (FIR). Software was being developed to enable the application of Automatic Dependent Surveillance – Contract Climb Descent Procedure (ADS-C CDP) to facilitate longitudinal separation of 15 NM under certain conditions.

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4.11 A 20 NM Lateral separation, a 12 NM lateral ‘climb-through’ separation minimum, a new 20 NM longitudinal standard (under development by the Separation and Standards Panel) and future use of ADS-B In-Trail Procedure for 15 NM longitudinal separation were being planned or considered. It was noted that amendments to ICAO Doc. 7030 would be necessary to support these separations.

ATC Separation Reduction Plan in China (IP07)

4.12 China announced that most ATC units in China strictly complied with separation minima in Doc4444 and ATC separation in the remaining ATC units between aircraft under ATC surveillance would be further improved to 10 km (5 NM) en-route and 6 km (3 NM) in terminal airspace. Moreover, the transfer spacing between Chinese Area Control Centres (ACCs) would reduce from 30 km (15NM) to 20 km (10NM) by 30 September 2018.

4.13 ICAO congratulated China for this step, and urged other States in the Asia/Pacific Region to follow China’s example. ICAO also noted China’s expectation to strengthen bilateral coordination in order to increase capacity by reducing transfer spacing. Hong Kong, China advised that they would work closely with China on enhancing efficiency of spacing, and would like to share the safety assessment China conducted in this regard to facilitate its work.

Initiatives to Enhance Hong Kong FIR Air Navigation Services (IP08)

4.14 Hong Kong, China described initiatives to optimise airspace capacity, such as en-route airspace review, implementation of ATS Inter-facility Datalink Communications (AIDC) and reduction of aircraft spacing with adjacent ANSPs (for example, 20 NM longitudinal spacing with the Taipei FIR).

Air Traffic Flow Management Steering Group Outcomes (WP11)

4.15 The meeting was informed of the outcomes of the Eighth Meeting of the ATFM Steering Group (ATFM/SG/8, New Delhi, India, 14 – 18 May 2018).

4.16 The ATFM/SG/8 meeting was informed by Indonesia that flow control restrictions on ATS routes in the SCS area had been delaying flights from Jakarta FIR by up to five hours.

4.17 The meeting was updated on India’s implementation of the Central ATFM system, the integration of the Central ATFM with Airport CDM/Airport Operations Command Centre (A-CDM/AOCC), C-ATFM post-operations analysis, and the establishment of Airspace Management Cells. The timing of implementation of Phase III of cross-border ATFM had not yet been determined. India was monitoring the progress of other cross-border ATFM implementation activities in the Region.

4.18 China, Japan and the ROK together presented to ATFM/SG/8 the outcomes of the Sixth meeting of the Northeast Asia Regional ATFM Harmonization Group (NARAHG/6, Seoul, ROK, 12 – 14 March 2018), and on the progress of the Cross Region ATFM Collaborative Platform (CRACP), tentatively planned for completion in 2020.

4.19 ATFM/SG/8 observed that ICAO Doc 9971 *Manual on Collaborative ATFM* stated that Calculated Time Over (CTO), which used the aircraft Required Time of Arrival (RTA) function, was a gradual process that required education and collaboration to ensure that requirements were understood and met, and that such techniques were advanced, requiring substantial experience for implementation.

4.20 An update on the Distributed Multi-Nodal ATFM Project focused on recent achievements in implementation of ATFM measures (GDPs), and the work plan for the development of ATFM measures for airspace congestion. The project was arranged in two phases (**Table 2**), with three levels of engagement by participating Administrations (**Table 3**).

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Phase	Key Focus
Phase 1 (2015 – 2016+)	Airport Program: Distributed GDP / CTOT to regulate traffic into arrival airports where demand is exceeding capacity
Phase 2 (2017 onward)	Airspace Program: Distributed GDP / CTOT to regulate traffic into airspace where demand is exceeding capacity

Table 2: Distributed Multi-Nodal ATFM Project Phases

Tiered Level	Capabilities
Level 3	Capable of generating, distributing, receiving, and complying to ATFM measures
Level 2	Capable of receiving and complying to ATFM Measures
Level 1	Observe and participate in the trial progress
Project Advisor	Provide advice to the project (*Australia*)

Table 3: Distributed Multi Nodal ATFM Project Engagement Levels

4.21 Initial work on Phase 2 had begun with a focus on alleviating problems with compounding MINIT flow restrictions on major SCS ATS routes (**ATM/SG/6/WP12**).

4.22 The lack of support from some Level 2 participants was noted. Calculated Take Off Time (CTOT) compliance for flights departing aerodromes was 45.45% for Level 1 in Participating States, 52.89% for Level 2, and 79.44% for Level 3 States. Low compliance with CTOT had resulted in significant delay penalty for CTOT-compliant flights.

4.23 The Multi-Nodal ATFM Project Core Team and its Technical Sub-Group had agreed to use the EUROCONTROL Slot Allocation Message (SAM) for the exchange of ATFM data until the establishment of a System-Wide Information-Management (SWIM)-based ATFM information exchange using the Flight Information Exchange Model (FIXM). SAM was consistent with the EUROCONTROL ATS Data Exchange Presentation (ADEXP), included in the *Asia/Pacific Regional Framework for Collaborative ATFM*. The Technical Sub-Group would also support the effort to identify areas requiring interoperability with NARAHG, and regional ATFM interoperability.

4.24 ATM/SG/8 noted that ICAO Doc. 4444 *Procedures for Air Navigation Services – Air Traffic Management* included *flow control messages* in the *movement and control messages* (priority FF) category of ATS messages, but also included in paragraph 11.4.2.6.3 a note stating that the format and data conventions for automated interchange of flow control messages had not yet been developed. Therefore, it could be necessary to develop a proposal to include SAM in ICAO Doc 7030.

4.25 Long Range ATFM (LRATFM), a concept devised to provide a basis for research into the application of ATFM measures beyond current system timeframes, had been subject to practical trialling by New Zealand and Singapore during the second half of 2017. Information provided included problem identification, the LRATFM concept, operational trial results, joint conclusions, reference to ICAO guidance, and next steps under consideration.

4.26 ATM/SG/8 had reviewed the results of an analysis of missing FPL and DEP messages requiring corrective action to be taken by States and/or airspace users. The data-gathering and analysis activities were conducted in response to **Conclusion APANPIRG/27/12: Origination and Distribution of Departure (DEP) Messages**, and the discussion outcomes of ATM/SG/5 which requested the scope of the analysis of missing DEP messages be broadened to include missing FPL messages.

4.27 The five APAC States participating in the data gathering activity reported non-receipt of 58 FPL and 582 Departure during the 24-hour analysis period. Of these, 50 FPL and 337 DEP messages were for flights departing from APAC aerodromes.

4.28 Actions undertaken by the ICAO Asia/Pacific Regional Office since ATFM/SG/8 included the issuance of a State Letter on the subject to all Asia/Pacific States, and to relevant non-APAC States through their respective ICAO Regional Offices, individual letters to APAC States where the analysis indicted systemic failure to originate DEP messages, and coordination with ICAO Headquarters (HQ). APANPIRG ANS Deficiencies had also been proposed.

4.29 The Secretariat requested that the States that had participated in the data gathering activity conduct another such activity at a future date yet to be coordinated.

4.30 In accordance with **Conclusion ATM/SG/5-3: Asia/Pacific Regional Framework for Collaborative ATFM Amendment**, the ATFM Implementation Status Report form had been appended to the Framework document and made available on the ICAO APAC Regional Office website. Only one report had been received before the due date (end of April each year). States were reminded that the reporting form provided evidence of implementation of ATFM, which States had for some time been obliged to implement in accordance with the standards of Annex 11, and non-reporting would be treated in the same way as non-implementation.

4.31 Regarding the development of an APAC ATFM post-operations analysis framework, it was noted that no regionally-recommended compliance measurement had been established. The ATM/SG/6 agreed to the following Conclusion that had been developed by the ATFM/SG/8:

Conclusion ATM/SG/6-2: Recommended CTOT Compliance Window

That,

1. Asia/Pacific Administrations implementing Ground Delay Programs (GDP) for flights to capacity-constrained destination airports use a recommended compliance window of -5 to +10 minutes to measure compliance with Calculated Take-Off Times (CTOT);
2. CTOT compliance windows for individual departure airports be subsequently refined on the basis of post-operations analysis, taking into account the requirements at constrained destination airports and subject to the agreement of the Administration responsible for the departure airport; and
3. CTOT compliance windows other than the recommended compliance window be reported to the Air Traffic Flow Management Steering Group.

4.32 The Secretariat presented information from the ICAO APAC Regional Sub-Office (RSO). The meeting noted that States could request the APAC RSO to conduct workshops or provide technical assistance to support implementation of ATFM/CDM and A-CDM.

4.33 The meeting noted that no APAC Administration had defined a compliance window for CTO or other ATFM measures, so formulation of such compliance windows was a future consideration.

4.34 The UAE provided the meeting with a summary of ATFM enhancements that were being implemented, to enable greater efficiency within the very limited airspace available to the UAE. Moreover, the UAE suggested that Asia/Pacific States consider attendance at the First Meeting of the MIDANPIRG Air Traffic Flow Management Task Force and First Meeting of the MIDANPIRG World Cup 2022 Task Force (Muscat, Oman, 23 – 27 September 2018).

Post-Operation Analysis for M771 ATFM Operational Trial (WP12)

4.35 Singapore presented the post operations analysis for an operational trial of ATFM measures implemented on ATS route M771 for flights to Shanghai/Pudong from 15 January – 14 April 2018. The operational trial was re-initiated from 18 June 2018, while work on the inclusion of other destinations as part of Phase 2 of the trial was being developed.

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4.36 The aim of offering advance information to stakeholders of the expected delay as soon as the NOTAM informing of flow control restrictions was received was achieved through the issuance of CTOT and CTO before the flights departed. Key Performance Indicators (KPIs) identified were CTOT compliance, CTO compliance, notification lead time, CTOT lead time, Estimated Elapsed Time (EET) verification and FPL submission.

4.37 The post operations analysis report (**ATM/SG/6 WP12 Annex A**) recorded 202 flights affected by the ATFM measures, which responded to 51 NOTAMs, and 11 extensions and 16 revisions to the NOTAMs, issued by downstream ACCs imposing flow restrictions.

4.38 The success of the trial was indicated by stakeholders requesting CTOTs when the trial for Phase 1 had ended. Singapore urged the meeting to actively participate in the implementation of ATFM measures and engage relevant stakeholders to achieve objectives of ATFM measures.

Departure (DEP) Messages (WP13)

4.39 The USA provided information on the importance of Departure (DEP) messages, and on State non-compliance with the provisions of ICAO Doc 4444, paragraph 11.4.2.2. The FAA was in the process of ensuring that all FAA facilities were compliant with FAA Order JO 7110.10Z and Doc. 4444.

4.40 The feasibility of making DEP messages an automated process was being examined, and a study was being conducted into the possibility of the original flight plan filer sending the DEP message. The USA stressed that States were encouraged to contact the USA directly to investigate and correct processes resulting in missing Flight Plans and/or DEP Messages when they occurred.

Proposed NOTAM Format for Flexible Use of Airspace (WP14)

4.41 India, Japan and Thailand jointly proposed a NOTAM format for Flexible Use Airspace (FUA) operations for uniform use in the Asia/Pacific Region. This work was undertaken in response to the outcomes of discussion of ATM/SG/5/IP19.

4.42 Australia stated that the proposed format needed further work, and that Australia needed time to trial their system. Thailand also noted that the terminology needed to align with the new ICAO Doc. 10088. Hong Kong, China mentioned that the terms Temporary Reserved Areas (TRAs) and Temporary Segregated Areas (TSAs) could cause a problem for pilots if these were not universally understood.

4.43 In summary, the meeting agreed that the proposed *Conclusion Recommended NOTAM Format for FUA Operations* be presented to the ATM/SG/7 in 2019, following further research and development of the format.

Information Management for Activation of FUA Structures (WP15)

4.44 India proposed a format for Airspace Use Plans (AUP) or Updated Airspace Use Plans (UUP) utilised the pre-tactical phase (within 24 hours of operation), for activation of FUA structures and also proposed measures intended to mitigate the reduced advance notification time risks.

