

INTERNATIONAL CIVIL AVIATION ORGANIZATION



**REPORT OF THE EIGHTH MEETING OF THE ATM SUB-GROUP OF APANPIRG
(ATM/SG/8)**

VIDEO TELECONFERENCE, 23 – 27 NOVEMBER 2020

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/8
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INTRODUCTION

Meeting

1.1 The Eighth Meeting of the Air Traffic Management Sub-Group (ATM/SG/8) 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.

Attendance

2.1 The meeting was attended by 220 registered participants from 27 States, two Special Administrative Regions of China and five International and ATM-related organizations, including Afghanistan, Australia, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, China, Hong Kong China, Macao China, Fiji, France (French Polynesia), India, Indonesia, Japan, Lao People's Democratic Republic (PDR), Malaysia, Maldives, Mongolia, Myanmar, Nepal, New Zealand, Pakistan, Philippines, Republic of Korea (ROK), Singapore, Sri Lanka, Thailand, United States of America (USA), Viet Nam, CANSO, IATA, IFALPA, IFATCA, 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 ATM/SG portions of the meeting throughout its duration as Sub-Group Chairman.

3.2 Mr. Len Wicks, Regional Officer Air Traffic Management (ATM)/Search and Rescue (SAR), ICAO Asia and Pacific Office, was the Secretary for the combined meetings. He was assisted by Mr. Shane Sumner, Regional Officer, ATM/Aeronautical Information Management (AIM), Mr. Chew Han Chee, Associate ATM Officer, Mr. Erdenebaatar Davaasuren, Associate ATM/AIM Officer, and Mr. Hiroyuki Takata, Mr. Mior Addli Bin Mior Sallehuddin and Ms. Prakayphet Chalayonnawin, Programme Analysis Associate, ATM.

Language and Documentation

4.1 The ATM Sub-Group met as a virtual plenary meeting throughout the meeting. The working language of the meeting was English for all documentation and this Report. A total of 32 Working Papers (WPs), 17 Information Papers (IPs), one flimsy and eight presentations were considered by the meeting.

4.2 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 Mr. Len Wicks, on behalf of Mr. Arun Mishra, Regional Director of the ICAO Asia and Pacific Office, 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/8 Draft Conclusions

Draft Conclusion ATM/SG/8-3: Review of National Air Navigation Plans (NANPs)	
<p>What: That, States should review their NANPs in accordance with a whole-of-government approach and the requirements of the Regional Air Navigation Plan to:</p> <p>(1) include airspace user consultation to determine post COVID-19 service provision levels and the related investment and expenditure required, including identifying temporary or permanent service provision modification to reduce operational costs; and</p> <p>(2) seek government support for their Air Navigation Service Providers (ANSPs) during the post-COVID-19 recovery.</p>	<p>Expected impact:</p> <p><input checked="" type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input checked="" type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why: Review of service provision can support reductions in ANSP cost-base and therefore a reduction in target revenue required for cost-recovery, which drives ANS charges. Effective market stimulation and recovery can reduce the financial exposure of the government.</p>	<p>Follow-up: <input checked="" type="checkbox"/> Required from States</p>
<p>When: 18-Dec-20</p>	<p>Status: Draft to be adopted by PIRG</p>
<p>Who: <input type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:</p>	

ATM/SG/8
History of the Meeting

7.2 List of ATM/SG/8 Conclusions

Conclusion ATM/SG/8-1: ATFM Post-Operations Analysis Recommended Framework Version 1.0	
<p>What: That:</p> <p>1. The ATFM Post-Operations Analysis Recommended Framework Version 1.0 at ATM/SG/8 WP11 Attachment 2 be uploaded to the ICAO Asia/Pacific Regional Office eDocuments web-page, to replace the existing working draft version; and</p> <p>2. States are urged to utilize the guidance provided in the document when implementing ATFM post-operations analysis in accordance with the performance expectations of the Regional Framework for Collaborative ATFM.</p>	<p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why: To update and replace the guidance material provided in the working draft version of the ATFM Post-Operations Analysis Recommended Framework, as currently published on the ICAO Asia/Pacific e-Documents web-page</p>	<p>Follow-up: <input checked="" type="checkbox"/> Required from States</p>
<p>When: 26-Nov-20</p>	<p>Status: Adopted by Subgroup</p>
<p>Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:</p>	

