International Civil Aviation Organization

Thirty-Third Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/33)

Bali, Indonesia, Hybrid Meeting, 22 to 24 November 2022

Agenda Item 3: Performance Framework for Regional Air Navigation Planning and Implementation

3.2: ATM

ATM/SG/10 OUTCOMES

(Presented by the ATM/SG Chair)

SUMMARY

This paper provides a summary of the key outcomes from the Tenth Meeting of the Air Traffic Management Sub-Group (ATM/SG/10) and its contributory bodies. One Draft Conclusion is presented for consideration by APANPIRG/33.

Strategic Objectives:

A: ***Safety*** *– Enhance global civil aviation safety*

B: ***Air Navigation Capacity and Efficiency*** *— Increase the capacity and improve the efficiency of the global aviation system*

E***: Environmental Protection*** *— Minimize the adverse environment effects of civil aviation activities.*

1. INTRODUCTION

1.1 The Tenth Meeting of the Air Traffic Management Sub-Group (ATM/SG/10) of the Asia Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG) was held by Video Teleconference (VTC) from the ICAO Asia and Pacific Regional Office, Bangkok, Thailand.

1.2 The meeting was attended by 265 registered participants from 29 States, two Special Administrative Regions of China and four International and Air Traffic Management-related organizations, including Australia, Bangladesh, Bhutan, Cambodia, China, Hong Kong China, Macao China, Fiji, France, India, Indonesia, Japan, Kiribati, Kyrgyzstan, Lao People's Democratic Republic (PDR), Malaysia, Mongolia, Myanmar, Nepal, New Zealand, Pakistan, Philippines, Republic of Korea (ROK), Singapore, Somalia, Sri Lanka, Thailand, United Arab Emirates, United States, Viet Nam, Yemen, IATA, IFAIMA, IFALPA, and ICAO.

1.3 The ATM Sub-Group met as a virtual plenary meeting. The working language of the meeting was English for all documentation and this Report. A total of 46 Working Papers (WPs), 22 Information Papers (IPs), two flimsies and five presentations were considered by the meeting.

1.4 The full ATM/SG/10 meeting report and all associated papers and presentations are available on the ICAO Asia/Pacific (APAC) Regional Office website at:

https://www.icao.int/APAC/Meetings/Pages/2022-ATM-SG10.aspx

1.5 **DISCLAIMER:** The presentation of material in this report does not imply the expression of any opinion whatsoever on the part of ICAO, APANPIRG or the ATM Sub-Group of APANPIRG concerning the legal status of any country, territory, city or area of its authorities, or concerning the delimitation of its frontiers or boundaries.

2. DISCUSSION

ANS USOAP Update

2.1 The Secretariat provided information on the ICAO Universal Safety Oversight Audit Programme (USOAP) Continuous Monitoring Approach (CMA). The paper discussed the Protocol Questions (PQs) used to assess a State's safety oversight system, and an annual update of ANS USOAP status.

2.2 The average ANS Effective Implementation (EI) of APAC region was 64.24%, as at October 2022. **Figure 1** illustrated the EI ratings for ANS-related PQs of the 37 APAC States that had been audited or received USOAP activity:

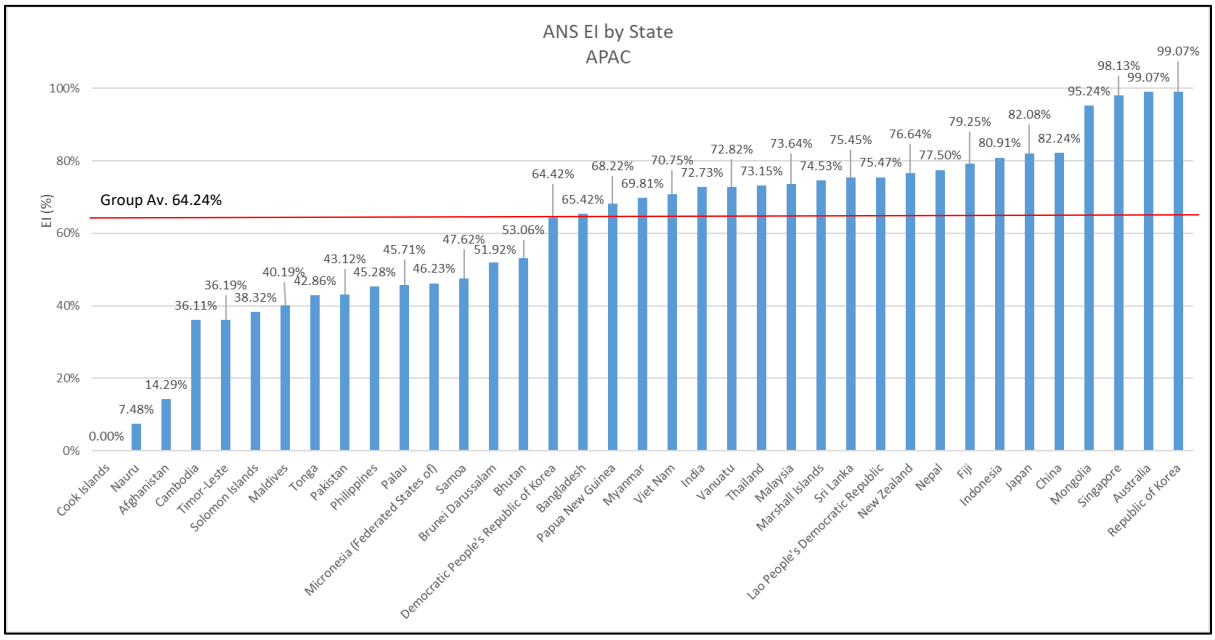

Figure 1: USOAP ANS EI Comparisons by State (October 2022)

2.3 The meeting was informed that the data source was the USOAP Continuous Monitoring Approach (CMA) Online Framework (OLF), which reflected the 2020 version of PQs and recent USOAP activities such as CMA Audit (CMAA), ICAO Coordinated Validation Mission (ICVM), and Off-Site Validation Activity (OSVA).

2.4 Two USOAP CMA workshops had been tentatively scheduled for 2023 in Bangkok. The details would be shared in due course.

Updating the Asia/Pacific Seamless ANS Plan

2.5 The Secretariat presented a proposal for the update of the Asia/Pacific Seamless ANS Plan for ATM/SG comment. The proposal is provided in a separate working paper for consideration by APANPIRG/33.

ATM-Related Regional Guidance and Plans Update Cycle, Standardised Reporting Format and Reporting Date

2.6 The meeting considered a proposal for a revised document review cycle for ATM-related Regional guidance material and plans, and a revised common due date (28 February each year) and standardised format for implementation status reporting of their performance expectations.

2.7 The meeting agreed to the following Conclusion:

Conclusion ATM/SG/10-1: Revised Reporting Date for ATM Regional Plans' Implementation Status Monitoring

That,

1. *States are urged to report their implementation status of the performance expectations of the following regional plans by not later than 28 February each year:*
   a) *Regional ATM Contingency Plan;*
   b) *Regional Framework for Collaborative ATFM;*
   c) *Regional Plan for Collaborative AIM; and*
   d) *Regional SAR Plan; and*
2. *The implementation reporting forms for each of these regional plans be updated to provide for reporting in percentages of implementation.*

This Conclusion supersedes the status reporting requirements of Conclusions ATM/SG 5-3, 5-8 and 7-16

2.8 The meeting agreed to the proposed document review cycle for ATM-related plans that were subsidiary to the Seamless ANS Plan. Further coordination would be conducted with the AGA, CNS and MET sections of the ICAO Asia/Pacific Regional Office to examine the need for any revision of document update cycles and implementation reporting dates.

2.9 **Figure 2** illustrated the proposed ATM-related document review cycle.

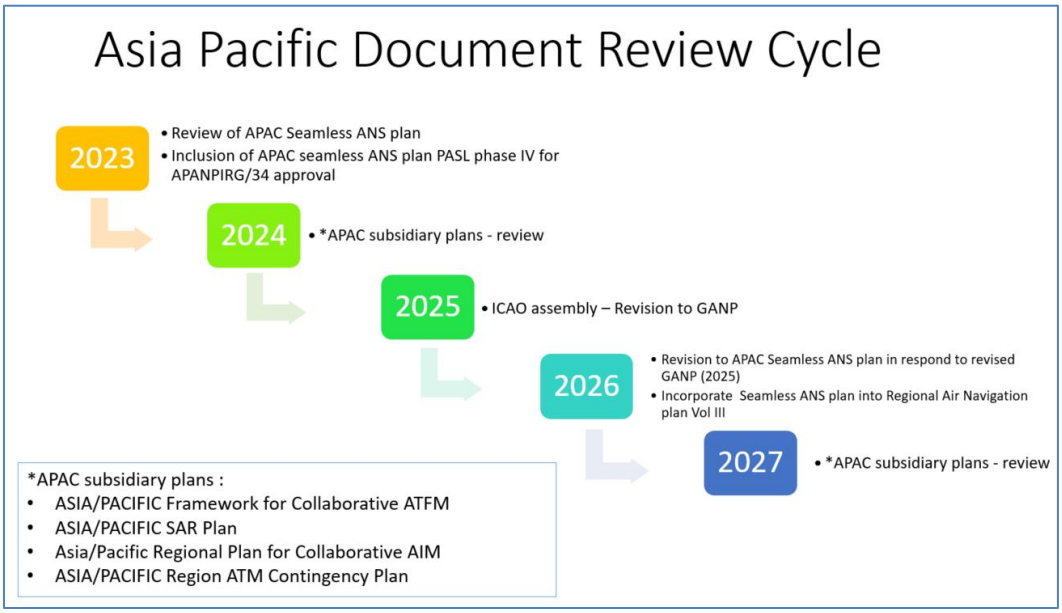

Figure 2: Proposed ATM-Related Document Review Cycle

Application of ATC Separation Standards

2.10 The Secretariat provided information on the Seamless ATM survey conducted to determine which Air Traffic Control (ATC) separation minima were being applied within the Asia/Pacific Region. The response from Asia/Pacific Administrations to the latest survey was poor, with only 21 replies (48% of administrations). The survey measured the minimum horizontal separation standard within State/Administration's FIR in Category R, Category S and Category T airspace[1]. **Figures 3** and **4** illustrated the efficiency of ATC spacing between aircraft at the same level as it is theoretically being applied inbound at FIR TOC Points, and within FIRs.

[1] Asia/Pacific Seamless ANS Plan paragraph 1.4:

> Category R: remote en-route airspace with Air Traffic Services (ATS) HF or CPDLC communications and outside the coverage of ground-based surveillance coverage; or
>
> Category S: serviced (or potentially serviced) en-route airspace – by direct (not dependent on a Communication Service Provider (CSP) ATS communications and surveillance; or
>
> Category T: terminal operations serviced by direct ATS communications and surveillance.