4.45 India observed that Annex 15 *Aeronautical Information Services* paragraph 5.1.1.4 stipulated that at least seven days' advance notice was required for the activation of established danger, restricted or prohibited areas and of activities requiring temporary airspace restrictions (including the non-ICAO TRAs and TSAs), other than for emergency operations. ICAO noted that this standard had been discussed at HQ and would not be amended in the short-term.

4.46 WP15 stated that TRA and TSA established in India thus far did not affect international ATS routes, and that non-availability of domestic ATS routes or route segments would be informed to airline operators before 1230 UTC of the previous day through AUP or UUP.

4.47 India explained that TRAs and TSAs were only notified within Indian domestic airspace, and that they were established clear of international routes. The meeting did not agree to the use of the terms TRAs and TSAs being used in the format, as these were not yet formally recognised by ICAO.

4.48 ICAO stated that as had been previously informed, if a State was imposing a temporary airspace restriction in non-compliance with Annex 15's notice requirements by using a TRA or TSA without a network manager or equivalent function as part of a centralised ATFM system to mitigate the risks or disruption, then this would be submitted for consideration as an APANPIRG Deficiency.

BOBCAT Operational Updates (June 2018) (WP16)

4.49 Thailand presented an operational analysis and overview of westbound flights through the Kabul FIR associated with the Bay of Bengal Cooperative Air Traffic Flow Management (BOBCAT) System. Information was provided on BOBCAT efficiency benefits, problems with DEP messages and conformance with slot times, and other data related to BOBCAT operations (Presentation 01). **Figure 3** summarized BOBCAT Slot Request volume (July 2016 – June 2018).

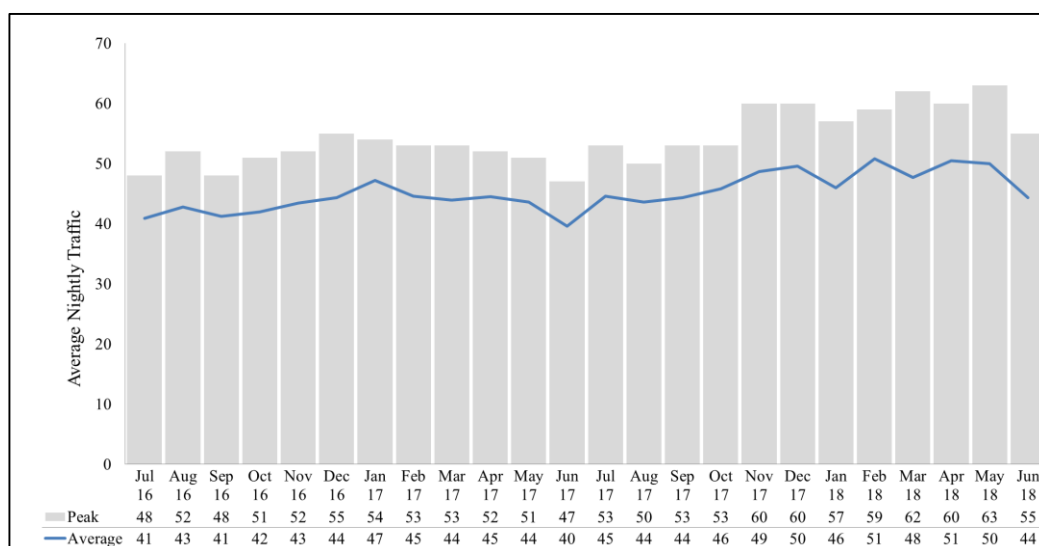


Table 3: BOBCAT Traffic Demand from Slot Request: July 2016 - June 2018

4.50 **Table 4** summarizes CTOT and CTO compliance in the period January to June 2018.

CTOT/CTO Compliance	Overall	Early Entry	Compliance	Late Entry
Early Take-Off	13%	92%	8%	0%
Compliance Take-Off	75%	44%	43%	13%
Late Take-Off	2%	0%	17%	83%
No DEP Received	11%	32%	32%	36%

Table 4: Correlation of CTOT Compliance and CTO Compliance (January – June 2018)

BOBCAT ATFM Operations - Delhi FIR (WP17)

4.51 India presented the issues related to ATFM operations through the BOBCAT system in the Delhi FIR, and suggestions for improvement. Delhi ACC was experiencing problems during peak periods for westbound traffic that would transit via Afghanistan. WP17 provided details of issues affecting, or affected by, BOBCAT slot and entry level allocations, and proposed mitigation strategies.

4.52 While noting the issues reported by India, the meeting also recognised the need for a discussion on whether the ongoing capacity constraint in the Kabul FIR was necessary, given the improvement in surveillance coverage, and on future provision of ATFM by India's C-ATFM system.

4.53 Afghanistan informed the meeting that a current surveillance project, together with existing radar coverage, would lead to an improvement in longitudinal separation from 50 NM to 30 NM in coming months, with further improvements expected after further proving activities.

4.54 IATA agreed with the need to prioritise the enhancement of Afghanistan with a transition plan from BOBCAT, but recalled that previous implementations such as 50 NM longitudinal had not been properly implemented.

4.55 In response to a discussion about developing greater flexibility in the BOBCAT system and how to manage aircraft departing from the Delhi and Karachi FIRs, the Chairman stated that Pakistan and India should work together to establish more tactical capability. Given the development of Afghanistan's ATS surveillance capability (Flimsy 09), the meeting agreed to the States concerned and ICAO developing a transition plan in this regard as a matter of priority.

Efforts to Improve Shanghai Pudong Airport Flight Punctuality (IP09)

4.56 China provided information on efforts to improve the punctuality of flights at Shanghai/Pudong International Airport, and related achievements, noting that the CDM mechanism with participation by all stakeholders was the key to improving punctuality. Information was provided on on-time performance, flight delay times, Flow Management Positions (FMPs), ATC area control and approach control separation minima, and collaborative information exchange.

4.57 Hong Kong, China congratulated the achievements of these two major airports and, noting the paper focused on departures, requested China to share similar data on for the arrivals in these two airport, to which China agreed.

ACARS CTOT Information Service Operation Trial (IP10)

4.58 The meeting was informed of China's operational trial to share CTOT with pilot generated by the CDM system through the Aircraft Communications Addressing and Reporting System (ACARS) at Shenzhen airport. There would be 44 airports in China providing Data Link Departure Clearance (DCL) and Data Link Automatic Terminal Information Service (D-ATIS) by the end of 2018. CTOT information would also be available to the pilot through the ACARS system at these airports after the trial.

AMAN Implementation in China (IP11)

4.59 China provided information on the implementation of Arrival Manager (AMAN) in Urumqi and Shenyang, which had been in use for more than two years, and the planned implementation in by June 2020 in ATC facilities at major airport such as Beijing, Guangxi, Guangzhou, Hainan, Henan, Hubei, Hunan, Sanya, Shanghai and Shenzhen.

C-ATFM Operations in India (IP12)

4.60 India presented information on the phased implementation of the C-ATFM process, operational challenges faced in day-to-day operations, further steps in the implementation process and India's plans for facilitating cross-border ATFM under Phase III the C-ATFM implementation plan.

Implementation of A-CDM at Chennai Airport (IP13)

4.61 The meeting was informed by India of the process of implementation of A-CDM at Chennai airport, including implementation stages and tasks, future expansion to include AMAN and ATC system integration, and the implementation of simultaneous operations on diverging runways in Arrival-Departure and Departure mode, which would require an upgrade of A-CDM system software.

Mode S Conspicuity Code – Amendment to eANP Vol II (WP18)

4.62 Australia and the Co-Chairs of the Surveillance Implementation Coordination Group (SURICG) provided information identifying future requirements for a regional Mode Select (Mode S) Secondary Surveillance Radar (SSR) conspicuity code. The information provided noted the typical allocation processes for discrete Mode A SSR codes, and the assignment of blocks of codes to Asia/Pacific Administrations in the APAC Air Navigation Plan (ANP).

4.63 As traffic volumes increased, the finite number of discrete Mode A SSR codes would increase the likelihood of the same code assigned to multiple aircraft, increasing the risk of mis-identification. An alternative was the use of the Mode S Aircraft Identification and/or ICAO Aircraft Address for identification and flight plan coupling, provided States used Mode S radar systems and suitable ATM system capability.

4.64 Noting the relevant sections of the *Asia/Pacific Seamless ATM Plan*, the *Surveillance Strategy for the Asia/Pacific Region*, the *European SSR Code Management Plan 2010*, and India's trial non-discrete Mode A SSR conspicuity code implementation, the meeting agreed to the following Conclusion:

Conclusion ATM/SG/6-3: Proposed Air Navigation Plan Volume II Amendment

That, a Proposal for Amendment (PfA) to the APAC Air Navigation Plan Volume II at **Appendix C to the Report** be submitted, withdrawing Mode A SSR Code A1000 from Table ATM II-APAC-2 and identifying it as the Mode S conspicuity code for the APAC Regions.

SLOP Survey (WP19)

4.65 In response to inconsistent application previously noted in the Asia/Pacific Region, ICAO presented the principles and guidelines of Strategic Lateral Offset Procedures (SLOP), as defined in Annex 2 - *Rules of the Air* and ICAO Doc. 4444.

4.66 WP19 also highlighted the results from a survey regarding the current and planned implementation of SLOP. Only nine administrations responded, indicating a low awareness of this important safety technique.

4.67 Of these, six had enabled in their Aeronautical Information Publications (AIPs) a maximum offset of 2 NM where the lateral separation minimum applied was 23 NM or more, but none had enabled a maximum offset of 0.5 NM where the [non-surveillance] lateral separation minimum applied was 6 NM or more, and less than 23 NM. ICAO urged all States applying such applications to implement SLOP, and would recirculate the survey before 2019.

SID/STAR Phraseology Implementation in Australia (WP20)

4.68 Australia presented progress of the implementation of ICAO Standard Instrument Departure/Standard Arrival Route (SID/STAR) phraseology, informing about the issues realized following implementation. The procedures were implemented in Australia on 09 November 2017.

4.69 Information was provided on the safety assessment and safety work, ATC workload increases, the use of level restrictions in published SID/STAR for strategic separation, and discussion of what constitutes an aircraft being 'on SID/STAR'.

4.70 Australia would conduct further post-implementation reviews which, if necessary, would result in a request for change to the SID/STAR phraseology being submitted through the ATM Operations Panel (ATMOPSP), but also requested feedback from other States on the issue of the use and implications of the term 'VIA' (which meant the procedure's restrictions remained in force).

4.71 Moreover, Australia requested additional examples to clarify the intent of various operational scenarios. IFALPA stressed the need for examples that contained intermediate level or speed restrictions, to reduce interpretation issues. New Zealand noted that some intermediate restrictions were for ATC and some were part of the procedure design and cannot be cancelled for safety reasons (for example, due to terrain), so had specifically labelled the ATC purpose of the restriction on the SID/STAR, so pilots and controllers could identify the ATC-related steps (as being the only procedures that could be cancelled or amended).

4.72 Australia, IFATCA and IATA noted the continuing operational issues in applying the new SID/STAR standard, and supported a harmonised transition strategy. IFATCA suggested that there may be a need for a re-think of the standardised approach for SIDs and STARs as the current generation of procedures did not have a constant climb/descent component. Hong Kong, China commented that considering safety net features in ATM system relied on input of cleared flight level into the system, the system handling of multiple level steps in a single clearance would need to be addressed.

4.73 IATA was concerned that a number of global changes recently such as PBCS, SID/STAR and GADSS that had not been managed well in terms of implementation, so ICAO HQ needed to reconsider the way in which these global changes were being developed to take into account the impact on actual operations, and effective implementation.

SID STAR New Procedures (WP21)

4.74 The Secretariat presented information relating to the implementation of SID/STAR procedures consequential to Amendment 7-A to PANS-ATM. The information, jointly prepared by ICAO Headquarters and the ICAO Asia/Pacific Regional Office, brought attention to the development of regional implementation strategies, highlighted areas of concern during implementation planning, and discussed safety concerns resulting from non-harmonized implementation of these procedures.

4.75 The meeting was reminded of *Conclusion ATM/SG/5-17: SID/STAR Phraseology*, which urged States to take action to implement the new SID/STAR-related phraseology. The meeting was also informed of the outcomes of the combined SAIOACG/8 and SEACG/25 meeting, which had agreed to ***Draft Conclusion SAIOACG/8 and SEACG/25-1: New SID/STAR Phraseology Implementation***, proposing that a regional transition strategy be developed.