7.3 List of ATM/SG/8 Draft Decisions

Draft Decision ATM/SG/8-2: Amend AAITF Terms of Reference	
<p>What: That, the amended Terms of Reference for AAITF at Attachment C be adopted.</p>	<p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why: To incorporate reference to ICAO Doc 10066 Procedures for Air Navigation Services – Aeronautical Information Management (PANS-AIM), and to reflect the renaming of the Asia/Pacific Seamless ANS Plan (formerly the Seamless ATM Plan)</p>	<p>Follow-up: <input type="checkbox"/> Required from States</p>
<p>When: 26-Nov-20</p>	<p>Status: Draft to be adopted by PIRG</p>
<p>Who: <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:</p>	

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 Thirtieth Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/30, 05 – 09 August 2019).

2.2 In preparing for the next Ministerial Conference on Civil Aviation, tentatively scheduled for 2020, the meeting had noted that each of the Air Navigation Service (ANS) priority areas still presented a challenge to many States, so the progress report to the ministers may not show a positive result. States were therefore urged to use a whole-of-government approach in coordination with ministries in order to ensure that appropriate progress was made.

2.3 ATM-related Conclusions from APANPIRG/30 were noted as follows:

- *Conclusion APANPIRG/30-5: Asia/Pacific Seamless ANS Plan:*
- *Conclusion APANPIRG/30-6: ICAO HQ Support for Regional ANS Implementation*
- *Conclusion APANPIRG/30-7: Asia-Pacific ATM Performance Measurement Framework*
- *Conclusion APANPIRG/30-8: Recovery of Lost Revenue due to Airspace Closure*
- *Conclusion APANPIRG/30-10: Ballistic Launch and Space Re-Entry Notification and Response*

RASG and APRAST Meeting Outcomes (WP03)

2.4 WP03 provided the ATM/SG/8 with a summary of the outcomes of the Ninth Meeting of the Regional Aviation Safety Group – Asia and Pacific Regions (RASG-APAC/9, Bangkok, Thailand, 07 – 08 November 2019) and the Fifteenth Meeting of the Asia Pacific Regional Aviation Safety Team (APRAST/15, VTC, 24 – 25 June 2020).

2.5 RASG-APAC/9 had agreed to Decision *RASG-APAC 9/6 — Asia-Pacific Regional Aviation Safety Plan (AP-RASP) 2020-2022*.

2.6 The RASG-APAC/9 meeting had also been invited to recognize the importance of human performance management in Air Navigation Service Providers (ANSPs), encourage ANSPs to avail themselves of the *CANSO Standard of Excellence in Human Performance* and to use it as a means for assessing their current level of maturity with respect to human performance.

2.7 APRAST/15 had adopted *Decision APRAST 15/1 — Establishment of ICAO APAC COVID-19 Contingency and Recovery Planning Group (ACCRPG)*.

2.8 APRAST/15/WP/20 had discussed occurrences of near miss events as being a safety concern area identified in the Global Aviation Safety Plan (GASP) 2020-2022. The meeting agreed to develop Safety Enhancement Initiatives (SEI) in coordination with the ATM/SG and the Regional Airspace Safety Advisory and Monitoring Group (RASMAG) to mitigate mid-air collision risk in the Asia/Pacific (APAC) Region. The meeting had endorsed the following Decision:

Decision APRAST 15/13 — Mid-Air Collision Risk Mitigation

2.9 India recalled that the procedure for managing Aircraft Collision Avoidance System (ACAS) equipped and non-equipped aircraft was now more significant, with an expected major increase of non-transponder unmanned systems and the possible presence of helicopter operations. India suggested that the helicopter industry should be considered for inclusion as a stakeholder. ICAO agreed to pass this concern to the ICAO officers responsible for APRAST so this could be taken into account.