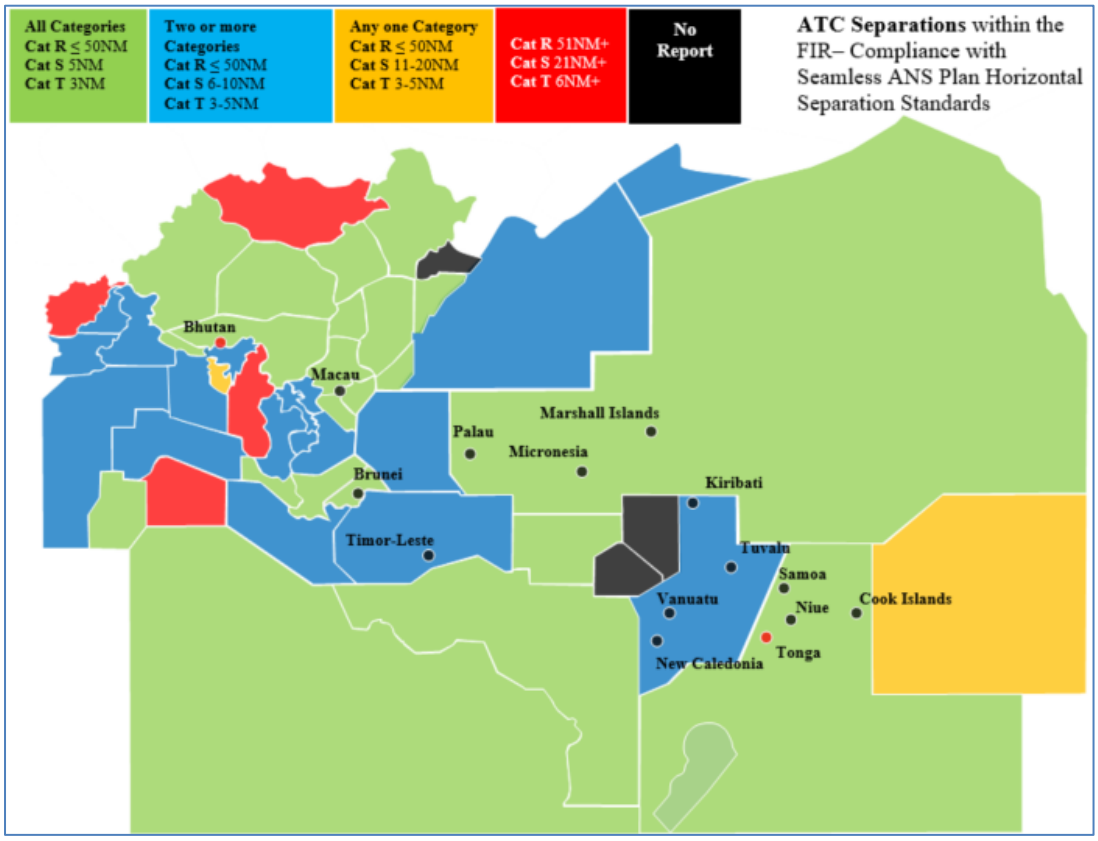

Figure 3: Horizontal Separation Minima within the FIR, September 2022

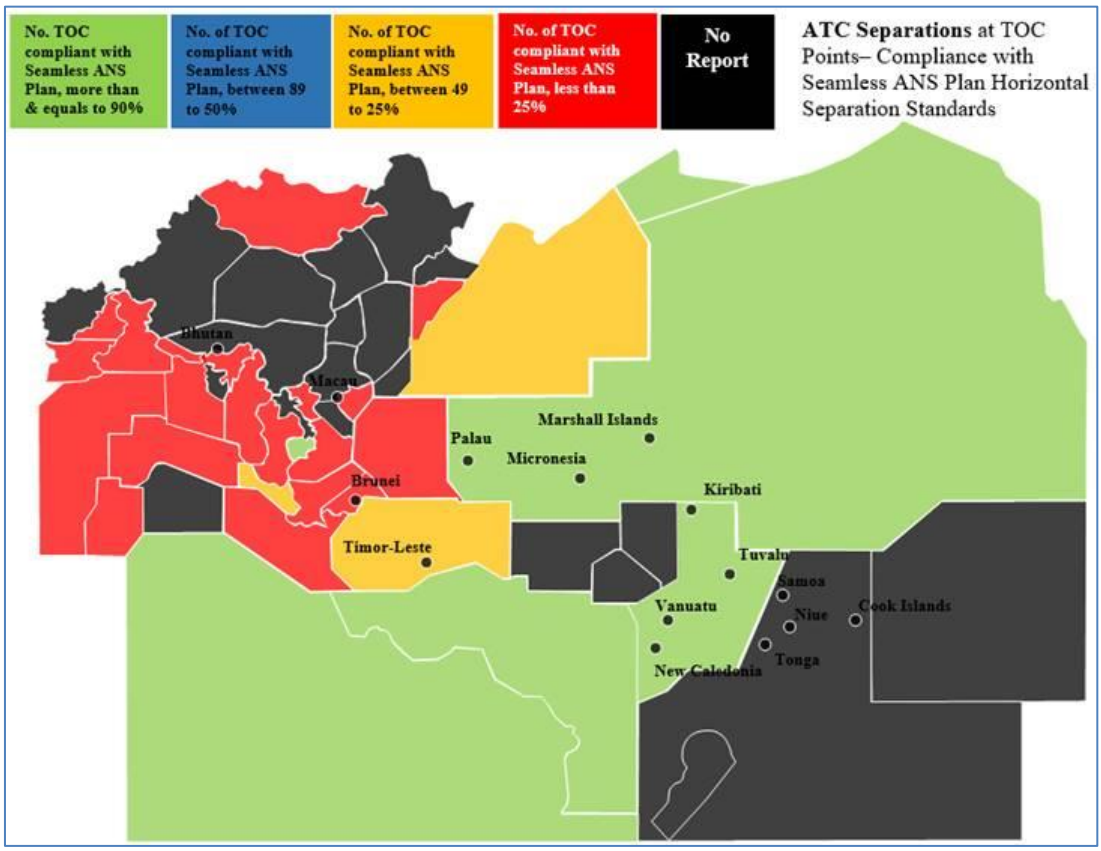

Figure 4: ATC Horizontal Spacing at Inbound FIR TOC points, September 2022

2.11 The survey results also revealed that for those compliant TOC points 'Category R/S airspace to Category S' FIR TOC Point had the highest rate of compliance in APAC region whereas for the non-compliant TOC points, the most prevalent were 'Category S airspace to Category S' FIR TOC Points with 432 TOC points reported. Even with surveillance coverage, separation minima of more than 10NM were currently applied at TOC points in the APAC region. All Administrations were urged to complete the ATC separations survey and to implement separation minima and update their Air Traffic Services (ATS) LOAs to meet the expectations of the *Asia/Pacific Seamless ANS Plan*.

ATM and Airspace Safety Deficiencies List

2.12 ICAO presented the list of APANPIRG Air Navigation Deficiencies in the ATM and Airspace Safety fields. The ATM/SG/10 meeting recommended the following change proposals for consideration by APANPIRG/33 under Agenda Item 4:

a) SAR capability

i. Fiji Deficiency deleted;

ii. Tuvalu – new Deficiency.

b) WGS-84 not implemented

i. Bangladesh Deficiency deleted.

Regional Air Navigation Plan Update

2.13 ICAO presented an update on the progress of incorporating coordinate data for Asia/Pacific Flight Information Regions (FIRs) and Search and Rescue Regions (SRRs) in the Regional Air Navigation Plan (ANP) Volume I. **Figure 5** & **Figure 6** illustrated the current status of the FIR and SRR reviews.

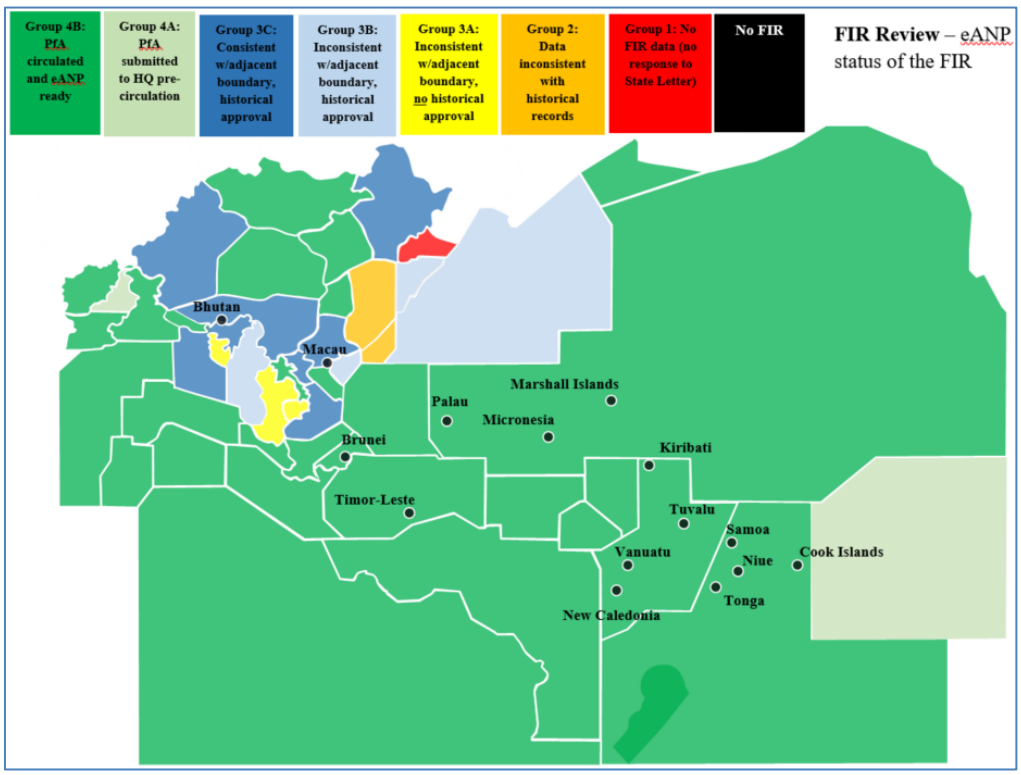

Figure 5: FIR Review Status, as at September 2022

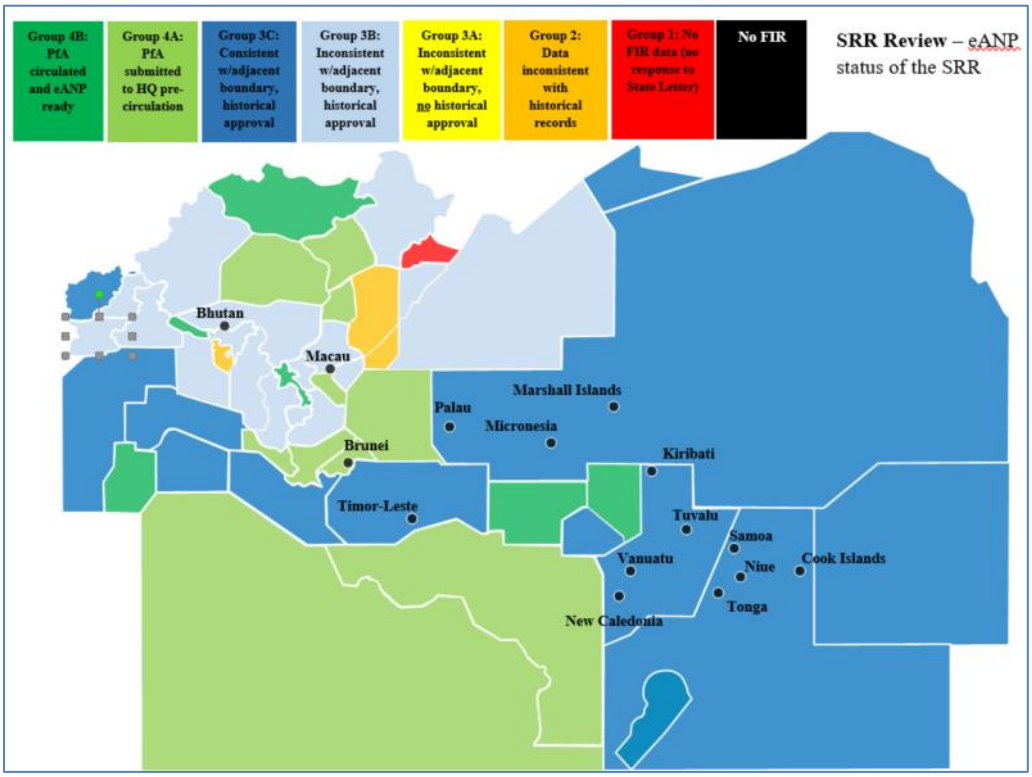

Figure 6: SRR Review Status, as at September 2022

2.14 ICAO shared the Proposal for Amendment (PfA) process of approval FIRs and SRRs data to be included in ANP Volume I (approval of the Council). In order to facilitate the PfA process, ICAO urged States to urgently review the FIR/SRR data of those FIRs and SRRs related to their administration that were not included in the ANP Volume I Table SAR I-1 and provide feedback to the Regional Office on the data's accuracy.