4.76 The meeting noted the establishment of the *ICAO SID STAR Implementation Support Team* (ISSIST), and a range of suggestions received by ISSIST from industry to improve implementation. Information was also provided on the ISSIST Work Program, which was expected to be completed by March 2019.

4.77 A proposed Regional implementation strategy was provided. While not exhaustive, it included a checklist of actions and requirements that should be considered by all Asia/Pacific Administrations that have published, or plan to publish, SIDs and/or STARs in their AIP. The strategy included a proposed Regional implementation date of not later than 07 November 2019.

4.78 Thailand offered to forward information from the Asia/Pacific CANSO APAC OPS Working Group to support the survey. The USA noted that the ATM Ops Panel would meet on 10 – 14 September 2018 at which this matter would be discussed, so urged other States to participate. IATA suggested appending ‘lessons learnt’ from States to the Regional Strategy.

4.79 IFALPA stated that the variations in implementation between States was the most concerning matter, and urged States to implement at a regionally-agreed date. Furthermore, the meeting noted that if States had not implemented the changes, a Difference would need to be filed under Article 38 of the Convention.

4.80 The meeting agreed to the following Conclusion:

Conclusion ATM/SG/6-4: Asia/Pacific Regional SID/STAR Phraseology Implementation Strategy

That,

1. The Asia/Pacific Regional SID/STAR Phraseology Implementation Strategy at **Appendix D to the Report** be adopted, and uploaded to the ICAO Asia/Pacific Regional Office Website, together with an Appendix of information on lessons learned, updated on receipt of new information; and
2. All Asia/Pacific Administrations respond to a survey on the implementation status of the SID/STAR phraseology, and report final implementation of the phraseology to the ICAO Asia/Pacific Regional Office.

Alphanumeric Call Sign Project Update (IP14)

4.81 IATA updated the meeting on progress in the Asia/Pacific Alphanumeric Call Sign project, focusing on airport readiness to support the project. The ability of airport and ATC systems to receive and process alphanumeric formats and the difference between an alphanumeric call sign for ATC systems and a commercial flight number were identified as the main challenges.

4.82 The UAE shared its experience in implementation of Alphanumeric Call Signs, which had reportedly reduced air safety reports from Emirates Airlines by 45%. The UAE recommended that States establish national task forces, agree to harmonised procedures for tactical changes of call signs, and work with ATC system vendors to support the implementation. ICCAIA stated that vendors were working on system improvements to support this initiative.

4.83 Hong Kong, China asked about call sign confusion during emergencies. The UAE stated that its system allowed a second call sign to be selected if necessary, and both call signs could be displayed.

Review of ADS-B Specific Phraseologies (IP15)

4.84 New Zealand presented a review of PANS-ATM 12.4.3 phraseologies pertaining to ADS-B operations. The information provided highlighted the confusion that current phraseologies could generate for both pilots and ATC, and proposed that, where the functionality for MODE S and ADS-B is derived from the same source, the phraseology should be the same for both. This had also been presented to the Communications, Navigation and Surveillance Sub-Group of APANPIRG (CNS/SG) which had referred the matter to the ATM/SG/6 meeting for discussion.

4.85 IATA noted that some airlines had ADS-B capability as part of their Minimum Equipment List (MEL), so this was also a potential issue for the airlines.

Recent CNS-Related Developments in APAC (WP22)

4.86 ICAO updated the meeting on recent developments in the Communications, Navigation and Surveillance (CNS) fields. The ATM/SG/6 meeting reviewed the discussion outcomes, Conclusions and Draft Conclusions arising from the Twenty-Second Meeting of the CNS Subgroup (CNS/SG/22, Bangkok, 16 – 20 July 2018). Additional information supporting WP22 was provided in Flimsy 02.

4.87 Outcomes from the CNS SG/2 meeting included eight Conclusions and one Decision, of which the following were noted by the meeting:

Conclusion CNS SG/22/6 (SWIM TF/2/2) – Asia/Pacific SWIM Survey, urging States to respond to a survey on SWIM to be circulated through an ICAO State Letter; and

Conclusion CNS SG/22/15 (SURICG/3/2) – Revised ADS-B Implementation and Operations Guidance Document (AIGD), adopting the revised AIGD (Version 11), consolidating all changes proposed during the Third Meeting of the Surveillance Implementation Coordination Group (SURICG/3, Nadi, Fiji, 25 to 27 April 2018).

4.88 The meeting also noted the following Draft Conclusions from CNS SG/22, which had been referred to APANPIRG for endorsement and to ATM/SG for information:

- *Draft Conclusion CNS SG/22/8* - Revised Strategy for Implementation of Communication systems to support Air Navigation Service;
- *Draft Conclusion CNS SG/22/9* – Support allocation of radio spectrum for space based VHF communications;
- *Draft Conclusion CNS SG/22/10* - PBN-IN-A-PAGE (Version 2.0); and
- *Conclusion CNS SG/22/17* – Amendment of Asia/Pacific Seamless ATM Plan V2.

4.89 The meeting agreed to changes to *Draft Conclusions CNS SG/22/13, 22/14 and 22/16*, resulting in the following ATM/SG Draft Conclusions and Conclusion agreed by the meeting:

Draft Conclusion ATM/SG/6-5 – Transition Planning for RNP APCH CHART Identification from RNAV to RNP

Recognizing ICAO Circular 353, *Transition Planning for Change to Instrument Flight Procedure Approach Chart Identification from RNAV to RNP* will be finalized to provide guidance on the development of global, regional and State transition plans, and ICAO Regional Office ~~has~~ is requested to develop a draft transition plan within twelve months of the final publication of the Circular, that,

- a) States begin internal coordination on the State transition plan and provide the number of RNP APCH procedures published and planned, and the time required to transition from RNAV (GNSS)/RNAV (RNP) to RNP chart identification;
- b) ICAO Regional Office drafts a regional transition plan on RNP APCH chart identification in coordination with relevant regional contributory bodies of APANPIRG, sub-regional ATM coordination groups and regional stakeholders; and
- c) ICAO Regional Office conducts a meeting or workshop to discuss the regional transition plan, after a regional transition plan template has been provided by the ICAO PBN Programme Office.

Conclusion ATM/SG/6-6: Revised ADS-B Version 2 ADS-B Out Forward Fit Equipage

That, States/Administrations in APAC Region be strongly encouraged to mandate that registered aircraft with a maximum certified take-off mass exceeding 5 700 kg or having a maximum cruising true airspeed capability greater than 250 knots, with a date of manufacture on or after 1 January 2020 be equipped with ADS-B avionics compliant with Version 2 ES (equivalent to RTCA DO-260B) or later version.

This Draft Conclusion supersedes Conclusion APANPIRG 26/44

Draft Conclusion ATM/SG/6-7: Proposal for amendment to PANS-ATM (Doc4444) on ADS-B related Phraseology (WP/14)

Recognizing that:

1. where system functionality is derived from the same source for both MODE S SSR and ADS-B the phraseology used between ATC and pilots should be the same;

2. in almost all cases, the pilot interfaces with the ADS-B system through the SSR transponder interface; and
 3. the use of ADS-B-specific phrases may cause confusion between pilots and ATC;
- ICAO be invited to amend PANS-ATM to remove the following phrases:
- 12.4.3.5 “RE-ENTER ADS-B AIRCRAFT IDENTIFICATION”
- 12.4.3.7 “TRANSMIT ADS-B IDENT”
- 12.4.3.10 “STOP SQUAWK TRANSMIT ADS-B ONLY” or “STOP ADS- B TRANSMISSION, SQUAWK (CODE) ONLY”
- 12.4.3.11 “TRANSMIT ADS-B ALTITUDE”
- 12.4.3.13 “STOP ADS-B ALTITUDE TRANSMISSION [(WRONG INDICATION, or reason)]”

4.90 Regarding *Draft Conclusion CNS SG/22/12 – Ground-Based GNSS Status Monitoring*, the USA commented that while they understood the importance of States determining the essential radio navigation services for GNSS based operations, the need for a Conclusion as a whole was not understood. After discussion and input from Australia, the meeting agreed that there was insufficient basis to support the Draft Conclusion, and it was referred back to the CNS/SG for further consideration.

4.91 Regarding *Draft Conclusion CNS SG/22/17 – Amendment of Asia/Pacific Seamless ATM Plan*, ICAO stated that proposals for amendment to the *Asia/Pacific Seamless ATM Plan* did not require an APANPIRG Conclusion; however, the specific matter was important to highlight to State planners, so the Conclusion was considered to have merit on that basis, and was subsequently endorsed by the meeting.

4.92 The meeting noted that the IATA Ops Notice relating to deficiencies in the air/ground communication facilities and services in the Yangon FIR was formally cancelled on 24 May 2018. CNS SG/22 had endorsed the recommendation from IATA that the deficiency be removed from the APANPIRG ANS Deficiencies List.

4.93 The meeting also noted the implementation status regarding ATN/AMHS/AIDC provided in **ATM/SG/6/WP22 Appendix A**, and for ADS-B in **ATM/SG/6/WP22 Appendix B**.

Implementation and Operationalization of ADS-B in India (IP16)

4.94 India provided a brief overview of the implementation of ADS-B in India, and the operationalization of ADS-B based surveillance services. India had installed and commissioned 21 ADS-B sensors, including 20 on the Indian mainland and one at Port Blair in the Bay of Bengal. A further 10 were being installed, including one at Campbell Bay, near the FIR boundaries of Chennai, Jakarta and Kuala Lumpur, for data sharing with neighbouring States. A further five were planned, including one at Agatti Island in the Arabian Sea.

4.95 China asked the meeting whether other States were experiencing the problem of some aircraft not including the ICAO Aircraft Address in the filed flight plan. India advised that it did not have any reported problems of this nature. ICAO reminded the meeting that flight-planning of the ICAO Aircraft Address was not normally necessary for ADS-B and Mode S SSR operations, as the Aircraft Identification downlinked in Mode S SSR interrogation responses and ADS-B extended squitters was used for to couple the ATM system track to the flight plan.

4.96 China stated that in its ADS-B/Mode-S implementation plan, the aircraft address would be the first option to couple the ATM system track, to mitigate the risk of pilots incorrectly inputting the aircraft call sign. China appealed to organizations concerned to include aircraft address and Mode-S capability in FPLs.

4.97 ICAO recalled that, regarding ADS-B mandates mentioned in IP16, States should follow the guidance in the *Asia/Pacific Seamless ATM Plan* to ensure appropriate consultation and an update to Doc. 7030 for any high seas airspace involved.

4.98 The Secretariat congratulated India on the Campbell Bay ADS-B installation, which was undertaken by India in acknowledgement of RASMAG outcomes. India also informed that ADS-B data from Sittwe and Coco Island had been integrated into the Kolkata ATM system, so that the Kolkata/Yangon FIR boundary was now completely under surveillance. The improved situational awareness to controllers at Kolkata would help in reducing LHDs occurring at boundary interface.

Air Navigation Infrastructure Improvements in Kiribati (IP17)

4.99 Kiribati provided an update on ANS and airport infrastructure improvements. Navigation aid improvements included automatic meteorological observing systems (AWOS), VHF radios and backup power generators and Uninterruptable Power Supply (UPS) at both airports with the runway and taxiway lighting at Cassidy to be replaced. An ADS-B, Distance Measuring Equipment (DME) and Airfield Ground Lighting (AGL) system had been installed at Bonriki.

Implementation of RNP AR Approaches in Malaysia (IP18)

4.100 Malaysia provided information on the implementation of Required Navigation Performance – Authorization Required (RNP AR) approaches at airports in the Kuala Lumpur and Kota Kinabalu FIRs. Collaborative efforts with airline operators had achieved implementation of some PBN-related Aviation System Block Upgrade (ASBU) Block 0 modules and Continuous Descent Operations (CDO) had led to reduced fuel burn, increased efficiencies, noise reduction and reduced carbon emissions.

Update On Philippine CNS/ATM Systems (IP19)

4.101 The Philippine CNS-ATM System Modernization Project was a nationwide upgrade to a highly automated and integrated CNS and ATM system, including AIDC, ADS-C/Controller Pilot Datalink Communications (CPDLC), enhanced surveillance and PBCS capability.