Conference of Directors General of Civil Aviation Outcomes (WP04)

2.10 The meeting noted outcomes relevant to ATM from the Fifty-Sixth Conference of Directors General of Civil Aviation, Asia and Pacific Region (DGCA/56, Kathmandu, Nepal, 19 – 23 August 2019), including commitments by Asia and Pacific Ministers of Aviation under the *Beijing Declaration* to implement the APANPIRG-endorsed *Asia/Pacific Seamless ANS Plan* by 2022.

Agenda Item 3: Performance Frameworks and Metrics

FIT-Asia and RASMAG Outcomes (WP05)

FIT-Asia/10

3.1 ICAO provided a summary of the outcomes from the Tenth Meeting of the FANS Interoperability Team-Asia (FIT-Asia/10, VTC, 03 – 06 August 2020) and the Twenty-Fifth Meeting of the Regional Airspace Safety Monitoring Advisory Group (RASMAG/25, VTC, 27 – 30 October 2020).

3.2 The improvement in the submission of Problem Reports (PRs) by ANSPs to the Central Reporting Agency (CRA) that was noted at FIT-Asia/9 continued at FIT-Asia/10. A total of 66 PRs had been raised between July 2019 and June 2020, compared with 45 in the previous 12-month period.

3.3 FIT-Asia/10 had noted that performance based separations were known or intended to have been implemented within high seas airspace included India, Indonesia, Maldives, Myanmar, Philippines and Sri Lanka. States had been requested to notify the ICAO Regional Office so that a Proposal for Amendment (PfA) to Doc 7030 – *Regional Supplementary Procedures* (SUPPS) may be prepared. Following the receipt of information subsequent to the FIT-Asia/10 meeting, coordination had commenced on the inclusion of relevant provisions in SUPPS for Indonesia, Philippines and Sri Lanka.

3.4 Performance-Based Communications and Surveillance (PBCS) non-compliance report templates were intended for ANSPs to inform the relevant Regional Monitoring Agency (RMA) of aircraft/aircraft operators where data link performance did not comply with specifications. A revised non-compliance report form template was proposed to FIT-Asia/10 in order to include additional information, to harmonize with the template already adopted in the North Atlantic (NAT) Region, and to use MS Excel format to facilitate data handling by the RMA.

3.5 RASMAG/25 had agreed to the following Conclusion developed by the FIT-Asia/10:

Conclusion RASMAG/25-1: Revised PBCS Non-Compliance Report Form Template

That, the PBCS Non-Compliance Report Form Template at **Appendix C to the Report** be uploaded to the Asia/Pacific Regional Office website, to replace the previous template.

Reduced Vertical Separation Minimum (RVSM) Vertical Safety

3.6 The meeting reviewed a summary of the RVSM Target Level of Safety (TLS) compliance and the Large Height Deviation (LHD) Hot Spot status, as at RASMAG/25 (**Figure 1**):