2.15 Information was provided on issues affecting resolution of 14 FIRs that required further coordination. Bangladesh informed the meeting of their efforts to resolve differences between the Dhaka FIR and the adjoining Kolkata (India) and Yangon (Myanmar) FIRs. No further progress had been reported on the other APAC FIR data that was yet to be finalized for publication in the ANP.

2.16 The meeting was reminded that the purpose of this process was not to modify FIR boundaries. The purpose of the process was to define current FIR boundaries in Volume I of the ANP.

ICAO Doc 7030 Regional Supplementary Procedures Publication Guidance for Implementation of ADS-B In-Trail Procedures (ITP) and Climb and Descent Procedure

2.17 New Zealand provided information on PfAs to ICAO Doc 7030 Regional Supplementary Procedures (SUPPS), jointly submitted by several States, for the implementation of ADS-B In Trail Procedure (ITP) and ADS-C Climb and Descent Procedure (CDP). In its review ICAO Headquarters had determined parts of the PfAs were unnecessary.

2.18 It was noted that for many years publication of an Air Traffic Control (ATC) procedure in SUPPS had been important to many ANSPs because it provided notification to their regulator that the FIR was approved to apply the procedure.

2.19 The meeting agreed to the following Draft Conclusion, for consideration by APANPIRG/33:

Draft Conclusion ATM/SG/10-2: Provide clear direction on Doc 7030 Regional SUPPs publication requirements.		
What: That, ICAO provides clear direction on which separation minima require Doc 7030 Regional SUPPS publication to provide consistency in the information published in the different ICAO Regions.		Expected impact: ☒ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical
Why: To provide consistency of published information in ICAO Doc 7030.	Follow-up:	☐Required from States
When: 23-November-22	Status:	Draft to be adopted by PIRG
Who: ☐ Sub groups ☐APAC States ☒ ICAO APAC RO ☒ ICAO HQ ☐Other: XXXX		

Proposal on the Establishment of a Study Group to Prepare a Set of Harmonised Operational Requirements of FF-ICE for Asia/Pacific

2.20 Japan, Singapore, USA and Thailand proposed the establishment of a Study Group to prepare a set of harmonised operational requirements of Flight and Flow Information for a Collaborative Environment (FF-ICE) and recommend an approach to devise an FF-ICE implementation strategy for Asia/Pacific, aligned with the Asia/Pacific Seamless ANS objective. FF-ICE would require changes in operational processes and flight planning procedures. New processes would be required to cater to a mixed mode environment where both current flight plan (FPL2012) and FF-ICE flight plan co-exist. The interaction of FF-ICE with other ATM initiatives such as Air Traffic Flow Management (ATFM) would also need to be studied.

2.21 The meeting agreed to the following Decision:

Decision ATM/SG/10-3: Establish FF-ICE Operational Requirements Small Working Group

That, ATM/SG establishes the FF-ICE Operational Requirements Small Working Group, that will:

a) study ICAO global TBO and FF-ICE provisions and the outcomes of relevant ICAO technical panels and regional technical groups; to

b) prepare a set of draft harmonised regional operational requirements of FF-ICE/R1, and related operational processes and procedures;

c) present related information to the FF-ICE seminar to be organised by ATMAS TF in 2023;

d) recommend an appropriate approach to devise a FF-ICE implementation strategy for the APAC region; and

e) recommend priority ASBU elements and develop draft regional performance objectives for consideration for inclusion in the Asia/Pacific Seamless ANS Plan version 4.0.

2.22 Singapore volunteered to organise the first meeting of the small working group. The following States/Administrations and international organization expressed interest to participate in this small working group: Australia, China, Hong Kong China, India, Japan, Mongolia, New Zealand, Thailand, USA and IATA. ICAO explained that such a small working group (SWG) was not an ICAO formal group and therefore did not required a chairperson. The rapporteur of the SWG would report the outcomes to ATM/SG for consideration.

Air Traffic Flow Management Steering Group Outcomes

2.23 The meeting was informed of the outcomes of the 12th Meeting of the Air Traffic Flow Management Steering Group (ATFM/SG/12), held by VTC from 13 to 16 September 2022.

2.24 Updates were provided on progress in the Asia/Pacific Cross-Border Multi-Nodal ATFM Collaboration (AMNAC), the Northeast Asia Regional ATFM Harmonization Group (NARAHG), and the East-Asia Air Traffic Management Coordination Group (EATMCG). The meeting was grateful for EATMCG's cooperation in using the Regional ATFM Concept of Operations (multi-nodal ATFM concept), especially for acting as a bridge between North East Asia and South East Asia.

2.25 A summary of the ATFM implementation status of APAC Administrations was provided, reported against the performance objectives of the Regional Framework for Collaborative ATFM. Annual implementation status reports were received from 15 APAC Administrations: Bangladesh, Cambodia, Hong Kong China, India, Indonesia, Japan, Mongolia, Nepal, New Zealand, Pakistan, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam.

2.26 Based on reports received States were assessed as having *Robust* (90-100%), *Marginal* (70-89%) or *Incomplete* (0-69%) implementation. Japan, Singapore, Thailand and USA were assessed as having Robust implementation. Australia, Cambodia, China, Hong Kong China, India, Pakistan, Philippines and Republic of Korea were assessed as having Marginal implementation.

2.27 The following APAC States had never provided an implementation status report, and their implementation status was recorded as *Did Not Report*:

- Afghanistan, Bhutan, Brunei Darussalam, Cook Islands, Fiji, France (French Polynesia), DPR Korea, Kiribati, Lao PDR, Marshall Islands, Micronesia, Nauru, Palau, Samoa, Solomon Islands, Sri Lanka, Timor-Leste, Tonga, Tuvalu, and Vanuatu.

2.28 The meeting was provided with information on ATFM in the context of recent years' contingency situations in the Asia and Pacific Region. The use of ATFM in contingency situations such as the ongoing Kabul FIR and recent Taibei FIR contingency events were examples.

2.29 ATFM/SG/12 was informed of the benefits of using Ground Delay Programs (GDPs) as the preferred ATFM solution for Demand-Capacity Balancing (DCB) as compared to Minutes-In-Trial/Miles-In-Trail (MINIT/MIT). The meeting was also informed that ATFM measures were intended to be used for the purpose of managing traffic flow to address demand-capacity imbalance rather than as a tool to ensure aircraft separation. As such, tolerance windows for ATFM measures should be provided to account for tactical variations rather than applying the measures with the rigidity of an aircraft separation minimum.

2.30 The meeting was informed that ATFM Information Requirements Small Working Group (ATFM/IR/SWG) had worked on the updated of the Regional Framework for Collaborative ATFM, the ATFM Training Guide, and the Regional ATFM Implementation Status Reporting form. ATFM/SG/12 agreed to the updated regional documents and drafted several conclusions for consideration by ATM/SG/10.

2.31 The meeting agreed to the following Conclusions:

Conclusion ATM/SG/10-4: Update Regional Framework for Collaborative ATFM

That, the Asia/Pacific Regional Framework for Collaborative ATFM Version 4.0 provided in ***Appendix D to the Report*** *be adopted, and made available on the ICAO Asia/Pacific Regional Office web site, replacing Version 3.0.*

Conclusion ATM/SG/10-5: ATFM Training Guide

That,

1. *the ATFM Training Guide provided in* ***Appendix E to the Report*** *be made available on the ICAO Asia/Pacific Regional Office website; and*
2. *Asia/Pacific Administrations are urged to refer to the ATFM Training Guidance material for developing their training programs.*

Conclusion ATM/SG/10-6: Regional ATFM Implementation Status Reporting

That,

1. *the ATFM Implementation Status Report form (version 3.0) provided in* ***Appendix F to the Report*** *be adopted, and made available on the ICAO Asia/Pacific Regional Office website;*
2. *Asia/Pacific Administrations are urged to report their ATFM implementation status at least once annually by no later than 28th February each year, using the ATFM Implementation Status Report Form; and*
3. *The Regional Framework for Collaborative ATFM be amended to include the information in Appendix F to the Report.*

Note: This Conclusion supersedes Conclusion ATM/SG/5-3

CDM Process in GBA under Adverse Weather Conditions

2.32 A presentation was made on how China dealt with ATFM with various weather conditions, including CDM with all the stakeholders. The meeting was informed that the Pearl River Delta (PRD) Operational Management Committee was officially inaugurated and put into operation in May 2022, where ATC, the three airports in PRD (Guangzhou, Shenzhen and Zhuhai), and relevant airlines working in the same room for the effective situational awareness and information sharing.

2.33 In response to the proposal that there should be more sharing of experience, the meeting noted CDM harmonization activities were undertaken by ATFM/SG and/or sub-regional ATFM groups (e.g., AMNAC, NARAHG, EATMCG), and that MET involvement in CDM processes was covered in both DOC 9971 and the Regional Framework for Collaborative ATFM. As MET was a key factor affecting airspace and airport capacity, the Meteorology Sub-Group of APANPIRG (MET SG) and the Meteorological Requirements Working Group (MET R/WG) had been working closely with ATM/SG and ATFM/SG. It was also noted that the expectation that States share CDM processes and experiences was already included in the Seamless ANS Plan. The meeting agreed that any specific proposals in this regard should first be proposed to ATFM/SG, as the expert technical body, to consider whether any additional activity in the CDM/ATFM domain might be needed.

Missing Departure (DEP) Messages

2.34 ICAO provided an update on the issue of missing Departure (DEP) messages, as discussed at ATFM/SG/8/9/10/11/12 (2018-22) and presented to ATM/SG meetings in 2019 and 2021.

2.35 The meeting was reminded of ICAO Doc 4444 *Procedures for Air Navigation Services – Air Traffic Management* (PANS-ATM) procedures for the addressing of ATS messages, noting that there were multiple examples of APAC Administrations specifying noncompliant Flight Plan (FPL) addressing requirements in Aeronautical Information Publication (AIP) Section ENR 1.11, together with the use in AFTN addresses of three-letter designators that were not registered for their use in Doc 8585 Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services. It was noted that specification of non-compliant addresses was a key factor in missing FPL and associated ATS messages (including DEP messages).

2.36 Analysis of incorrect FPL addressing requirements in AIP would continue, with a view to raising APANPIRG Air Navigation Deficiencies against non-compliance with ICAO Annexes and PANS where necessary.

2.37 The meeting was informed of the APAC Administrations for which APANPIRG ANS Deficiencies were recorded, where the most recent APAC regional analysis indicated 5% or more of the required DEP messages were not received by en-route and/or destination ATS units, as agreed by APANPIRG/31 and APANPIRG/32 (December 2021).