4.102 While the transition to the new system was reportedly as expected, some problems with four Very High Frequency (VHF) radios and one radar, and some software and hardware had been identified. Completion of the transition was estimated to be during the third quarter of 2018.

4.103 IATA congratulated the Philippines, especially the implementation of ADS-C/CPDLC. India noted that transitioning to a new system was very challenging. IATA looked forward to the implementation of ADS-C/CPDLC, which would resolve communications problems in parts of the Manila FIR. Thailand asked about ATFM measures during cut-off, to which the Philippines replied that a NOTAM had been issued detailing measures that were expected to be imposed.

Performance Based Communications and Surveillance (PBCS) (WP23)

4.104 Japan and USA informed the meeting that requirements for the development of PBCS policies and objectives supporting safety oversight of aircraft operator and aircraft system PBCS policies applied to all States of Registry. The meeting was reminded that the Asia/Pacific Region's agreed implementation of PBCS by not later than 29 March 2018 was supported by *Conclusions APANPIRG/27-7 – PBCS Operator Requirements*, *APANPIRG/27-8 – State Implementation of ICAO provisions for PBCS* and *APANPIRG/27-9 – Asia/Pacific Region PBCS Transition Strategy*.

4.105 The USA informed the meeting that previously, more than 90% of aircraft on the North Pacific (NOPAC) routes had been able to take advantage of performance-based separations, but that had dropped to about 40% when the new PBCS standard was implemented on 29 March 2018. States were asked to provide information on the progress of State regulatory authorisation for PBCS operations.

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4.106 ICAO reminded the meeting that, as mentioned in the discussion of FIT-Asia outcomes, the most significant barrier to PBCS operations was the failure of State regulators to undertake the actions necessary to enable their aircraft operators to file PBCS indicators in flight plans.

PBCS Operational Approval (IP20)

4.107 ICAO provided information on regulatory authorization requirements of Annex 6 – *Operation of Aircraft* for PBCS. The information included relevant sections of Annex 6 (**ATM/SG/6 IP/20 Attachment A**), advice from ICAO HQ, and supporting information from ICAO Doc. 9869 – *PBCS Manual*.

eANP FIR SRR Update (WP24)

4.108 WP23 provided an update on the electronic Air Navigation Plan (eANP) FIR and Search and Rescue Region (SRR) data analysis that had been on-going since 2014.

4.109 *APANPIRG Conclusion 28/5 FIR/SRR Air Navigation Plan Review* had urged Asia/Pacific States and Administrations having responsibility for the provision of services within a FIR or Aeronautical SRR to conduct a review of the ICAO data related to the FIR or SRR, and provide a verification to the Regional Office as early as possible, but not later than 31 December 2017. Although three State Letters had been issued on this matter, there had still been a poor engagement from States on a matter of this importance.

4.110 China indicated that relevant FIR data has been released in AIP, and ICAO should obtain accurate data from AIP. ICAO stated that AIP data was frequently incorrect, or inconsistent with neighbouring FIRs, or not supported by a historical legal mechanism such as a PfA. ICAO stated that Japan was still the only State with all data correct and supported by a historical record (either a Regional Air Navigation PfA, or as an outcome of a Regional Air Navigation – RAN) meeting.

4.111 Therefore, ICAO's intention was to signal to APANPIRG/29 that the FIR/SRR data review from States was expected to be completed by 01 July 2019. ICAO then planned to propose to APANPIRG/30 that the data in **ATM/SG/6/WP24 Attachment B and C** (as amended by 01 July 2019) be published in the eANP after circulation by PfA. The meeting noted that once published, States would need to file a PfA for any subsequent change.

ANS Improvement Reports (Flimsies 02, 04, 05 and 09)

4.112 The following Flimsies were provided on ANS improvements:

- Flimsy 04 – PBCS Implementation Status in Indonesia;
- Flimsy 05 – Indonesia Modernization Air Navigation System Update;
- Flimsy 09 – Afghanistan ANS Improvements;
- Flimsy 10 – ATM Developments within the UAE; and
- Flimsy 12 – UAE Alpha Numeric Callsigns and Future ATM Requirements.

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

Ballistic Launch Airspace Closures – Update (WP25)

5.1 IATA presented an update on ballistic launch/re-entry event issues and proposed regional procedures to improve the management of such events, particularly involving multiple FIRs.

5.2 IATA noted that although the *Asia/Pacific Seamless ATM Plan* (paragraphs 5.68 and 7.60) contained specific expectations for ballistic launch/re-entry events, they were still experiencing less than optimal management of ballistic events, and provided specific examples.

5.3 IATA stated that when large areas of airspace were affected due to an activity managed by another State, it should be incumbent on the State affected to have heightened monitoring of the situation and take proactive actions to ensure awareness of up-to-date situation information, to minimise the impact on airlines. Moreover, this could only occur when there was strong communication between the relevant States and the organisation actually conducting the ballistic launch/re-entry activity.

5.4 China stated that this issue was not a matter that the CAAC could manage, so it needed to seek the opinions of the relevant rocket launching agency and formally reply to ICAO. At the same time, the Chinese representative informed that it may not be feasible to utilise the procedures proposed by IATA due to technical reasons such as weather and other technical conditions, according to the conditions. ICAO stated that the relevant procedures were only guidance for States.

5.5 China also noted that the rocket launch issue was a global problem. China proposed that ICAO report the matter to ICAO HQ and formulate globally unified standards and procedures.

5.6 Therefore, the meeting agreed to the establishment of a 'State Planning Checklist' to supplement the *Asia/Pacific Seamless ATM Plan*'s expectation. Noting that the Checklist and guidance would be further refined by ICAO in coordination with IATA, the following Draft Conclusion was agreed by the meeting, for APANPIRG/29's consideration:

Draft Conclusion ATM/SG/6-8: Procedures for Ballistic Launch/Space Re-entry Management

That, States are urged to:

(1) ensure adoption and sensitisation of the ballistic launch/space re-entry expectations contained with the *Asia/Pacific Seamless ATM Plan* to the ballistic launch/space re-entry organization and other involved State institutions; and

(2) institutionalise the related guidance and State Planning Checklist provided at **Appendix E to the Report**.

Civil/Military Cooperation Update (WP26, Flimsy 06)

5.7 ICAO recalled that civil/military cooperation remained one of the highest regional priorities in the *Asia/Pacific Seamless ATM Plan*. WP26 provided examples of military operations or activity affected or controlled by military agencies which were of concern, so lessons could be learnt and improvements implemented. The examples included issues related to an Air Defence Identification Zones (ADIZ), Air Defence Codes (ADCs), operation of Special Use Airspace (SUA), ballistic launch and space re-entry activity, and significant delays and disruptions to civil air traffic in East Asia.

5.8 The meeting noted with interest the information provided by ICAO on relevant high seas requirements (Flimsy 06). States discussed key points such as the right of unobstructed transit by State aircraft in the high seas, the lack of recognition in international law of ADIZ, and the lack of a need for ADCs if civil FPL data was available.

5.9 During an extensive discussion, the meeting noted that while there had been continuing instances of poor civil/military cooperation, there had also been an improvement evident in some systems. In particular, the meeting observed that China had taken a number of steps to enhance capacity and safety, and ICAO noted that a continued effort in this regard should lead to a decrease in the major delays that had been reported in the area.

5.10 China observed that flight delays were due to imbalances in capacity and demand, and required the joint efforts of airlines, airports and all stakeholders. According to data analysis, China stated that the cancellation rate of flights in Europe were about 150 times that of China, and suggested that IATA should provide training to airlines to improve the operational decision-making ability, especially when the capacity of busy airports decreased.

5.11 China also informed about a civil/military cooperation workshop held in Hangzhou which was supported by the RSO. China also stated that it will continue to strengthen cooperation between civil and military aviation.

5.12 The meeting noted that, given that supporting the vital air navigation infrastructure of any State was consistent with the military mission to defend the nation's economy (which in turn supported the military), States were invited to study the examples provided as a matter of positive development for civil and military systems.

5.13 In this regard, the ATM/SG/6 endorsed the following Draft Conclusion that had been developed by the SAIOACG/8/SEACG/25, for APANPIRG/29's consideration:

Draft Conclusion ATM/SG/6-9: Minimizing the Impact of Non-ICAO Procedures and Requirements for Military Activities Affecting Civil Aviation

That, where the imposition of non-ICAO military requirements and procedures affecting international civil aviation is either planned or likely, States are urged to ensure that civil aviation interests are taken into account by:

- 1) ensuring military authorities are fully informed of the obligations of all States that are signatory to the Convention on International Civil Aviation;
- 2) conducting full and timely consultation with airspace users, adjacent States and ICAO;
- 3) implementing the capability to tactically share FPL and ATS messages, civil ATC surveillance data and other relevant information between the ANSP and military authorities;
- 4) implementing direct communications facilities between military organizations and the ANSP to permit the coordination of requests for information on any unknown aircraft;
- 5) establishing civil-military coordination functions within civil air traffic control centres; and
- 6) promulgating timely, clear and unambiguous information on the requirements and procedures, and accurate, detailed charts in accordance with the requirements of ICAO Annex 4 and Annex 15; and
- 7) where pre-authorizations for individual civil flights in affected areas are necessary, States are urged to either consider:
 - i) issuing authorizations with the seasonal schedule approval; or
 - ii) developing and rigorously test clear and, ideally, automated procedures for compliance such as the use of flight plan data.

5.14 Regarding ADCs, India stated that further consultation with other stakeholders within India was required, and the status would be reviewed.

'Due Regard' Military Operations in International Airspace (WP27, Flimsy 06)

5.15 India discussed concerns related to the frequent sighting of unknown aircraft – presumed to be military – within controlled airspace over the high seas.

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5.16 India recalled the provisions in the *Convention on International Civil Aviation* related to prevention of endangerment of civil aircraft by State aircraft – Article 3. These established the requirement for ‘due regard for the safety of navigation of civil aircraft’, and specifically in Article 3 *bis*, civil aircraft may not be endangered during any interception, and State aircraft must refrain from the use of weapons.

5.17 WP27 proposed a Conclusion, which suggested that the cooperation of military aircraft over the high seas be conducted in accordance with the UN Convention on the Law of the Sea (UNCLOS), and an ATC clearance with regard to RVSM levels. The meeting noted that the intent was to improve safety, but also observed that there was no current mechanism to require State aircraft operating in international airspace to comply with Annex 2 *Rules of the Air* in respect of clearance to enter SUA or controlled airspace (Annex 2, Section 3.1.10 and 3.6.1 respectively).

5.18 The EUR OPS Bulletin detailing European civil/military cooperation expectations in the high sea, including ‘due regard’ operations, was provided to the meeting.

Civil/Military Cooperation in Regional ATS Route Development (IP21)

5.19 India described the successful implementation of ATS Route L639 between Ahmedabad, India and waypoint RASKI (Mumbai – Muscat FIR boundary) through civil/military cooperation.

5.20 IP21 noted that during June 2018, L639 was made available on 12 occasions for a total of 27.15 hours. A total of 181 aircraft had used the route, with a calculated benefit of 138,465 kg of fuel and 436,029 kg of CO₂ saved. IATA thanked India and its military for developing alternative and more efficient routes.

Regional ATM Contingency Planning and Status Reporting (WP28)

5.21 ICAO presented information on the Asia/Pacific Regional Contingency Plan’s status reporting strategy, based on *Conclusion ATM/SG/5-8: Asia/Pacific Regional ATM Contingency Plan Amendment*. The Regional ATM Contingency Plan Monitoring and Reporting Form had been uploaded to the ICAO Asia/Pacific Regional Office website, and Asia/Pacific Administrations were expected to report their ATM Contingency Plan implementation status at least once annually.

5.22 Noting that Annex 11 section 2.31 required ATS authorities to develop and promulgate contingency plans, the meeting was informed that, commencing in 2019, the ICAO Regional Office would report annually the receipt, or non-receipt, of completed Contingency Plan Monitoring and Reporting Forms, for consideration for addition to the APANPIRG ANS Deficiencies List.

5.23 The meeting was also reminded that the ATM contingency plans of all Administrations must include contingency responses for volcanic ash cloud, as these could, and did, affect airspace and aerodromes in States that had no volcanoes.