2.38 The meeting was invited to note that few Administrations achieved 100% of DEP messages transmitted to all relevant participating FIRs. All Administrations should examine their processes and system configuration in order to improve overall performance.

2.39 It was noted that a large percentage of missing DEP messages pertained to flights departing from other ICAO regions (Mid-East/Europe/AFI). The meeting also noted that considerable progress had been made by APAC States in reducing the percentage of missing DEP messages.

2.40 The matter had also been discussed during ATFM/SG/12 meeting in September 2022. It was agreed that States that had participated in the earlier exercise would be approached by ICAO Secretariat in October 2022 for collection and sharing of data within a specific period. The data collected would be analyzed by the ICAO Secretariat for refining the regional scenario. States were requested to participate in the data collection exercise.

Need for Proper Guidance to Establish and Upgrade the ATS Airspace Classes

2.41 Nepal proposed that there was a need for updates to ICAO Annex 11 *Air Traffic Services* and/or other relevant ICAO documents to provide States with appropriate provisions or guidance to establish or upgrade their ATS airspace classification.

2.42 The meeting was informed that any revision to Annex 11 or ICAO Doc 9426 was a matter for the appropriate technical panel, in this case the ATM Operations Panel (ATMOPSP). It was suggested that Nepal may wish to raise the matter with ATMOPSP. In the case of Doc 9426, the meeting was informed that this document was currently under review by the ATMOPSP.

2.43 ICAO agreed to explore the option of conducting a workshop on the classification of airspace, and of seeking information from States in order to compile guidance in the form of a checklist of considerations for States to use in determining airspace classification. IATA noted that some PBN implementation guidance documents included information on steps to be considered in airspace design, including airspace classification.

Asia/Pacific Unmanned Aircraft Systems

2.44 The meeting was provided information on the availability of global and regional guidance for the regulation and integration of Unmanned Aircraft Systems (UAS) in national airspace. Information was also provided on past and upcoming ICAO unmanned aviation symposia.

2.45 Meeting participants were invited to utilize the available regional guidance and the information available in the ICAO UAS Toolkit, Model UAS Regulations and UTM Framework, and participate in the ICAO Unmanned Aviation 2022 Symposia.

Alphanumeric Call Signs

2.46 An update was provided on the issue of call sign confusion and the use of Alphanumeric Call Signs in mitigation. The meeting was reminded of the outcomes of ATM/SG/4 (2016) and APANPIRG/27 in the same year, which enabled Phase 1 of the APAC Alpha Numeric Call Sign Project to commence. Phase 2 of the project was supported by a Conclusion of ATM/SG/5 in August 2017.

2.47 Following up on ***Conclusion APANPIRG/31/11: Alphanumeric Call Sign Initiative***, which had been drafted by the Twenty-Fifth Meeting of the Regional Airspace Safety Monitoring Advisory Group (RASMAG/25) and cited the extreme safety risks associated with pilot-ATC miscommunication and the number of Category D (ATC Loop Error) LHDs, ATM/SG Action item 5/5 had been updated by ATM/SG/9 to include CANSO and ACI among the responsible parties, and to reference the APANPIRG Conclusion.

2.48 As a result of offline consultation on the Action Item between ACI, CANSO, IATA and ICAO, a regional webinar was conducted with a view to provide information on the need for Alpha Numeric Call Signs to mitigate call sign confusion in ATC communications, implementation challenges, and benefits to all stakeholders. The webinar, hosted by CANSO as a joint activity with ACI, and supported by IATA, was held on 01 June 2022. The webinar details and presentations were available on the CANSO website at:

https://canso.org/event/regional-focus-safety-significance-and-implementation-of-alphanumeric-call-signs/

2.49 In follow-up consultation, the webinar organizers considered that development of a Safety Enhancement Initiative (SEI) for inclusion in the APAC Regional Aviation Safety Plan (RASP) might encourage APAC stakeholders to trial and then implement the use of alphanumeric call signs. The meeting was informed there could also be benefit in including a related regional planning element in the APAC Seamless ANS Plan.

Implementation of Enhanced Wake Turbulence Separation (eWTS)

2.50 The meeting was informed of the implementation of enhanced wake turbulence separation (e-WTS) in Hong Kong China, Republic of Korea and Japan.

2.51 The review concluded that the implementation increased the runway capacity of HKIA without compromising flight safety. An increase in hourly arrival capacity (from 34 to 35) and progressively for more hours in a day had been achieved. Information was provided on comprehensive safety assessment and safety case that were conducted to ensure all aspects of safety were reviewed and addressed.

2.52 An analysis on the potential benefit of implementing e-WTS for departures at HKIA had been conducted. After analysis, the proposed minima planned to be adopted at HKIA would be more conservative than stipulated in PANS-ATM. There was potential to increase the maximum hourly departure capacity at HKIA by 2-3%.

2.53 The High Intensity Runway Operation (HIRO) procedures had been implemented in consultation with all stakeholders at Incheon International Airport (RKSI) since 2017. RKSI had also added multiple rapid exit taxiways on the 4th runway in 2021. Details of the procedures were described in AIP RKSI AD 2.20. About two years after the implementation of the HIRO, the throughput of the main landing runway was analyzed, and it was noted that the Runway Occupancy Time (ROT) improved significantly.

2.54 Japan presented information on the implementation process and status of eWTS at Tokyo/Haneda International Airport (RJTT) and Tokyo/Narita International Airport (RJAA), planned for implementation in early 2020 with a phased approach. A trial operation until 5 November 2020 had been conducted based on the result of safety assessments by JCAB.

Remote Apron Control Implementation in China

2.55 China shared their experience in the implementation of remote apron control tower technology and the trial operations of remote ATS based on visual surveillance system usage. The meeting was informed of technical highlights of the use of remote tower technology at Guangzhou Baiyun airport

2.56 In response to the proposal that operational and technical specifications be developed for remote towers in the Asia/Pacific Region, the meeting was informed that global specifications were currently under development by the ATM Operations Panel (ATMOPSP), including the use of digital technology to augment traditional aerodrome control tower operations. China was encouraged to engage with the ATMOPSP and contribute to this work.

SAIOSEACG Meeting Outcomes

2.57 ICAO presented the key outcomes of the First Meeting of the South Asia, Indian Ocean and Southeast Asia ATM Coordination Group (SAIOSEACG/1, 29 March – 01 April 2022).

2.58 SAIOSEACG was formed under Decision APANPIRG/32/5 to consolidate the South Asia/Indian Ocean ATM Coordination Group (SAIOACG) and the South-East Asia ATS Coordination Group (SEACG) meetings. The Bay of Bengal Traffic Flow Review Group (BOBTFRG) and South China Sea Traffic Flow Review Group (SCSTFRG) reported to SAIOSEACG.

2.59 The SAIOSEACG/1 meeting also noted some improvements in Bay of Bengal and South China Sea airspaces, such as Area Navigation (RNAV) 2 implementation on ATS routes L642, M771 and N892, and Required Navigation Performance (RNP) 10 for ATS route M768, implementation of 10 NM surveillance spacing between Jakarta ACC and Ujung Pandang ACC, Malaysia's revised ATM contingency plan level 2 in Kuala Lumpur FIR, RNP 4 implementation on ATS routes M767 and N884, and the completion of a trial of 30 NM longitudinal spacing on ATS routes A461 and A583.

2.60 With regard to the Flight Level Allocation Scheme (FLAS) and non-standard Flight Level Orientation Scheme (FLOS) operations in the South China Sea area, Japan noted that the RASMAG/27 meeting had not identified FLAS/FLOS as a contributing factor to the Large Height Deviation (LHD) hot spot at the Fukuoka/Manila FIR boundary. ICAO responded that discussions of the South China Sea Traffic Flow Review Group (SCSTFRG) had considered the transition to/from the non-standard FLOS was a root cause. It was agreed that a meeting on the matter should be conducted between the relevant parties.

Note: RASMAG outcomes are reported to APANPIRG/33 under Agenda Item 3.3

ATS Route Catalogue

2.61 The meeting was informed of the review process for the Asia/Pacific Region ATS Route Catalogue, including correspondence with all concerned States/Administrations and IATA requesting status updates on relevant route proposals. Feedback had been incorporated into the draft Asia/Pacific Region ATS Route Catalogue, which was reviewed by the meeting and would be uploaded to the APAC website as Version 21.2.

2.62 There were currently 33 proposals in the Route Catalogue, with positive progress in three proposals, but none had been implemented in this year. Additionally, 26 proposals had no progress in the past four years, 27 proposals were classified as priority C or D by States, and four proposals were assigned LOW priority by IATA. These could trigger the deletion mechanism according to the established management protocols for the Asia/Pacific Region ATS Route Catalogue.

Outcomes of the Mekong ATM Coordination Group

2.63 Thailand presented, on behalf of Cambodia, Lao PDR, Myanmar, Thailand, Viet Nam and IATA, outcomes of Ninth Meeting of the Mekong ATM Coordination Group (MK-ATM/CG/9) held on 21 – 23 September 2022.

2.64 Several route structure enhancements agreed to in previous MK-ATM/CG/9 Meetings had been discussed including route proposals from the ICAO APAC ATS Route Catalogue. MK-ATM/CG/9 discussed operational issues related to Flight Level Allocation Scheme (FLAS) for ATS routes A1 and B202, tasking member States to further study and provide updates prior to the next meeting. ATFM service development in Lao PDR, and surveillance service development plans including surveillance data sharing between Lao PDR and Thailand had also been discussed.

Route Developments

L644

2.65 Singapore presented an overview of the plans and phased approach to enhance flight utilization of L644, starting with the removal of flight planning restrictions. The WP discussed a phased enhancement of operations and utilization of L644 that would help to provide airspace users flexibility in planning the most optimal flight paths.

2.66 Singapore had engaged with Indonesia, Viet Nam, and the Philippines to remove the flight planning restriction on L644 where it previously only served flights to Jakarta from Hong Kong China and beyond. The removal of the flight planning restriction had been effective since 8 September 2022.

2.67 Future phases of enhancements for L644 include allowing flights to join L644 from other ATS routes within Singapore FIR. This would not only provide airspace users with flexibility in flight planning, but also help to improve and optimize flight efficiencies and trajectories.

2.68 Viet Nam and Malaysia indicated support for the removal of flight planning restriction to facilitate flights to Indonesia. Viet Nam also suggested that Singapore consider applying a RNP 2/ RNP 4 navigation specification in Phase II. Singapore agreed to consider the same.

L642 and M771

2.69 Hong Kong China presented a progress update of the initiative to optimize the capacity of air routes L642 and M771 by means of enhancing the longitudinal spacing applied.

2.70 The meeting was informed that a comprehensive evaluation for optimization of the longitudinal spacing between aircraft operating along L642 and M771 from 50NM to 20NM within the Hong Kong FIR was completed in Q2 2022. Information was also provided on an additional ATC sector established for the southern portion of the Hong Kong FIR, and ADS-B surveillance coverage extending up to 80 NM south of the FIR boundary.

2.71 A Letter of Agreement (LOA) detailing the requirements for different operating scenarios on the implementation of the proposed 20NM spacing between Hong Kong Air Traffic Control Centre (ATCC) and Sanya ACC had been drafted. The meeting was also informed that a similar agreement between Sanya ACC and Ho Chi Minh ACC would also be required.

2.72 Hong Kong China encouraged all concerned States/Administrations to actively participate in discussions in order to expedite the implementation of revised longitudinal spacing as soon as possible.