5.24 Information was also provided on the appropriate use of the least disruptive separation minimum available, in the event of outage of facilities necessary for the application of the separations normally applied and the African contingency planning experience.

5.25 Referring to the Inter-Regional Afghanistan ATM Contingency Arrangements, Afghanistan informed the meeting that the ANSP did not foresee any decline in ATS provision in the Kabul FIR, and that the ANSP was progressively training national staff to fill ATS roles.

SAIOACG and SEACG Meeting Outcomes (WP29)

5.26 The meeting was provided with an overview of the outcomes of the SAIOACG/8 and SEACG/25 (Siem Reap, Cambodia, 26 – 30 March 2018).

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5.27 The SCSTFRG had identified three priority areas, with action plans for each. With regard to Priority Area 3 (ATS routes A461/A583/L625/N892), Philippines intended to progressively reduce longitudinal separation and specify RNP 10, then RNP 4 and RNP 2 in the fourth quarter of 2019.

5.28 A side meeting was held during SAIOACG/8/SEACG/25 to discuss and agree the way forward for Priority Areas 1 (A1/A202) and 2 (L642/M771). A further side meeting was held to discuss planning for the First Meeting of the Bay of Bengal Traffic Flow Review Group (BOBTFRG, established under SAIOACG). Summaries of discussions of the side meetings was provided in **ATM/SG/6 WP/29 Attachments A and B**).

5.29 The SAIOACG/8 and SEACG/25 meeting had considered information provided by Singapore on the recommendations regarding the wake turbulence category for the A380-800 aircraft. ICAO had conducted a survey on implementation in late 2017, but few States had responded. The Wake Turbulence Working Group (WTWG), which was formed under the ATM Operations Panel, were working towards a Doc 4444 amendment proposal with a view to applicability by November 2020.

5.30 The *Asia/Pacific ATS Route Catalogue* was reviewed by SAIOACG/8 and SEACG/25, which noted that it contained proposals that had not yet been agreed and implemented. The Catalogue was amended to include routes proposed by Malaysia, from Kota Kinabalu to Hong Kong, Kota Bharu to Kota Kinabalu and Kota Bharu to Kuching.

5.31 India had submitted PfAs to the eANP) to introduce new ATS routes over the Arabian Sea, although noting alignment issues needed resolution. ICAO had advised that the previous combined PfA, which would now need to be updated, would also require further coordination with the ICAO Eastern and Southern Africa (ESAF) Region, as it included ATS routes that effectively ended at a point in space as they joined non-regional routes in the Mogadishu FIR.

5.32 Cambodia intended to follow up on the development of RNAV route N639 overlaying the current non-RNAV route B329, and parallel route structures supplementing current routes R468 and G474. A summary of the outcomes of a SAIOACG/8 and SEACG/25 side-meeting between Cambodia, Lao PDR and Viet Nam was provided in **ATM/SG/6 WP/29 Attachment C**.

5.33 SAIOACG/8 and SEACG/25 had discussed a proposal for an alternate route from Ujung Pandang FIR to South Pacific and East Asia FIRs, to provide a means of avoiding extreme delays incurred by flights from Australia to East Asian destinations, often requiring extensive en-route holding.

5.34 Other matters discussed by SAIOACG/8/SEACG/25 included flow restriction mitigations on ATS route M771, SID/STAR phraseology implementation, missing FPL and DEP message analysis, the *Asia/Pacific ATS Route Catalogue*, and civil/military cooperation.

5.35 As part of efforts to reduce the safety risk in the South Asia/Indian Ocean airspace, India had finalized and signed new coordination agreements with Indonesia, developed a draft agreement with Malaysia, and agreed with Oman to initiate various steps to reduce the occurrence of LHDs due to coordination error.

5.36 Thailand mentioned the forthcoming Mekong ATM Coordination Meeting and discussed the possibility of ATFM measures in response to volcanic eruption events. Indonesia elaborated on the update of contingency routes and ATS Letters of Agreement (LOA).

Trans-Regional ATS Coordination (WP30)

5.37 ICAO presented information on trans-regional Air Traffic Services (ATS) coordination, focusing on the interfaces between the ICAO Middle East (MID) Region and the Asia/Pacific Region (APAC), and between the European Region (EUR) and APAC.

5.38 There had been no other trans-regional meetings since 2016, except for the Advanced Inter-Regional Air Traffic Services Route Development Task Force (AIRARD/TF). The provisional AIRARD/TF agenda had been adopted by the MID's MIDANPIRG, but needed to be endorsed by the other regions. The meeting agreed to the following Draft Decision, for APANPIRG/29's consideration:

Draft Decision ATM/SG/6-10: AIRARD/TF Terms of Reference

That, the Advanced Inter-Regional Air Traffic Services Route Development Task Force (AIRARD/TF) Terms of Reference at **Appendix F to the Report** be approved by the Asia/Pacific (APAC) Region.

5.39 The UAE delegate, as Vice Chair of the MIDANPIRG, urged States to support the AIRARD/TF not just by attending but also with active participation, as this was considered to be an important body to manage the critical interface between regions. India also urged a greater focus on the African Region as the Mumbai FIR managed an increasing traffic volume serving Africa.

5.40 The Second and Third Meetings of the AIRARD/TF (AIRARD/TF/2, Astana, Kazakhstan, 26 – 27 October 2017 and AIRARD/TF/3, Amman, Jordan, 01 – 02 May 2018) had discussed a number of key improvement areas:

- Trans-regional routes and associated waypoints;
- ATS route designation;
- duplicated waypoint and route designators;
- The PBN Highway concept, based on the *Asia/Pacific Seamless ATM Plan*;
- Surveillance-based longitudinal separation and spacing;
- contingency planning; and
- Free Route Airspace (FRA) implementation.

ATS Route Catalogue (WP31)

5.41 ICAO presented the *Asia and Pacific Region ATS Route Catalogue* Version 16.1 for review and update as Version 17.0. States were urged to review and categorise route proposals as 'not possible', 'short term' (within 12 months), 'medium term' (within 12-36 months) and 'long term' (possible after 36 months).

Asia Pacific Region ATS Route Catalogue (WP32)

5.42 IATA had conducted a review of the *Asia and Pacific Region ATS Route Catalogue* using a focus group of IATA airlines, except for the Russian trans-regional routes.

5.43 ICAO proposed to take into account the comments from IATA then work with States on the proposals, then prepare Version 17.0 which will be shared on the ICAO website. ICAO advised the meeting that this was an ongoing process and there was no specific deadline.

5.44 WP32 identified priority routes from an airline perspective for States' consideration and implementation. IATA identified 17 priority route proposals, which would save approximately 531.8 million kilograms of CO₂ per annum if implemented. IATA stressed that with the implementation of new ATM systems together with increased focus on FUA in the region, these routes should be able to be considered by States.

AKARA Corridor (WP33)

5.45 IATA presented a proposal to address the issues associated with the management of the airspace known as the ‘AKARA Corridor’, with the objective of normalising service delivery in the area in accordance with Annex 11 requirements (i.e.: a single ATC unit operating within a single volume of airspace). IATA noted that aircraft operators had long held safety concerns, prompting the issuance of an ‘Operational Notice’ on the area, with the most recent version being reissued in November 2017.

5.46 Given the original arrangement had been established in 1983 between the three States and ICAO by Memorandum of Understanding (MOU), IATA suggested that these States urgently discuss how to plan and implement a structure to increase safety levels and comply with international standards, and that International Organisations would support this effort if required.

5.47 The ROK thanked IATA for the presentation, and noted the safety concerns that had been evident for several years, commenting specifically on the increasing traffic. Moreover, the ROK stated that they would like to urge the States concerned to discuss the AKARA Corridor and looked forward to a closer cooperation with the States.

5.48 China recalled the need for improved efficiency within the Corridor by improving longitudinal transfer spacing from 20NM to 15NM before the Olympics.

5.49 China observed that there was no ATS LOA between Shanghai and Incheon. However, China advised that Shanghai would assist with any contingency procedures for emergency descent, the implementation of SLOP, and direct tracks where possible. China also advised that the ANSPs concerned should discuss and resolve the issues under the framework of the existing MOU.

5.50 IATA thanked China and the ROK for their encouraging and positive responses. China stated that they fully supported the ATM operation normalisation. Japan stated that they were working with both ROK and China to improve safety, with satisfactory changes in the near future.

5.51 As reported by RASMAG and the ATM/SG previously, the airspace of major concern was only that portion east of position SADLI, which was currently serviced by both the Fukuoka ACC (west-east flights), and the Incheon ACC (north-south flights). In conclusion, ICAO thanked the States concerned and expressed the desire for bilateral agreement on the principles of transition to a safer arrangement would lead to a wider agreement by all the stakeholders to the MOU.

5.52 IATA had proposed a Draft Conclusion as follows:

Draft Conclusion ATM/SG/6-X: AKARA Corridor ATM Normalisation

That, considering the elevated safety risks and efficiency issues associated with the portion of the Incheon Flight Information Region (FIR) known as the AKARA Corridor that had been reported by RASMAG in recent years, China, Japan and the Republic of Korea were urged to normalize ATM procedures within this airspace as a matter of urgency.

5.53 During the meeting, China requested a modification to reflect the fact that the main safety focus was on the portion of the AKARA Corridor east of the position SADLI as follows:

*Draft Conclusion ATM/SG/6-X: **AKARA-FUKUE Air Corridor** ATM **Operation** Normalisation*

*That, considering the elevated safety risks and efficiency issues associated with the portion of the **AKARA-FUKUE Air Corridor** east the of position SADLI of the **Incheon Flight Information Region (FIR)** known as the **AKARA Corridor** that had been reported by RASMAG in recent years, China, Japan and the Republic of Korea were urged to normalize ATM **operational** procedures within this airspace as a matter of urgency.*

5.54 However, in discussion during the reading of the report, the ROK delegation did not agree with the Draft Conclusion. Therefore, in the absence of consensus the ATM/SG/6 could not agree to the Draft Conclusion, so the matter may be further considered by APANPIRG/29.

ATS Routes A461 and A583 PBN Specification Implementation (IP22, Flimsy 07)

5.55 Hong Kong, China proposed to implement a PBN specification (RNAV 10) on ATS routes A461 and A583, to accommodate an increase in air traffic through the application of improved longitudinal spacing. IP22 recalled that the Philippines had previously agreed to RNAV 10 and Australia had already implemented 50NM longitudinal spacing on these routes since 04 September 2017.

5.56 Referring to Flimsy 07, ICAO noted that the *Asia/Pacific Seamless ATM Plan* expected implementation of RNAV 2 or RNP 2 within airspace with ATS surveillance ('Category S airspace'), and that RNAV 10 should only be used for remote airspace ('Category R airspace'). Moreover, as IP19 had indicated that the airspace concerned was almost all Category S, with a small surveillance gap near the FIR boundary, ICAO noted that 20NM spacing monitored by surveillance was entirely possible, with the gap being covered with GNSS procedural-based separation (PANS-ATM 5.4.2.3.3.1 refers).

5.57 In this regard, ICAO clarified noted that it was not necessary to re-designate a conventional ATS route to allow a PBN-capable aircraft to use that route – as long as the route WGS-84 waypoints were published and aircraft operating on these routes are required to be suitably equipped. Hong Kong, China stated that, based on the information supplemented by ICAO on the requirement for PBN route designation, they did not see the need, hence had no intention to change the designation of A461/A583.

5.58 The Philippines informed the meeting that there was a surveillance gap, but would work continuously to improve the capacity of the system by considering data sharing and space-based ADS-B. Indonesia agreed to implement a more efficient longitudinal separation. The meeting supported ADS-B data sharing as it was consistent with the *Asia/Pacific Seamless ATM Plan*, and had no security implications as it was a public broadcast.

EATMCG Meeting Outcomes (IP23)

5.59 IFATCA provided a brief overview of the Eleventh Meeting of the East Asia ATM Coordination Group's (EATMCG/11) outcomes.

5.60 The uncontained growth of overflight traffic in every FIR was a common theme at the meeting as it directly impacted airspace capacity and overall ATM operational efficiency. It was noted that some FIRs adjacent to the EATMCG area were regularly implementing short notice restrictive measures for traffic transiting their airspace at certain times and this inevitably affected upstream units.