Update on Trials for Application of 10 Minutes Separation on Crossing Tracks over Oceanic Airspace in Mumbai Flight Information Region

2.73 India proposed the application of 10 minutes' separation on an opportunity basis between ADS-B equipped aircraft flying on crossing tracks under Space Based ADS-B (SB ADS-B) Surveillance in the oceanic airspace of Mumbai FIR. For the proposed separation, the establishment of two-way radio communication via VHF/HF or CPDLC connection for suitably equipped aircraft was considered mandatory. 15 minutes' separation over the crossing points was currently being applied.

2.74 ATS provision in Mumbai oceanic airspace was dependent on procedural position reporting via HF, and/or by establishing ADS-C/CPDLC connection with appropriately equipped aircraft. However, with availability of Space Based ADS-B surveillance, improved performance of HF, availability of ADS-C/CPDLC and a strengthened Mumbai ATM Automation System the safe application of 10 minute separation between aircraft on crossing tracks was planned.

2.75 India conducted a trial from 01 May to 31 July 2022, applying 10 minutes horizontal separation on crossing tracks on opportunity basis only between the aircraft where their ADS-B tracks were correlated with the flight plan and positive contact was established with Mumbai Oceanic Control Centre (OCC) on voice (HF/VHF) or CPDLC. During the trials reduced crossing time separation was utilized at least 51 times between 102 participating aircraft where the estimated crossing time values were from 10 to 14 minutes.

2.76 Responding to the proposal that ICAO recognize the separation applied in this project, the meeting was informed that ICAO may only 'recognize' separations that are defined in Annex 11, PANS-ATM and Doc 7030. ICAO suggested India may consider developing a Doc 7030 Pfa proposal, which would require extensive work, or engage with the Separation and Airspace Safety Panel (SASP).

ADS-C CDP Progress in Fukuoka FIR

2.77 Japan provided information on the progress of the ADS-C Climb Descend Procedure (CDP) in the Pacific Ocean airspace of the Fukuoka FIR. ADS-C CDP allowed ATC to apply 15-25 NM longitudinal separation minima for a climb or descent through the cruising flight level of another aircraft. (**Figure 7**)

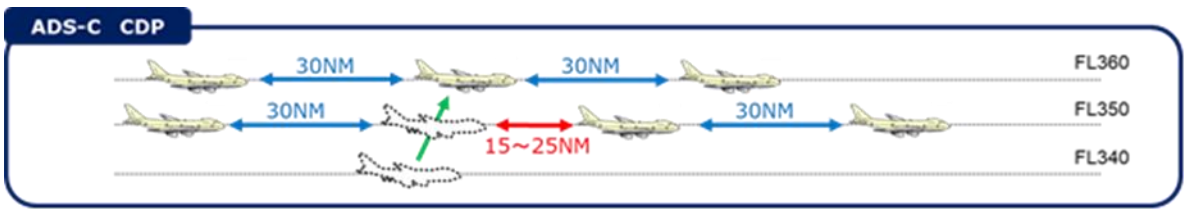

Figure 7: Example of adopting ADS-C CDP

2.78 The meeting was informed that JCAB established the ADS-C CDP implementation plan, in accordance with the Global Ari Navigation Plan (GANP), in their long-term vision for the future air traffic systems of Japan in 2015. The actual implementation in the Fukuoka FIR occurred on 9 September 2019, as a trial after conducting a safety assessment.

2.79 A total of 386 flights were approved for flight level change while separated by ADS-C CDP from 9 September 2021 to 31 August 2022. As an additional result, implementing ADS-C CDP in the airspace made a contribution not only to PBCS-approved aircraft but also provided non-PBCS-approved aircraft more opportunities to fly at their preferred flight level. However, the meeting was informed that JCAB encouraged aircraft operators flying in the Pacific Ocean airspace to obtain PBCS approval/authorization.

Space Launch and Space Vehicle Re-Entry Coordination and Military exercise Coordination

2.80 There were three WPs related to the Space Activity coordination and Military exercise coordination from Republic of Korea, the United States and Japan.

2.81 Republic of Korea proposed to strengthen international coordination procedures to secure the safety of civil aircraft and space launch vehicles when space vehicle launch and re-entry took place, and suggested that States/Administrations took appropriate measures in accordance with the ICAO Asia/Pacific Seamless ANS Plan and related guidance materials.

2.82 Information was provided on the requirement in Annex 11 section 2.19 that States shall coordinate with the appropriate ATS authorities with regard to activities potentially hazardous to civil aircraft.

2.83 Areas for improvement were identified, particularly the inability to conduct a conference for pre-tactical launch coordination due to the absence of a unitary POC, with no single contact designated for this matter among the domains identified in the ATM POC list.

2.84 USA presented a proposed process for the timely coordination of space launch and re-entry activities in the Asia/Pacific Region.

2.85 Information was provided on specific coordination activities that all States and organizations that conducted ballistic launch or space re-entry activities should ensure, including development of written coordination agreements between the State civil aviation authority and the launch/re-entry agency concerned, coordination milestones and their timing, consideration of affected airspace users and ANSP to lessen possible disruption, and the establishment of communication with affected ANSPs.

2.86 Examples of recent coordination activities were provided, together with a list of guidelines developed by USA in collaboration with the Informal Pacific ATC Coordinating Group (IPACG) and the Informal South Pacific ATS Coordinating Group (ISPACG). USA had also conducted a live test with Fiji to validate the use of the Aeronautical Fixed Telecommunication Network (AFTN) utilizing Automated Message Handling System (AMHS).

2.87 Japan informed the meeting of the impact of the establishment of airspace on short notice, such as rocket launch/re-entry areas and military exercise areas, on ATM and ATC operations.

2.88 The meeting was reminded of ATM/SG/9 discussion outcomes, including the ICAO Doc 10066 *PANS – Aeronautical Information Management* (PANS-AIM) procedure requirement that NOTAMs promulgating Danger Areas be published for all affected FIRs with at least seven days' advance notice.

2.89 Information was provided on a number of Danger Areas that had been established in the North Pacific and affecting ATS routes in the Anchorage Oceanic and Fukuoka FIRs, and for which the notification had been at short notice of less than seven days, and required close coordination between the Anchorage Air Route Traffic Control Center (ARTCC) and the Fukuoka Air Traffic Management Center (ATMC) to establish alternative routes to avoid the danger areas.

2.90 A further example of short notice activation of multiple Danger Areas in the Taibei FIR in August 2022 had resulted in a significant impact on major international ATS routes between Japan and Southeast Asia, and irregular traffic flow and significant congestion in the affected sector of the Fukuoka Area Control Center.

2.91 Recalling Annex 11 section 2.19, the Asia/Pacific Seamless ANS Plan and Conclusion APANPIRG/29-9: Procedures for Ballistic Launch/Space Re-entry Management, Japan highlighted that 14 days' prior coordination of rocket launch/re-entry areas and seven days' prior notification for military exercises would reduce operational impact, provide enough time for coordination among ATC units and allow ATC uints to arrange and manage human resources accordingly. Japan also informed the meeting that enhancement of civil-military coordination based on the guidance in ICAO Doc 10088 *Manual on Civil – Military Cooperation in ATM* would lead to more effective outcomes.

2.92 The meeting agreed to the following Conclusion and Decision:

Conclusion ATM/SG/10-7: Points of Contact List for Space Vehicle Launch and Re-Entry Coordination

That,

1. *An Asia/Pacific regional Points of Contact (POCs) List for coordination of space vehicle launch and re-entry be established;*
2. *The Asia/Pacific Space Vehicle Launch and Re-Entry Coordination POC List be managed by ICAO on behalf of ATM/SG, and published on the ICAO Asia/Pacific Regional Office website;*
3. *States are urged to:*
    a. *formally identify to the ICAO Asia/Pacific Regional Office the POCs nominated to originate space vehicle launch and re-entry coordination, and POCs nominated to receive and respond to any such coordination; and*
    b. *ensure at least one State POC is available and contactable at all times;*
4. *Nominated POCs should include an office or unit rather than an individual, and preferably be the operational management or supervisory function of the ATS centre in charge of the FIR who will;*
    a. *Respond to coordination received; and*
    b. *Ensure necessary coordination is undertaken with all affected ATS units within the FIR.*

Decision ATM/SG/10-8: Space Vehicle Launch and Re-entry Coordination Small Working Group

That, the Space Vehicle Launch and Re-entry Coordination Small Working Group (SVLRC SWG), reporting to ATM/SG, be formed to:

1. *Study global practices and procedures for the coordination of space vehicle launch and re-entry activities, with a view to making recommendations for best practices to be adopted in the Asia/Pacific Region;*
2. *Consolidate and update Asia/Pacific regional guidance material on space vehicle launch and re-entry coordination and response; and*
3. *Recommend consolidated guidance and performance expectations for inclusion in the 2023 update of the Asia/Pacific Seamless ANS Plan.*

The SVLRC SWG will be comprised of relevant experts from Australia, China, India, Japan, New Zealand, Republic of Korea, Singapore, Sri Lanka, Thailand, USA (rapporteur) and IATA. Other APAC States may also join the SWG.

Regional ATM Contingency Planning and Contingency Operations Update

2.93 ICAO presented information on the Asia/Pacific Regional ATM Contingency Plan with regard to State reporting of implementation of its performance expectations, a brief outline of recent ATM contingency events in the APAC Region, and an update on the proposal to update of the Regional contingency plan.

2.94 The Regional ATM Contingency Plan, available on the ICAO Asia/Pacific Regional Office eDocuments web-page, included among its performance expectations the expectation that States would report their implementation status at least once annually, using the Regional ATM Contingency Plan Monitoring and Reporting Form. The performance expectations of the plan were expected to be implemented by 10 November 2016, reflecting the Annex 11 standard that had been applicable since November 2003.

2.95 Implementation status was assessed as robust (90 – 100% of expectations implemented), marginal (70 – 89%) or incomplete (0 – 69%). Only Indonesia, Singapore, Thailand and United States were assessed as having robust implementation.

2.96 21 Administrations had never provided an implementation status report.

Afghanistan, Bhutan, Brunei Darussalam, China, Cook Islands, DPR Korea, Fiji, France (French Polynesia), India, Kiribati, Lao PDR, Marshall Islands, Micronesia, Nauru, Palau, Samoa, Solomon Islands, Timor-Leste, Tonga, Tuvalu, Vanuatu.

2.97 **Figure 8** illustrated the overall regional implementation status:

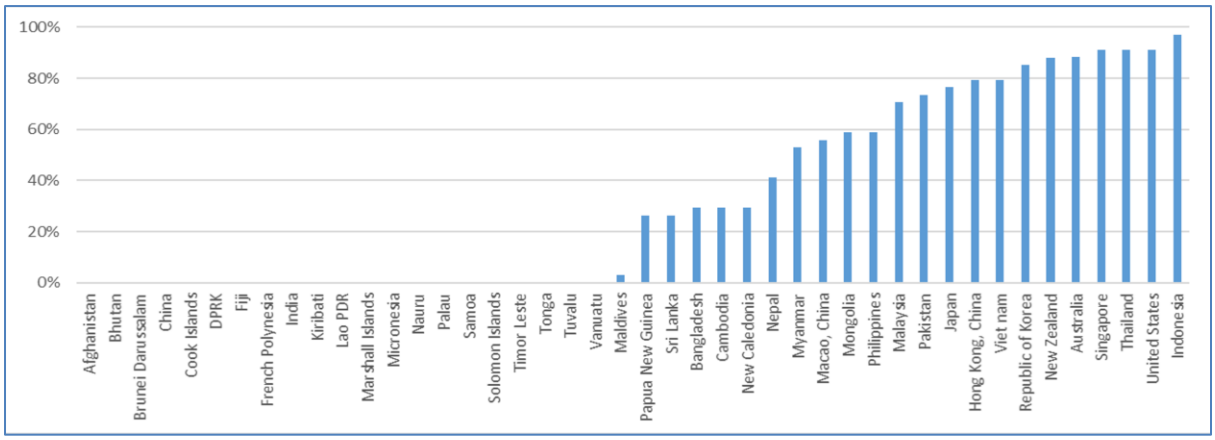

Figure 8: Regional ATM Contingency Plan –Implementation Status (21 October 2022)

2.98 The meeting was reminded of Annex 11 Attachment C Material Relating to Contingency Planning, which provided guidelines supporting the standard in Annex 11 section 2.19. The information provided highlighted the allocation of responsibility among States and ICAO for contingency planning, and ICAO Asia/Pacific Regional Office consideration of any notification of ATM contingency operations to, where considered necessary, form a Contingency Coordination Team.