5.61 The SCSTFRG was requested to consider a new parallel route within the Manila FIR to alleviate major congestion within flows in the northern part of the SCS between the Taipei FIR and the Hanoi FIR. EATMCG also discussed the timeline for the implementation of changes regarding PBN-based procedures, AIDC and ATC procedures. It was agreed to adopt a phased approach for improvements to promote the harmonisation of the region's airspace and procedures.

Asia/Pacific Unmanned Aircraft Systems Task Force Outcomes (WP34)

5.62 The meeting was informed of the outcomes from the Second Meeting of the Asia/Pacific Unmanned Aircraft Systems Task Force (APUAS/TF/2 Bangkok, Thailand 05 to 08 February 2018).

5.63 The Remotely Piloted Aircraft Systems (RPAS)/3 and DRONE ENABLE/2 symposiums that would be held in Chengdu, China from 10 to 14 September 2018. ATM/SG/6 participants were requested to ensure their State was represented at the symposiums, particularly DRONE ENABLE/2, in order to share knowledge on global developments in the management of UAS.

5.64 The meeting noted that the International Organization for Standardization (ISO) had commenced work on *ISO 21384-1 Aerospace – Unmanned Aircraft Systems* and a draft development plan for UTM. ICAO did not have a clear understanding of the role of ISO with regard to the new area of ‘operational standards’. There was a concern that ISO standards might impose extra costs [that might reduce the likelihood of public compliance] and impose extra requirements for parts of aviation that were already regulated, such as ANSPs. ICAO HQ was following up to clarify the role of ISO in UAS.

5.65 The APUAS/TF/2 meeting had also been provided with information on civil UAS traffic management in China, the FAA’s UAS integration efforts, and regulation of UAS in Hong Kong China.

5.66 Noting that the outcomes of HLCS 2015, the 39th Session of the Assembly of ICAO, and the RPAS/2 and DRONE ENABLE symposiums had led to the commencement of a global effort to be conducted under the UAS Advisory Group (UAS-AG) in three streams of UAS Traffic Management, the meeting agreed that the scope of work of APUAS/TF should be amended.

5.67 The meeting agreed to the following Draft Decision for consideration by APANPIRG:

Draft Decision ATM/SG/6-11: Revised APUAS/TF Terms of Reference

That, recognizing the scope of work on Unmanned Aircraft Systems (UAS), and particularly UAS Traffic Management (UTM) Systems being undertaken at the global level by the UAS Advisory Group, the revised APUAS/TF Terms of Reference at
Appendix G to the Report.

5.68 The APUAS/TF/2 meeting had been provided with a summary of the outcomes of the 2017 Annual Conference of the International Federation of Airline Pilots’ Associations (IFALPA) in relation to UAS. The outcomes from the conference, presented in an IFALPA position paper on UAS, were included, where relevant, in the principles of UAS management that would be included in the *Asia/Pacific Regional guidance for the Regulation and Safe Operation of UAS within National Airspace*.

5.69 APUAS/TF had commenced work on draft regulatory guidance for the operation of small UAS, initially guided by a Table of Contents for State Regulations for UAS, which was being developed by the Joint Authorities for Rulemaking on Unmanned Systems (JARUS).

Afghanistan, Pakistan, India, Thailand, and ICAO Side Meeting

5.70 Delegates from Afghanistan, Pakistan, India, Thailand, and ICAO had a side meeting to discuss the future increased capabilities of the Kabul FIR ANS system and its effects on adjacent FIR’s and the BOBCAT system. All parties agreed to continue a dialog in the near future to agree how to improve the overall system and begin work on a transition plan to enhance major traffic flow capacity through this airspace.

5.71 Pakistan noted the barriers to enhancement of services within the Karachi and Lahore FIRs were largely connected with the need for sufficient competent controllers to allow more ATC sectors, and the workstations for those sectors. However, Pakistan stressed that its ATS surveillance had already been improved, with extensive coverage and multiple sensors.

5.72 Separately, Afghanistan and Pakistan discussed some pending ANS issues between the two States. Pakistan provided updated information on the status of the review of an ATS route proposal that had been submitted by Afghanistan (increased flight level of A453 from TAPIS-GADER) and a second proposal that had been submitted by both Afghanistan and Tajikistan with input from IATA (a new route connecting SURVI-IMTEL or new route connecting RAMAN-new fix on Afghanistan-Pakistan border).

Agenda Item 6: AOP, AIM, MET, SAR

AOP Subgroup Outcomes (WP35)

6.1 ICAO provided a summary of the relevant outcomes from the Second Meeting of the Aerodromes Operations and Planning Subgroup (AOP/SG/2, Bangkok, Thailand, 27 – 29 June 2018):

- the Second Meeting of the Asia/Pacific Airport Collaborative Decision Making Task Force (APA-CDM/TF/2, Hong Kong, China, 29 November – 01 December 2017);
- development of the *Asia/Pacific Regional Guidance on Requirements for the Design and Operations of Water Aerodromes for Seaplane Operations*;
- development of the *Asia/Pacific Regional Guidance on Aerodrome Operations Personnel Competency Requirements* by the Aerodrome Operations Personnel Competency Small Working Group (AOPC/SWG), which would include runway and apron safety aspects; and
- approximately 20% of Asia/Pacific international aerodromes were not yet certified.

Multiple Line-Ups on the Same Runway (WP36)

6.2 India presented a proposal to include Multiple Line-ups on the Same Runway procedures within the Asia/Pacific portion of ICAO Doc 7030, as these had already been adopted as European (EUR) *Regional Supplementary Procedures*.

6.3 The meeting discussed the proposal, noting that several States had allowed this procedure for decades. The meeting also noted that it was not necessary for States to have a Doc. 7030 procedure established to enable a State to approve such procedures within sovereign airspace, and that it was also unnecessary to develop a Conclusion. Australia noted that the European procedures did not include reference to night operation safety considerations, so this needed to be included. Notwithstanding this, to ensure visibility of the issue, the meeting agreed to the following Conclusion:

Conclusion ATM/SG/6-12: Multiple Line-Ups on Same Runway

That, considering the efficiency and environmental benefits, Asia/Pacific States are urged to support a proposal to include Multiple line-ups on same Runway within ICAO Doc 7030 *Regional Supplementary Procedures* for the Asia and Pacific Regions, in accordance with **Appendix H to the Report**.

ICARD Status in Pakistan (WP37)

6.4 The meeting was informed of the status of the ICAO International Codes and Route Designators (ICARD) application in Pakistan. WP37 discussed the procedures related to retaining 5-Letter Name Codes (5LNCs) for re-use under the provisions of Annex 11 Appendix 2.

6.5 Pakistan had developed a phased plan for the removal of inconsistencies in published 5LNCs, including 24 duplicated 5LNCs in AIP Pakistan, inconsistency between AIP Pakistan and ICARD data for more than 40 significant points, and use of some non-ICARD designators on domestic ATS routes. Coordinated action had also been taken to resolve inconsistent information and duplicated 5LNCs marking boundary waypoints.

6.6 Pakistan proposed that a change to the ICARD application be considered, to permit States to retain the allocation of codes that had been made unavailable for use for six months after their registration was deleted. China proposed that ICARD references to ‘coordinating country’ be changed to ‘coordinating country/administration’ to facilitate the Special Administration Regions of China.

AIS – AIM Implementation Task Force Outcomes (WP38)

6.7 The outcomes of the Thirteenth Meeting of the Aeronautical Information Services (AIS) – Aeronautical Information Management (AIM) Implementation Task Force (AAITF/13, Bangkok, Thailand, 04 to 08 June 2018) were provided to the meeting.

6.8 Three AIS-AIM-related ANS Deficiencies had been identified by the AAITF: WGS-84 not implemented (12 States), AIP Format (two States) and Quality Management System not implemented (23 States).

6.9 There had been ongoing and rising concern about poor quality management of aeronautical information in the APAC Region, and the apparent lack of organizational priority for this safety-critical requirement.

6.10 A Draft Conclusion had been proposed, urging States to ensure that at least seven days' advance notice of the planned activation of established danger, restricted or prohibited areas and of planned activities requiring temporary airspace restrictions other than for emergency operations be provided to the AIS. However, the Secretariat informed the meeting that, while the intent had been to replace 'shall' in Annex 15 with 'should' in PANS-AIM, in the interest of transparency for States, the Air Navigation Commission had agreed to retain 'shall' in PANS-AIM 6.1.4.3.

6.11 The meeting was informed of AIM transition progress in the APAC Region, as reported to the ICAO Asia/Pacific Regional Office since AAITF/12 in June 2017. Progress was measured against the transition steps outlined in the ICAO Roadmap for Transition from AIS to AIM, and was recorded in the AIM Transition Table available on the ICAO Asia/Pacific Regional Office website at <http://www.icao.int/APAC/Pages/edocs.aspx>.

6.12 States that had provided no information at any time were Brunei Darussalam, Marshall Islands, Micronesia, Nauru and Palau. A total of 13 Administrations had provided information since AAITF12, which compared poorly with the AAITF/12 report (22 Administrations updated progress).

6.13 **Figure 4** and **Figure 5** illustrated the overall Regional Implementation of Phase 1 of the Roadmap for Transition from AIS to AIM (approximately 73%, compared to 71% at AAITF/12) and Phase 2 of the Roadmap (approximately 37%, compared to 34% at AAITF/12). This indicated that there has been, in general region-wide terms, little further progress in the last year. Overall Regional implementation of Phases 1 and 2 of the Roadmap was approximately 48%, compared to approximately 44% at AAITF/12.

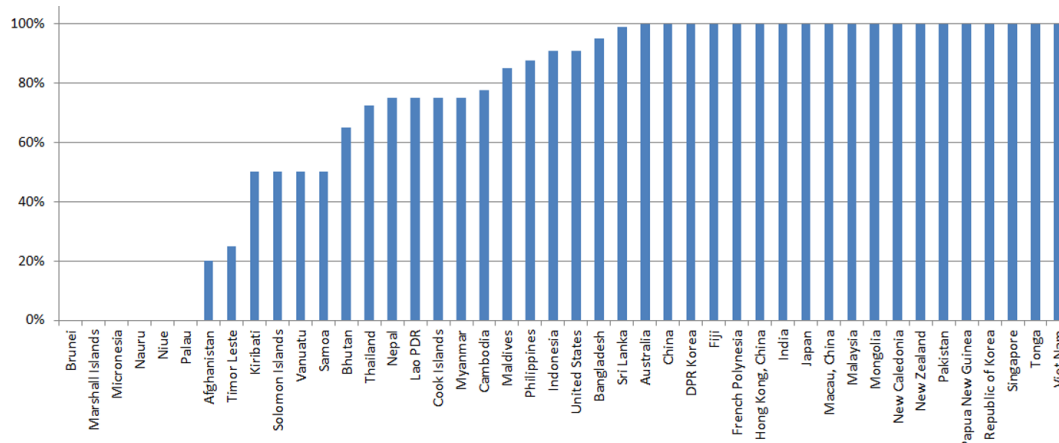


Figure 4: Regional Phase 1 Implementation Progress

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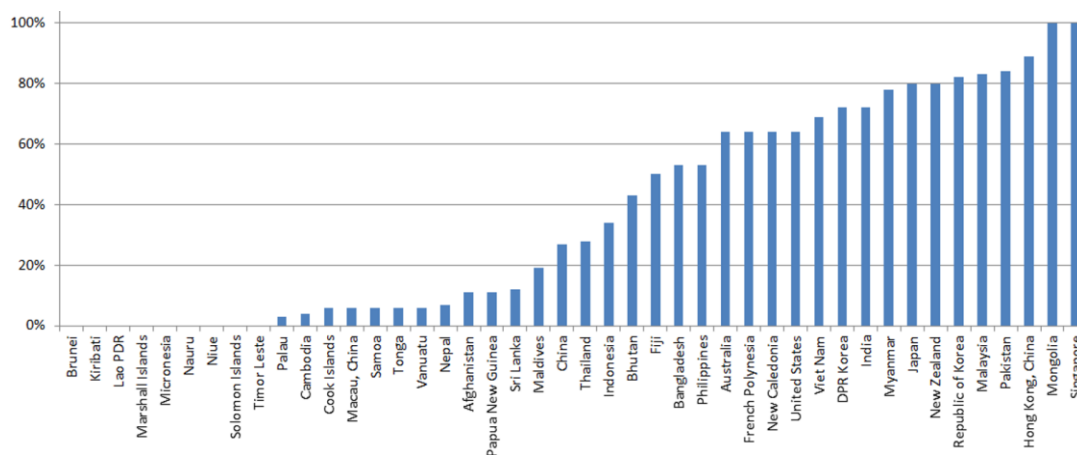


Figure 5: Regional Phase 2 Implementation Progress.

6.14 The meeting was again reminded that the implementation steps of Phase 1 of the Roadmap were consolidation steps, i.e. the SARPS for these four steps had been published in Annex 15 many years before the need for transition to AIM arose. The failure of many States to implement these fundamental requirements for the correct functioning of an AIS was a particular concern.

6.15 Known AIS/AIM compliance status for of the Asia/Pacific Region, measured against the 36 AIS and charts-related USOAP PQs indicated the overall Effective Implementation of AIS and aeronautical charts was 62%, which was a 3% increase compared with that reported to AAITF/12.

6.16 In relation to the ICARD application, and procedural issues related to the allocation of waypoint names, ICAO State Letter AN 11/45.5-17/101 was distributed in August 2017, requesting States to provide information on all 5LNCs published in AIP, in order to the commence registering all published 5LNCs in ICARD, and detailing the rules to be used for the resolution of duplicated 5LNC. It was noted that this would require significant effort by States and ICAO, and that States must ensure that appropriate safety management processes were applied.

6.17 The initial priority for resolution of duplicated 5LNC was applied to those that were separated by less than 1,000 NM due to the increased risks involved. A list of these duplicates was provided in **ATM/SG/6 WP/38 Attachment A**.

6.18 Noting that, while AIS had a critical interest in the matter of 5LNCs due to the need for AIP amendment, the AIS was not always responsible for their allocation. ATM/SG/6 participants were requested to ensure that their organizations were fully aware of the work that must be undertaken to ensure the global uniqueness of 5LNC, and the impact upon ATC, AIS and other relevant parties.

6.19 The meeting was informed of the adoption by the Council of ICAO of Amendment 40 to Annex 15, effective 16 July 2018 and applicable on 08 November 2018. The new PANS-AIM was expected to be approved in the near future, as was the amended ICAO Doc 8126 – AIS Manual, both of which would be applicable from 08 November 2018.

6.20 Information was provided on ICAO's new strategy for the transition of RNP APCH chart identification from RNAV to RNP, issued in Electronic Bulletin (EB) 2018/11 and Circular 353 *Transition Planning for Change to Instrument Flight Procedure Approach Chart Identification from RNAV to RNP*, and arising from Amendment 6 to PANS-OPS Volume II. This matter was further discussed under a separate ATM/SG/6 WP.

6.21 The ATM/SG/6 was invited to note the demands that the RNP APCH chart transition will place on stakeholders identified in **Table 5**.

Items	Potential impact
Chart identification/PBN requirement box	(Re-) publication of charts in AIP, Possible changes to automation software
Pilot procedures	Knowledge and training (e.g. pilot bulletins, simulator training, CBT)
ATC procedures (APP, TWR, FIS)	Knowledge and training (e.g. ATCO bulletins and training) prior to chart change
Procedure design software	Software adaptation
Charting house	Re-issue of charts closely coordinated between the State's AIS and charting house. Possible software adaptation required
Aircraft flight manual (AFM)	Amendment of AFM by air operators, if applicable. Regulator may have to issue clarification
Changes to on board the multi-function control and display unit (MCDU)	Possible FMS changes to reflect the change from RNAV to RNP, which cause economic impact. If not changed, discrepancy between display and ATC clearance will happen

Table 5: Potential Impact from the Transition of PBN APCH Chart Identification

6.22 Hong Kong, China had updated AAITF/13 on the progress of AIS to AIM transition, and highlighted three areas where challenges had been identified. These included ICARD and the resolution of duplicated 5LNC, the production of electronic AIP (eAIP), and issues relating to Phase 3 of the ICAO Roadmap for Transition from AIS to AIM – *Information Management*. The meeting agreed to the following Draft Conclusion for consideration by APANPIRG/29 and referral to ICAO HQ:

Draft Conclusion ATM/SG/6-13: ICAO Action to Provide Support and Guidance Material to Facilitate AIS – AIM Transition

That, ICAO is urged to:

1. provide guidance on the best practice on the establishment of a support team, training and handling of data inconsistencies to facilitate digital eAIP implementation; and
2. provide guidance on best practices for implementing AIM Roadmap Phase 3 Steps P-19, P-20 and P-21

6.23 Viet Nam had provided AAITF/13 with information on the continuing existence of NOTAM containing information of permanent validity that had not been transferred to AIP or AIP Supplement (AIP SUP) in a timely manner, overloading pilots with lengthy Pre-flight Information Bulletin (PIB). The relevant SARPS in Annex 15 and guidance provided in Doc 8126 *AIS Manual* were highlighted, as was the guidance provided in the Guidance Manual for AIS in the Asia/Pacific Region. Therefore, the meeting agreed to the following Conclusion:

Conclusion ATM/SG/6-14: Management of NOTAMs

That, States are urged to take immediate action to reduce the large numbers of permanent, long duration NOTAMs by:

1. conducting a full review of all NOTAMs issued by the State;
2. expediting the transfer of valid permanent NOTAM information into AIP;
3. expediting the transfer of valid temporary NOTAM information of long duration into AIP SUP; and
4. cancelling the NOTAMs accordingly.

6.24 AAITF would undertake periodic sampling of NOTAMs, with a view to direct engagement with States responsible for permanent, long duration NOTAM and subsequent reporting to APANPIRG through the Air Navigation Deficiencies list. IATA requested that this issue be escalated to reflect that it was a global problem.

6.25 AAITF/13 had agreed that that Version 1.0 of the *Asia/Pacific Regional Plan for Collaborative AIM* be finalized, noting that the information included in the document had been rationalized to take account of the recently increased effort to finalize global guidance, and to avoid any inadvertent divergence.

6.26 The *Asia/Pacific Regional Plan for Collaborative AIM* included performance expectations aligned with and supporting the performance objectives of the Asia/Pacific Seamless ATM Plan. The meeting agreed to the following Draft Conclusion, for consideration by APANPIRG/29:

Conclusion ATM/SG/6-15: Asia/Pacific Regional Plan for Collaborative AIM

That,

1. the *Asia/Pacific Regional Plan for Collaborative AIM* Version 1.0 at **Appendix I to the Report**, be adopted and uploaded to the ICAO Asia/Pacific Regional Office eDocuments web-page;
2. the Regional AIM Implementation Status Reporting Form, provided at Appendix D to the AIM Plan, be separately uploaded to the Regional Office eDocuments web-page; and
3. Asia/Pacific Administrations utilize the Regional AIM Implementation Status Reporting Form to report their AIM implementation status at least once annually, by not later than 30 April each year.

6.27 Hong Kong, China noted there was similarity, as well as potential duplication and inconsistency, of the performance expectations of the *Asia/Pacific Regional Plan for Collaborative AIM* and their associated status reporting elements and the Seamless ATM Plan reporting regime, and in some cases the ICAO Roadmap for Transition from AIS to AIM. The meeting agreed that AAITF should further examine the performance objectives and status reporting elements with a view to future rationalization in this regard of the *Asia/Pacific Regional Plan for Collaborative AIM* and *Seamless ATM Plan*. AAITF should also re-consider the necessity for two levels of implementation reporting.

6.28 The meeting urged ICAO to provide the resources for a harmonized, single portal for reporting implementation of the performance expectations of the Seamless ATM Plan and its supporting, subsidiary plans (Regional Framework for Collaborative ATFM, Regional ATM Contingency Plan, Regional SAR Plan and Regional Plan for Collaborative AIM).

Updating ICARD and Resolution of Duplicated 5LNCs (WP39)

6.29 India reminded the meeting of State Letter AN 11/45.5-17/101, dated 11 August 201. India had provided a report to the Asia/Pacific Regional Office, listing 5LNCs published in AIP India and registered in ICARD, published in AIP and not registered in ICARD, registered in ICARD but not published in AIP, and those for which the data recorded in ICARD did not match the AIP data.

6.30 Information was provided on other activities undertaken by India to comply with the requirements of the State Letter, including an action plan which gave priority to addressing harmonization issues with waypoints on the FIR boundaries with neighbouring States. India provided a list of FIR boundary waypoints yet to be resolved in ATM/SG/6 WP39 Annexure-2. Subject to similar action by neighbouring States, India expected to complete all action by the end of December 2018. India requested action by Bhutan, Myanmar, Nepal, Somalia, Sri Lanka and Yemen to resolve anomalies in FIR boundary waypoints with India. ICAO thanked and congratulated India for the level of attention they had paid to this challenging issue.

6.31 Hong Kong, China noted that with the rapid development of civil aviation, more and more ATS routes and procedures would be produced, so although 5LNC might meet the today's needs, a solution for the longer term should be explored in advance.

Meteorology Issues Relevant to ATM (WP40)

6.32 ICAO provided an overview of Aeronautical Meteorology (MET) issues relevant to ATM arising from the Twenty-Second Meeting of the Meteorology Subgroup of APANPIRG (MET SG/22, Bangkok, Thailand, 18 – 21 June 2018), and its contributory bodies, including:

- engagement with user groups and Pacific Island States;
- standardization of the format of transmission of special air-reports;
- Amendment 78 to ICAO Annex 3 – *Meteorological Service for International Air Navigation*, MET elements of the APAC ANP;
- APANPIRG Air Navigation Deficiencies in the MET field;
- recent and planned changes to the World Area Forecast System (WAFS) and Secure Aviation Data Information System (SADIS);
- Meteorological Information Exchange Model (IWXXM) implementation; and
- Volcanic Ash Advisory Centre activities, and SIGMET coordination.

6.33 MET SG/22 formulated Draft Decision MET/SG/22/12: *Updated terms of reference of the MET SG (including work plan)*, proposing that APANPIRG approve the updated terms of reference of the MET SG, provided at ATM/SG/6/WP40 Appendix 1.

6.34 MET SG/22 reviewed proposed updates to the draft *Asia/Pacific Regional Guidance for Tailored Meteorological Information and Services to Support Air Traffic Management (ATM) Operations*, and identified the need for further editorial improvements. MET SG/22 noted the outcome from ATM/SG/5 concerning availability of the guidance document, and adopted Conclusion MET/SG/22/07: *APAC Regional Guidance for MET Information Supporting ATM*, to enable access to the working draft of the document on the ICAO website. In addition, *Draft Conclusion MET/SG/22/08: APAC Regional Guidance for MET Information Supporting ATM*, was endorsed for APANPIRG to approve the guidance.

6.35 The APAC Volcanic Ash Exercises Steering Group (VOLCEX/SG) continued to plan and coordinate volcanic ash exercises.

Asia/Pacific Search and Rescue Update (WP41)

6.36 ICAO provided an update on Search and Rescue (SAR) for the Asia/Pacific, from the Third Meeting of the Asia/Pacific SAR Workgroup (APSAR/WG/3, Bangkok, 21 – 23 May 2018).

6.37 APSAR/WG/3 had discussed Circular 347 *Aircraft Tracking Implementation Guidelines* related to the Global Aeronautical Distress and Safety System (GADSS), as provisions contained in Annex 6, Part I paragraph 3.5 would become applicable on 08 November 2018. IATA stressed that GADSS (and in particular the new tracking requirements) had implementation issues, largely due to the lack of complete guidance material and implementation data. The APSAR/WG/3 had agreed to the following Draft Conclusion, which the ATM/SG/6 endorsed for consideration by APANPIRG/29:

Draft Conclusion ATM/SG/6-16: GADSS Aircraft Tracking Requirement

To support compliance with the Global Aeronautical Distress and Safety System (GADSS) aircraft tracking requirements applicable 08 November 2018 that:

a) States should provide information to the ICAO APAC Regional Office where actual Air Traffic Control tracking capability does not meet the GADSS requirements in their area of responsibility, together with a timeline for promulgation of regulatory requirements for airlines to submit requests for variations and exemptions; and

b) ICAO HQ be requested to ensure that other ICAO regions affected take action in accordance with a), and consolidate the information to make it available to all aircraft operators and States.