2.99 Regarding CCT communications, ICAO noted that, as evidenced by the direct experience of the ICAO Regional Office in successfully forming and running multiple CCTs in recent years, they usually comprised more than 50 persons at the initial stages and their size increased rapidly. It was therefore not feasible for the ICAO Regional Office to use forms of direct one-on-one communications such as telephone calls for the purpose of forming and coordinating with the CCT. ICAO therefore requested that all CCT POCs ensure they provide an up-to-date email address, and that their Administration ensures nominees for this purpose are enabled to receive and respond appropriately to official email communications out-of-hours.

2.100 A brief update of the current, ongoing ATM contingency operations in the Kabul FIR and the meetings of its related CCT was also provided. The meeting was also briefed on the ICAO response to the Tonga volcanic eruption and tsunami event of January 2022, noting that while the formation of a CCT was not considered necessary ICAO had a role in coordinating relevant aeronautical information to humanitarian aid agencies to support their preparations for relief operations.

2.101 The meeting was also informed of a related outcome of the DGCA/57 conference, which had agreed to Action Item 57/19 relating to regulatory support for ATM contingency planning, and reporting of the status of implementation of the performance expectations of the Regional ATM Contingency Plan to the Regional Office

2.102 A further briefing was provided on contingency operations associated with the short notice promulgation by NOTAM of multiple Danger Areas affecting major traffic flows through the Taibei FIR in August 2022 (**Figures 9** and **10**).

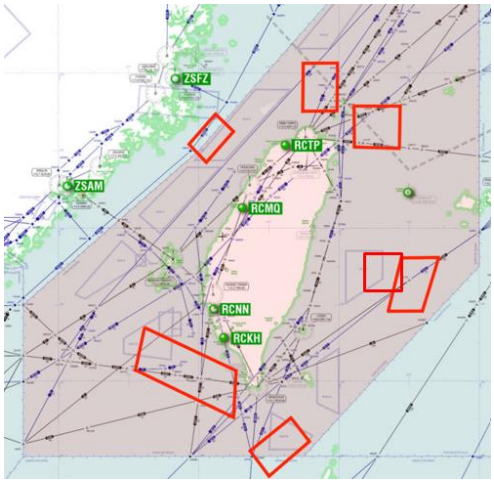

Figure 9: Danger Areas

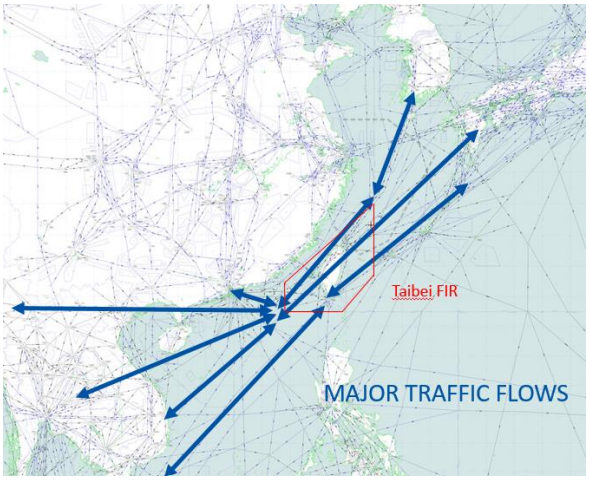

Figure 10: Major Traffic Flows

2.103 Subsequent NOTAMs imposing large longitudinal spacing requirements and substantial ATFM delays on flights that may have flight planned to avoid the Danger Areas via ATS routes to the west of the Taibei FIR were issued for the Shanghai and Hong Kong FIRs. No contingency ATS routes were made available to the west of the Taibei FIR.

2.104 A CCT was formed by the ICAO Asia/Pacific Regional Office on 03 August 2022, and dissolved on 05 August, 24 hours after the expiry of the last of the NOTAMs. During the contingency period traffic operating between Northeast Asia and Southeast Asia that would normally transit the Taibei FIR operated on alternate routes to the east of the FIR. ATFM support was provided by Japan, Singapore and Thailand.

2.105 Key points arising from the contingency situation were:

1. The need for compliance with the Standard in Annex 11 2.19 requiring that activities potentially hazardous to civil aircraft shall be coordinated with the appropriate ATS authorities;
2. The need for compliance with ICAO Annex 15 *Aeronautical Information Services* and PANS-AIM provisions for NOTAM promulgation, particularly relating to the use of correct location indicators in NOTAMs;
3. The value of ATFM capability among CCT participating Administrations.

2.106 ICAO acknowledged the competent, professional engagement of States and international organizations that participated in managing this contingency situation.

AKARA Corridor Progress and Update

2.107 Japan and the Republic of Korea presented updates on the AKARA Corridor. The meeting was informed that Phase 1 of the AKARA airspace improvement project had been implemented since 25 March 2021, but Phase 2 was not yet completed.

2.108 Noting the ATM/SG/9 discussion, Japan and ROK had conducted a bilateral discussion on the use of non-FLAS flight levels, which would provide more preferred and efficient operation to aircraft operators and contribute to decreasing the technical risk estimates.

2.109 The meeting was informed the number/percentage of non-FLAS flight level usage westbound, especially FL320, FL340, FL360 and FL380, had significantly increased through positive coordination between Incheon ACC and Fukuoka ACC.

2.110 The meeting was also informed that Republic of Korea would work closely with China and Japan to improve the situation regardless of the Phase 2 implementation delay, including:

- Efficient FLAS operation: formulating measures and discussion with Japan;
- AIDC implementation: with Shanghai ACC targeted by 3Q 2023; and
- Reducing longitudinal separation minima: 10 minutes (currently with Shanghai ACC).

2.111 ICAO mentioned that since Phase 2 had been delayed, ICAO would like to support initiatives such as efficient FLAS operation, AIDC implementation between Incheon ACC and Shanghai ACC, and longitudinal separation minima improvement between Incheon ACC and Shanghai ACC). In this regard, Japan and the Republic of Korea agreed to discuss further efficient FLAS operations for the agreed target of 50% of non-FLAS usage.

2.112 China could discuss further improvement after the completion of Phase 2. ICAO informed the meeting that the Technical Working Group (TWG) Secretariat had advised that improvement initiatives, including FLAS, AIDC and separation minima could be arranged separately from Phase 2 of the project, and independently from the TWG. The meeting Chair recommended the States concerned conduct bilateral and/or trilateral meetings to discuss this further.

Coordination of ATFMS Across the Region in the Irregularities Situation

2.113 Japan presented information on operations in response to contingency situations, especially ATFM operations, and shared lessons learned from this experience.

2.114 The meeting was informed of how Japan coordinated with the neighbouring ATS units when Danger Areas were recently promulgated in the Taibei FIR. Regular coordination processes were used to communicate with Taibei ACC, Daegu ATCC and Manila ACC for ATFM-related discussion. In addition, GDP for domestic flights were applied in order to accommodate separations/restrictions requested by the neighbouring FIRs.

2.115 The meeting was also informed that Japan could share information on trends in each FIR across APAC through the CCT. However, it was beneficial for Japan to coordinate directly with the ATS units in neighbouring FIRs such as Incheon and Manila without relying on timing of CCT meetings, to share information more actively through CDM meetings as needed with a limited number of stakeholders.

2.116 Through this experience, Japan had considered that, rather than establishing a contingency-specific scheme, coordinating with neighboring FIRs and enhancing the communication and coordination scheme during normal situations could result in flexible ATFM measures for any situation.

2.117 ICAO acknowledged Japan's ATFM initiative in the Taibei FIR contingency situation. ICAO pointed out the importance of direct coordination among the ATS units concerned rather than waiting for CCT activity since the ICAO Regional Office, while having a formal role in the convening and running of CCTs, was not a tactical ATS facility.

The Feasibility of Large-Scale Detour Procedure

2.118 China presented the Typhoon Detour Procedure trial jointly evaluated by China, Japan and Republic of Korea in September 2022, to manage the number of detouring flights by managing as many detour flights as possible without affecting regular flights. Additional information on Trajectory-based Operations (TBO) verification in China was provided.

2.119 The meeting was informed that MET was one of the key factors affecting airspace capacity and airport capacity, and common terminology, terms and abbreviation should be used to avoid confusion.

2.120 In response to the action proposed in this paper, the meeting considered it should be discussed further by the ATFM/SG, being the expert technical body to consider whether any related activity in the CDM/ATFM domain might be needed.

COVID Impact and Forecast – Navigating Safely and Sustainably out of COVID

2.121 IATA provided an update on the COVID-19 pandemic impact on the airline industry, and recovery and traffic growth expectations.

2.122 Information was provided numbers of passengers and flights and the value of goods carried before and during the pandemic, and in the recovery period, noting that it was the largest and longest shock to hit the industry in the history of aviation. The meeting was informed of the rate of recovery of the industry, its financial performance, and the recovery of international travel, noting that the Asia/Pacific Region was lagging behind other regions in this aspect (**Figure 11**).

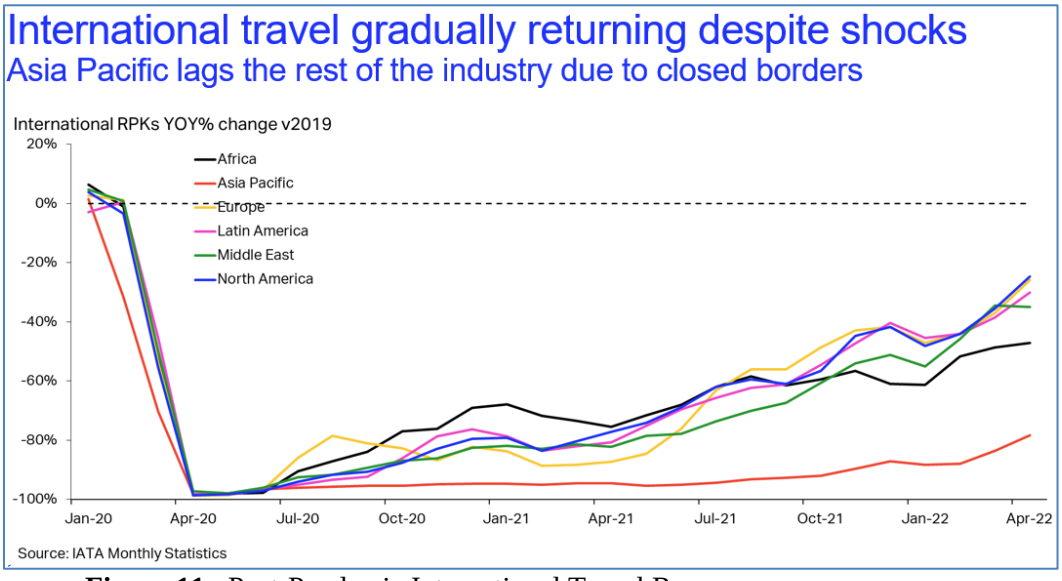

Figure 11: Post-Pandemic International Travel Recovery

AIS – AIM Implementation Task Force Outcomes

2.123 Outcomes from the 17th Meeting of the ICAO AIS – AIM Implementation Task Force (AAITF/17, 20 to 23 June 2022) were provided to the meeting.

2.124 AAITF/17 had reviewed APANPIRG Air Navigation Deficiencies in the AIS/AIM field. No changes to the Deficiencies List approved by APANPIRG/32 had been identified. At the time of the AAITF/17 meeting 10 APAC States had Deficiencies recorded for non-implementation of World Geodetic System 1984 (WGS-84), two for non-implementation of AIP Format, and 20 for non-implementation of AIS Quality Management System (QMS).

2.125 The meeting was again reminded of the ongoing, deep concern about poor quality management of aeronautical information in the APAC Region, and the apparent lack of organizational priority for this safety-critical obligation of all States.

2.126 An update was provided on the status of implementation of the performance expectations of the APAC Regional Plan for Collaborative AIM, which were expected to be implemented in in three phases: Phase I (immediately), Phase II (07 November 2019) and Phase III, (27 November 2025).

2.127 Japan and Singapore had reported implementation of all Phase I elements. Only Singapore reported implementation of all Phase II elements. **Figures 12** and **13** illustrated overall regional implementation of Phases I and II, which was unchanged from the implementation reported to ATM/SG/9 in 2021.

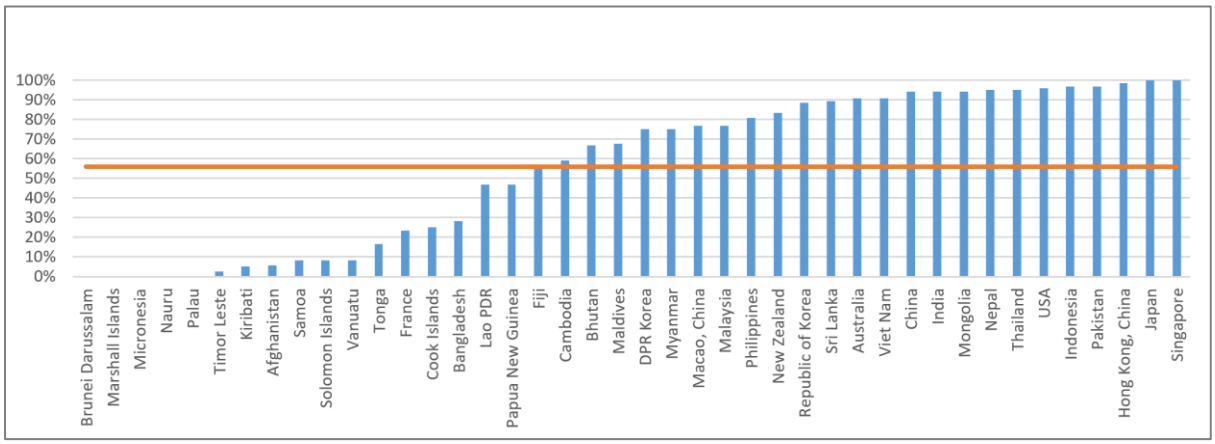

Figure 12: Regional Phase I Implementation Progress (updated 29 September 2022)

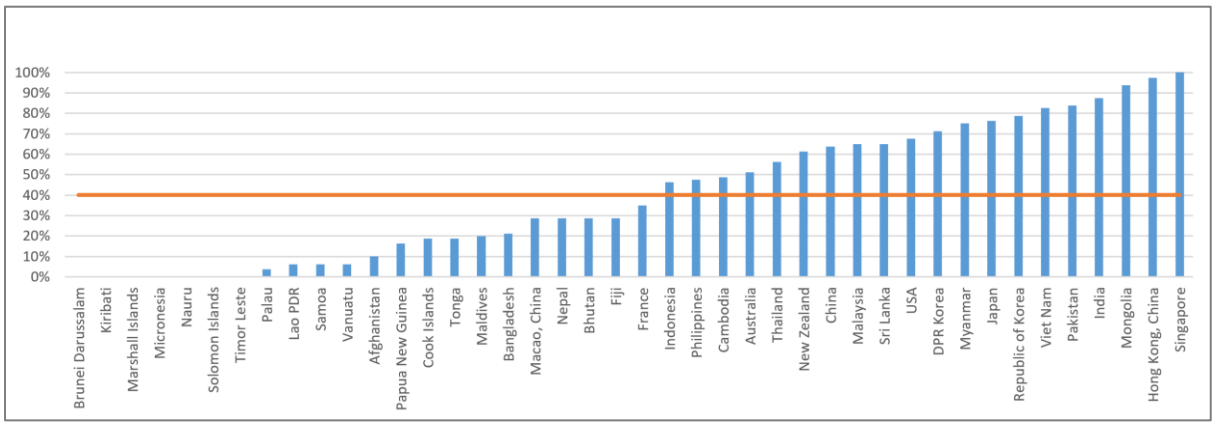

Figure 13: Regional Phase II Implementation Progress (updated 29 September 2022)

2.128 The meeting was invited to note there had been effectively zero regional progress in AIS/AIM implementation in the last year, and very little progress for several years.

2.129 Following discussion of the outcomes from the Workshop on WGS-84 and Data Accuracy (AAITF/17 Agenda Item 2), AAITF/17 had discussed the reasons that data revalidation was necessary, and recommended that data be revalidated every five years, after a major natural event, or following construction of critical airport elements.

2.130 Noting that Annex 11 Appendix 7 required the State to ensure that maintenance and periodic review of instrument flight procedures for aerodromes and airspace under the authority of the State were conducted, and that States must establish an interval for periodic review of instrument flight procedures not exceeding five years, AAITF/17 had drafted the following Conclusion which was subsequently agreed by the ATM/SG/10 meeting:

Conclusion ATM/SG/10-9: Revalidation of Coordinate Data

That, noting the factors that cause WGS-84 coordinate data to change over time, States are urged to ensure that all surveyed and calculated coordinate data published in AIP or used in Instrument Flight Procedure design is revalidated:

1. *each five years; or*
2. *after a major natural event such as an earthquake or volcanic eruption; or*
3. *following construction of critical airport elements,*

whichever is the sooner, by ground survey, or Light Detection and Ranging (LIDAR) survey, or imagery collection.

2.131 IFAIMA had conducted the annual analysis of NOTAMs for AAITF/17, supporting the drive to reduce NOTAM proliferation. **Figures 14** and **15** illustrated APAC NOTAM statistics since June 2020. At 01 June 2022, a total of 6122 NOTAMs were active in the APAC Region. 323 (5.3%) of these were *old* (i.e. more than three months but less than one year), and 666 (10.9%) were *very old* (one year or more).

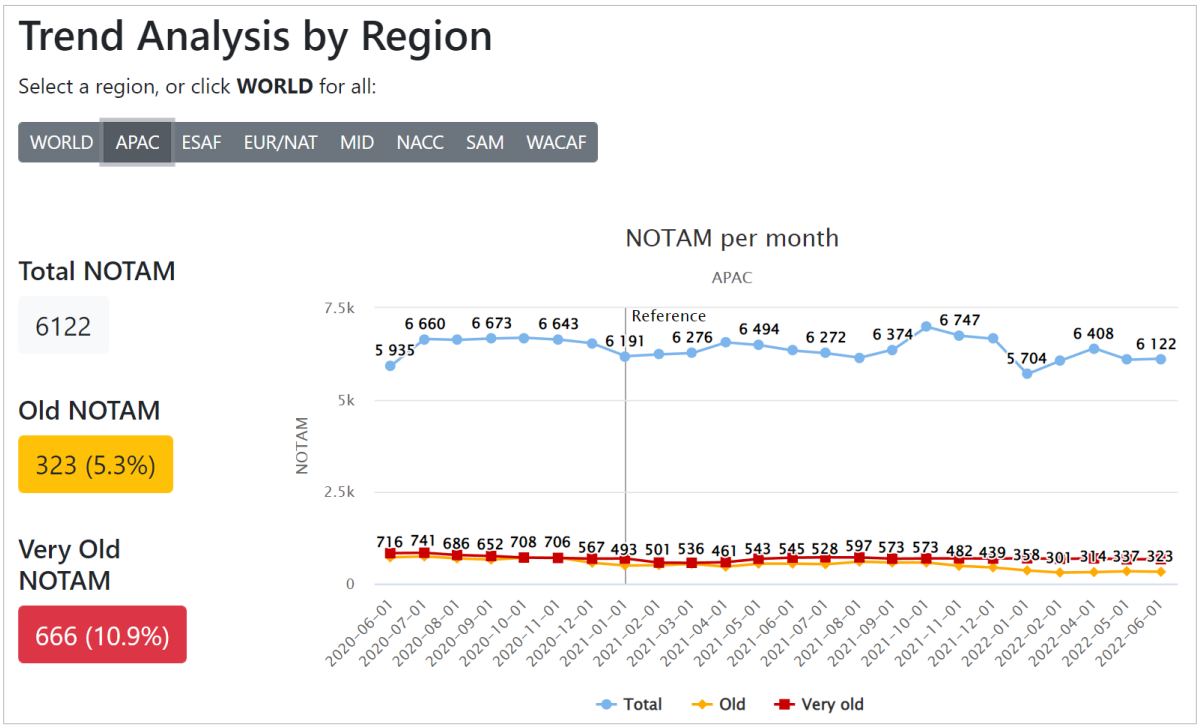

Figure 14: APAC NOTAM Statistics (Total, old and very old)

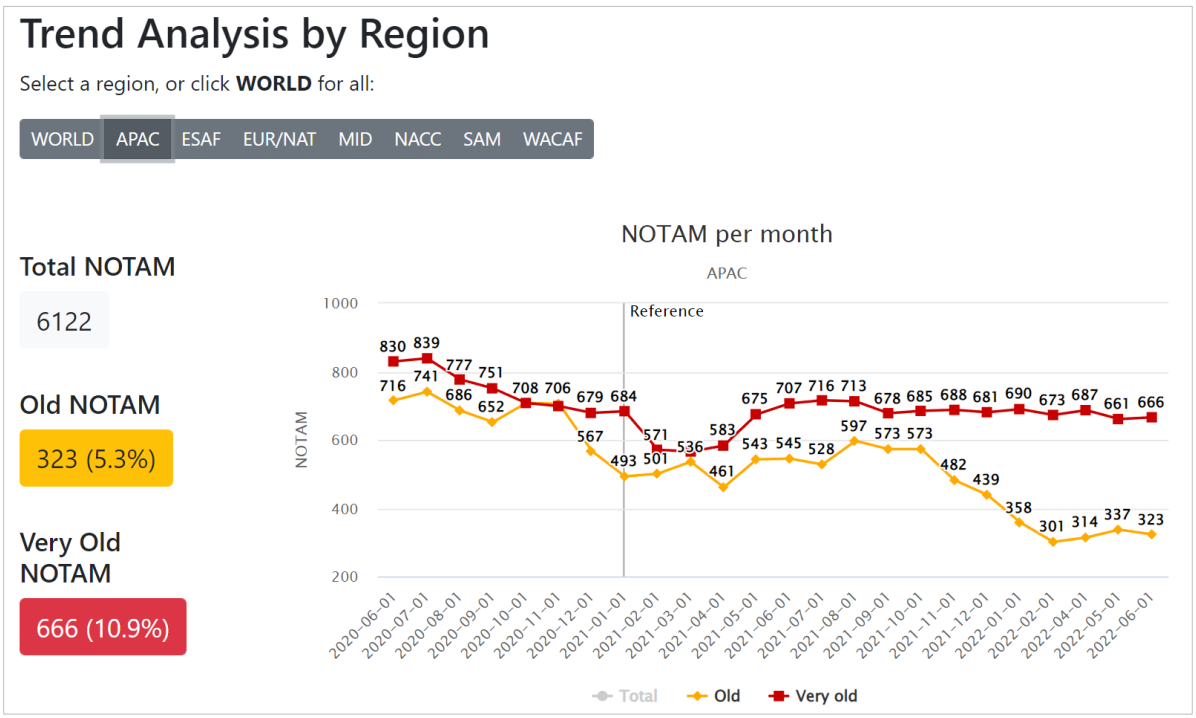

Figure 15: APAC NOTAM Statistics (old and very old)

2.132 ICAO provided an update on the use of the ICAO International Codes and Route Designators (ICARD) application in the APAC Region and the resolution status of 5-letter name code (5LNC) duplicates.