Note: Due to the short timeline between APANPIRG/29 and the implementation of this GADSS phase in late 2018, States were urged to commence action in accordance with the Draft Conclusion if appropriate, even before APANPIRG/29.

6.38 ICAO's Job Card *Implementation of the Global Aeronautical Distress and Safety System (GADSS)* to develop workshop materials for States and aircraft operators and a high-level rollout plan and regional plans by 2020 had been approved by the Air Navigation Commission.

6.39 The USA had stated that ICAO HQ would need assistance to conduct Job Card Tasks G14 and G15, and that HQ recognized the ICAO APAC Regional Office as a leader in advancing SAR development.

6.40 There were no unresponsive SAR Points of Contact (SPOCs) in the Asia/Pacific Region.

6.41 Asia/Pacific States that had already installed the new Cospas-Sarsat Medium Earth Orbit SAR (MEOSAR) system were Australia, Japan, Malaysia, New Zealand and the USA. India, Pakistan, Thailand and Viet Nam were planning MEOSAR implementation, and Singapore was in the process of installing the MEOSAR System, with expected completion at the end of 2018.

6.42 APSAR/TF/3 had discussed the lack of progress in the registration of detected beacons, which had been steady at about 72% for several years. It was considered necessary to closely monitor this issue, and if necessary in future urge States to take stronger action, such as legislation requiring registration, and appropriate enforcement policies.

6.43 An analysis of the 27 USOAP SAR-related PQs indicated that the overall Effective Implementation (EI) for SAR had risen from 50.7% in 2015 to 54.8% (August 2016), 55.4% (May 2017) and **57.19%** in May 2018 for the Asia/Pacific Region.

6.44 Implementation of the *Asia/Pacific SAR Plan* was being monitored by an annual survey (**Figure 6**). A total of 11 States had not yet responded to the survey – Bhutan, Cook Islands, Marshall Islands, Micronesia, Nauru, Palau, Papua New Guinea, Solomon Islands, Timor-Leste, Tuvalu and Vanuatu.

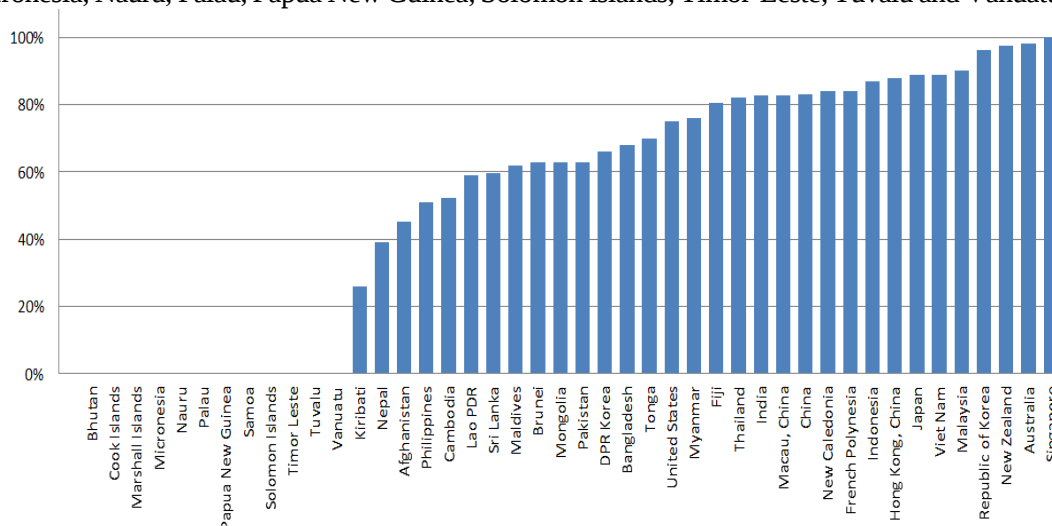


Figure 6: Asia/Pacific SAR Plan Implementation Status (as at 8 May 2018)

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6.45 ICAO recalled that APSAR/WG/2 had agreed that States below 90% implementation by 2019 would be considered to have a SAR deficiency at that time, so a large number of States were urged by the APSAR/WG/3 to continue their efforts to fully implement the *Asia/Pacific SAR Plan*.

6.46 ICAO had sent a survey on one of the 41 *Asia/Pacific SAR Plan* elements causing concern as a result of monitoring – Rescue Coordination Centre (RCC) contingency planning. Administrations were urged to respond to this survey so the region had a clearer understanding of implementation issues.

6.47 APSAR/TF/3 supported the inclusion of SAR in the Global Air Navigation Plan (GANP) as a Basic Building Block (BBB) element. The USA urged States to submit papers on SAR to the Thirteenth Air Navigation Conference (AN-Conf/13, Montreal, Canada, 9 – 19 October 2018), and for Asia/Pacific States to send SAR experts to the Conference.

6.48 APSAR/WG/3 agreed to the following Draft Conclusion, which was endorsed by the ATM/SG/6, for consideration by APANPIRG/29:

Draft Conclusion ATM/SG/6-17: SAR and GADSS in the GANP

That, Asia/Pacific States are urged to advocate for:

a) inclusion of Search and Rescue (SAR) as a Basic Building Block (BBB) and the Global Aeronautical Distress and Safety System (GADSS) functions within the Sixth edition of the Global Air Navigation Plan (GANP) by -

i) sending SAR experts; and

ii) presenting SAR-related papers to the Thirteenth Air Navigation Conference (AN-Conf/13, Montreal, Canada, 9 – 19 October 2018); and

b) greater resources within ICAO HQ to ensure an effective oversight of SAR.

6.49 The meeting noted that the *European SAR Plan*, which had been largely based on the *Asia/Pacific SAR Plan*, was published as EUR Doc 039 in November 2017.

6.50 Given the large number of potential changes to the *Asia/Pacific Seamless ATM Plan* in 2019, the meeting agreed to form a Small Working Group (SWG) to review potential amendments with the following ***Decision APSARWG/3-3: SAR Plan Amendment Review Small Working Group***.

GADSS Aircraft Tracking Requirements (WP42)

6.51 The USA observed that national SAR services would need to adapt current practices and procedures to manage these new capabilities for GADSS flight tracking and the benefit for SAR, if the data is rapidly available to the aircraft operator, the appropriate ATS unit, and the RCC.

6.52 WP42 also noted that the new Autonomous Distress Tracking (ADT) capability would become applicable for certain aircraft on 01 January 2021. The meeting noted that as this would generate alerts to ATS from different sources, training for controllers in this regard was necessary.

6.53 IATA expressed its concern that States were not ready for the initial GADSS tracking requirements and that awareness would need to be raised at APANPIRG and the DGCA Conference.

Search and Rescue Agreements and Letters of Agreements (WP43)

6.54 The USA discussed the lack of SAR agreements across the Asia/Pacific Region, and recalled several, less formal mechanisms that could be used in lieu of a SAR agreement if format was an issue.

MET and AIM Supplementary Information (Flimsies 01, 03 and 08)

6.55 The following Flimsies were provided on ANS improvements:

- Flimsy 01 – Airport Low-Level Wind Information, ALWIN (Japan);
- Flimsy 03 – AIS-AIM Phase II Transition Workshop (ICAO); and
- Flimsy 08 – Asia/Pacific Volcanic Ash Exercise (APAC VOLCEX 18/02) (Indonesia).

Agenda Item 7: Air Navigation Service Deficiencies

Air Navigation Service Deficiencies List (WP44)

7.1 The current confirmed ANS Deficiencies as at APANPIRG/28 are shown in **Figure 7**:

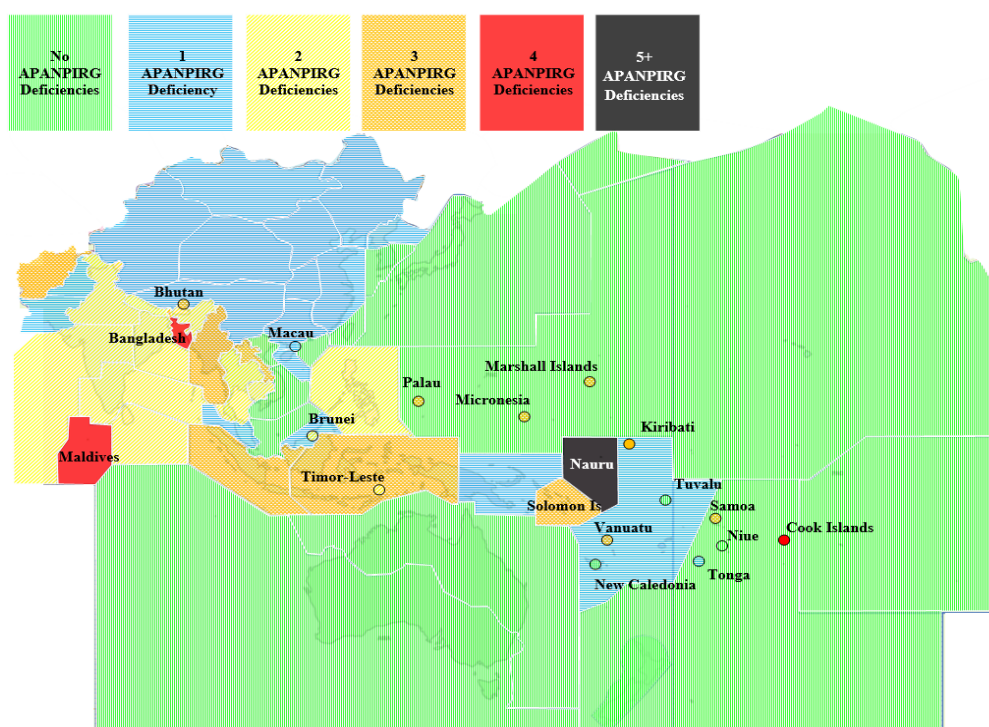


Figure 7: APANPIRG/28 ANS Deficiencies

7.2 The meeting reviewed and discussed the ATM/AIS/SAR Deficiency List included as **Appendix J** and agreed to forward the list for consolidation and presentation by APANPIRG/29.

7.3 Noting the proposed APANPIRG Deficiency related to the lack of a control zone to support controlled airspace class C, the equivalent of Class C airspace requirements had been adopted within the Macao Aerodrome Traffic Zone and published in AIP. Macao, China provided information of the establishment and characteristics of Macao airspace which extended between two FIRs, and the ICAO standards and Class C airspace requirements were adopted within the Macao ATZ and had been published in the AIP since 1995.

7.4 The meeting acknowledged the deficiency concerns related to the IFALPA Deficiencies, and invited IFALPA to present these as part of an IFALPA WP at future ICAO meetings, instead of being appendixes to an ICAO paper. Hong Kong, China also recommended that States and IFALPA should engage in dialogue related to the IFALPA-identified deficiencies to verify the information provided.

Agenda Item 8: Update the ATM Task List

APANPIRG ATM Subgroup Task List (WP45)

- 8.1 The meeting agreed to the updated Task List included as **Appendix K**.

Agenda Item 9: Any Other Business

ATM Security (WP46)

- 9.1 ICAO provided information related to general ANSP security requirements contained in the 10 Edition (Amendment 15) of Annex 17 – *Security*, and specifically, the establishment of cyber security guidance material and resources. The meeting noted that a new Amendment 16 to Annex 17 – *Security* had been approved by the ICAO Council, with an applicable date of 16 November 2018.

- 9.2 Kiribati emphasised that the cyber threat was not an emerging threat but a present issue, that should be taken seriously by even the smallest States.

Cyber Security (Flimsy 11)

- 9.3 The following Flimsy was provided by the UAE: ATM Data and Cyber Security Portal. The UAE had organised a global summit last year to discuss cyber security risks in aviation. The summit emphasised the importance of global cooperation and sharing experiences to learn from others. The UAE also chaired an action group in the MID region to address ATM data and cyber security issues. An ATM Data and Cyber Security portal had been developed by UAE and was currently a prototype under testing.

ATM Points of Contact Update (WP47)

- 9.4 The Secretariat presented the current ATM Points of Contact List (**Appendix L**), and requested that administrations update this information as required.

Agenda Item 10: Date and venue for the next meeting

ATM/SG/7

- 10.1 The tentative timeframe and venue for the ATM/SG/7 was 05 – 09 August 2019, Bangkok, Thailand.

Closing

- 10.2 The Chairman thanked the meeting participants for their valuable contributions.

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