2.133 The ICAO International Codes and Route Designators (ICARD) application was the sole repository of 5-letter name codes marking significant points that ensured global uniqueness, and was the only means by which the requirements of Annex 11 Appendix 2 paragraph 3.5 may be met.

2.134 The Regional Office had presented a State 5LNC status report for each Administration to the AAITF/15 meeting in 2020. The status reports were again presented to AAITF/16 in 2021 and AAITF/17 in 2022 (ATM/SG/10 WP/44 Attachment 3). APAC Administrations had been requested at AAITF/15 and AAITF/16 to review and maintain their status reports, and send an update to the ICAO Regional Office at least once per year. Very few reports had been received. Accordingly, AAITF/17 drafted the following Conclusion agreed by the meeting:

Conclusion ATM/SG/10-10: State Reports of 5LNC Status

*That, States are urged to provide an annual update on the status of duplicated 5LNCs in **ATM/SG/10 WP/44 Attachment 3** to the ICAO APAC Regional Office by not later than 28 February each year.*

2.135 The final Draft of the *Asia/Pacific Regional Guidance for Postponement of Changes to Aeronautical Information*, developed by the AAITF SWG (Rapporteur Singapore) had been presented to AAITF/17 for discussion and agreement by the meeting. AAITF/17 drafted the following Conclusion which was subsequently agreed by the meeting:

Conclusion ATM/SG/10-11: Regional Guidance for Postponement of Changes to Aeronautical Information

*That, the Asia/Pacific Regional Guidance for Postponement of Changes to Aeronautical Information at **Appendix G to the Report** be adopted, and uploaded to the Asia/Pacific Regional Office website.*

Asia/Pacific Search and Rescue Update

2.136 The Seventh Meeting of the Asia/Pacific Regional Search and Rescue Work Group (APSAR/WG/7) was held from 24 to 27 May 2022.

2.137 **Figure 16** illustrates the implementation status of of the performance expectations of the Asia/Pacific Regional SAR Plan as at 29 September 2022.

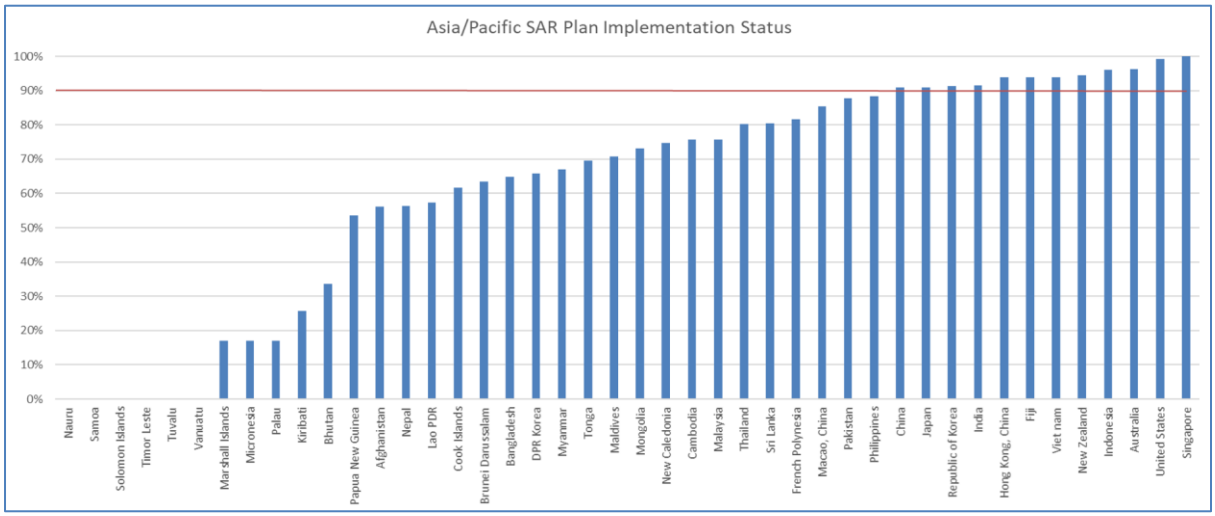

Figure 16: Asia/Pacific SAR Plan Implementation Status as at 29 September 2022

2.138 Regional policy established that States below 90% implementation would be considered to have an APANPIRG ANS Deficiency recorded for SAR implementation. Since APSAR/WG/6 (2020) there was an increase from 10 to 12 Administrations that had reported implementation of 90% or more:

Australia, China, Fiji, Hong Kong China, India, Indonesia, Japan, New Zealand, Republic of Korea, Singapore, USA and Viet Nam

2.139 The APSAR/WG/7 meeting had discussed the Location of an Aircraft in Distress Repository (LADR), which would support the Autonomous Distress Tracking (ADT) Standards in Annex 6 Operation of Aircraft Part I *International Commercial Air Transport* – Aeroplanes. The LADR was intended to meet the requirements for information sharing as part of the Global Aeronautical Distress and Safety System (GADSS). The GADSS concept of operations and the functional specifications for the LADR were available at https://www.icao.int/safety/globaltracking.

2.140 APSAR/WG/7 discussion arising from the GADSS Workshop, held on 23 May 2022, identified an urgent need for effort to be made to improve knowledge of GADSS among Regulatory, Airline, SAR and ANSP stakeholders, and to promote development of procedures among them in preparation for the likely appearance of ADT, including ELT(DT) before the end of 2022 and increasingly after the applicability date.

2.141 The Checklist of Considerations supported by ***Draft Conclusion APSAR/WG/7-1*** formed the basis of the survey on ADT readiness that was circulated by the ICAO APAC Regional Office. State Letter (APAC) AP128/22 (ATM), 13 September 2022 refers.

2.142 The meeting was is invited to note that, as mentioned in the APAC State letter, Amendment 48 to Annex 6 *Operation of Aircraft* Part 1, adopted by the Council of ICAO on 18 July 2022, deferred the applicability of Standard for the location of an aeroplane in distress until 01 January 2025. ICAO (HQ) State Letter AN 22/75, 29 July 2022 referred. However, it was expected that increasing numbers of aircraft equipped with ADT devices would become operational from late 2022

and that ADT alerts would be distributed through the Cospas-Sarsat system and the ICAO LADR (when commissioned).

2.143 The meeting agreed to the following Conclusion, updating Draft Conclusion APSAR/WG/7-1 to take into account the deferred ADT applicability:

Conclusion ATM/SG/10-12: Checklist of Considerations in Readiness for Autonomous Distress Tracking

Noting:

1. *the recent deferral of applicability of Autonomous Distress Tracking (ADT) from 01 January 2023 to 01 January 2025; and*
2. *the likelihood that ADT equipped aircraft will increasingly be operating from late 2022 onwards;*

States are urged to implement a programme of education and procedure development for aviation regulators, aircraft operators, SAR services and ANSPs, using the Checklist of Considerations for Response to ADT Notifications at ***Appendix H to the Report****.*
Asia/Pacific Regional SAR Plan Update

2.144 The meeting was provided with an updated version of the Asia/Pacific Regional SAR Plan, prepared jointly by Australia, Singapore, USA and ICAO as arranged under APSAR/WG Action Item 6/3. The following Conclusion was agreed by the meeting:

Conclusion ATM/SG/10-13: Revised Asia/Pacific Regional SAR Plan

That,

1. *the revised Asia/Pacific Regional SAR Plan at* ***Appendix I to the Report*** *be adopted, and uploaded to the Asia/Pacific Regional Office eDocuments web-page to replace the existing version; and*
2. *States are urged to update their national SAR Plans to align with the revised Regional SAR Plan.*

Survey Results on Positive ATM Safety Culture in the APAC Region

2.145 ICAO presented an analysis of responses to a survey distributed by State Letter AP069/22 in May 2022. The survey had resulted from ATM SG Task List Action Item 9/9.

2.146 Responses were de-identified and aggregated into quantitative data. The meeting was informed of key observations from the survey results, together with conclusions drawn.

2.147 APAC States/Administrations and industry were encouraged to utilize the survey results to promote a positive safety culture and strengthen safety management performance in ATM. The meeting was also invited to note that the conclusions above and further detailed survey results would be used to prioritize and develop future ICAO APAC implementation support planning.

2.148 As the survey outcomes revealed gaps and potential areas of improvements that required attention of all of the ATM community, particularly in the course of recovery from the pandemic, the meeting strongly supported the proposal that a safety management and safety culture workshop be conducted to provide a regional forum for ATM stakeholders to share experience, lessons learned and best practices in developing a positive safety culture to enhance ATM safety management performance and facilitate safe and effective implementation of APAC Seamless ANS Plan.

2.149 USA offered to facilitate the workshop, and multiple Administrations indicated their interest in participating in the activity.

3. ACTION BY THE MEETING

3.1 The Meeting is invited to:

a) note the information in this paper;

b) discuss and agree to **Draft Conclusion ATM/SG/10-2: Provide clear direction on Doc 7030 Regional SUPPs publication requirements;**

c) note the current status of the update of FIR boundary descriptions in the APAC ANP;

d) note the recent and current, ongoing ATM contingency events in the APAC region;

e) note the technical Conclusions;

- ***Conclusion ATM/SG/10-1: Revised Reporting Date for ATM Regional Plans' Implementation Status Monitoring;***
- ***Conclusion ATM/SG/10-4: Update Regional Framework for Collaborative ATFM;***
- ***Conclusion ATM/SG/10-5: ATFM Training Guide;***
- ***Conclusion ATM/SG/10-6: Regional ATFM Implementation Status Reporting;***
- ***Conclusion ATM/SG/10-7: Points of Contact List for Space Vehicle Launch and Re-Entry Coordination;***
- ***Conclusion ATM/SG/10-9: Revalidation of Coordinate Data;***
- ***Conclusion ATM/SG/10-10: State Reports of 5LNC Status;***
- ***Conclusion ATM/SG/10-11: Regional Guidance for Postponement of Changes to Aeronautical Information;***
- ***Conclusion ATM/SG/10-12: Checklist of Considerations in Readiness for Autonomous Distress Tracking;*** and
- ***Conclusion ATM/SG/10-13: Revised Asia/Pacific Regional SAR Plan.***

f) note the Decisions;

- ***Decision ATM/SG/10-3: Establish FF-ICE Operational Requirements Small Working Group;***
- ***Decision ATM/SG/10-8: Space Vehicle Launch and Re-entry Coordination Small Working Group;*** and

g) discuss any relevant matters, as appropriate.

— END —