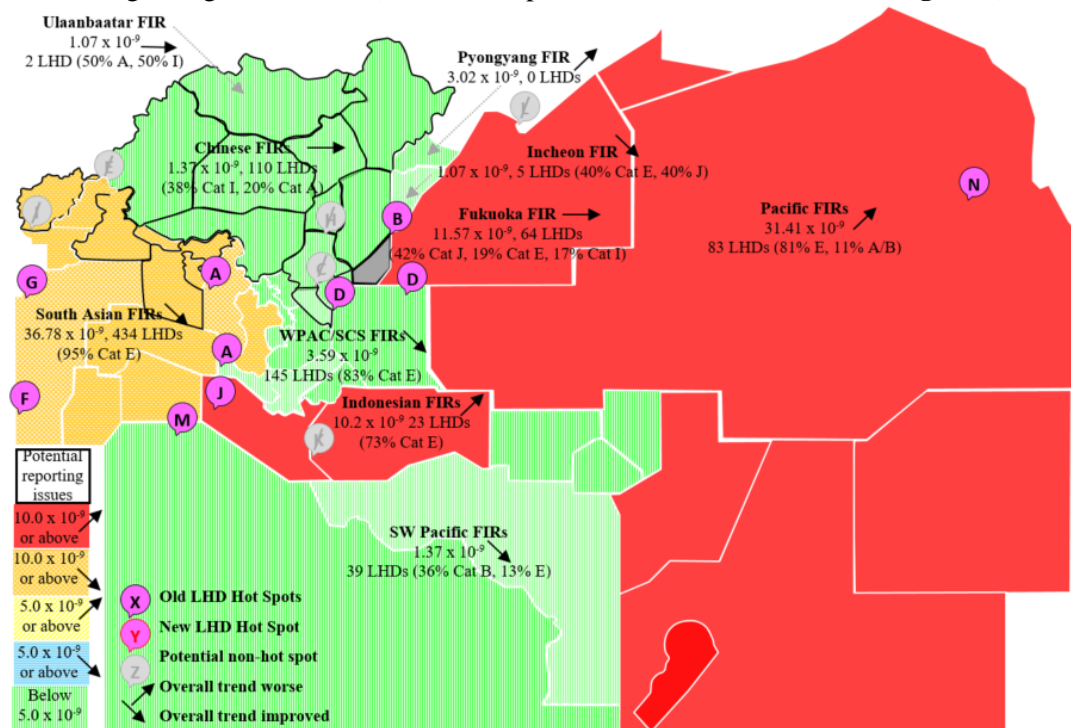


Figure 1: Asia/Pacific RVSM TLS subregion compliance reported to RASMAG/25

3.7 The USA had provided an RVSM safety report for the AKARA-FUKUE Corridor airspace within the Incheon FIR. The AKARA corridor airspace involved four FIRs (Fukuoka, Incheon, Taipei and Shanghai) and had a unique, Annex 11 non-compliant arrangement, whereby two ATC units provided services within the same airspace. Due to enhanced reporting, there had been an increase to 29 LHDs, which had resulted in a 57% increase in the estimated vertical risk to 247.0×10^{-9} . (**Figure 2**). The risk estimate exceeded the TLS by a factor of nearly 50 times, more than an order of magnitude.

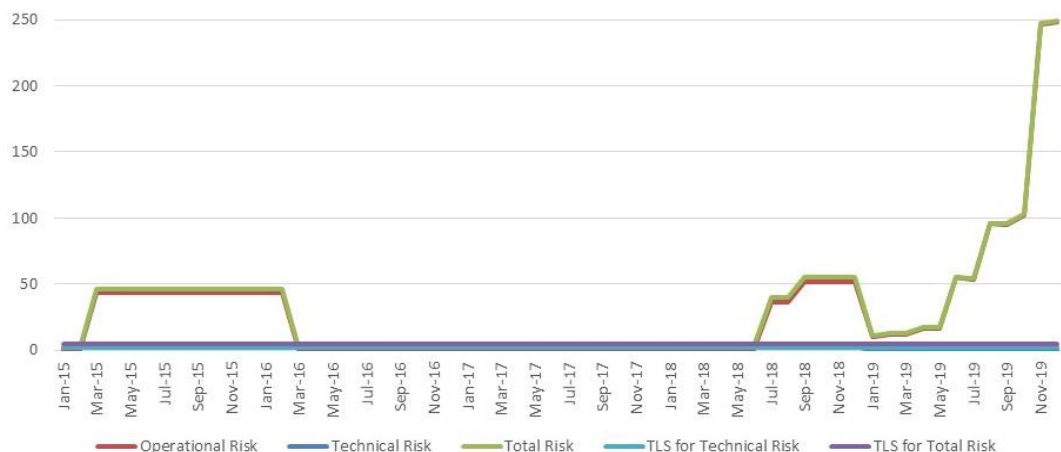


Figure 2: AKARA Twelve-month Rolling Vertical Collision Risk Estimates, 2015 – 2019

3.8 Due to the seven Category D events (*ATC Loop Error*), Japan had circulated an advisory to ATC, aircraft operators, IATA and IFALPA which emphasized the need to take particular care to avoid pilot – ATC miscommunication. Japan also stressed the importance of sharing safety reports.

3.9 Locations of the LHD events were indicated in **Figure 3**.

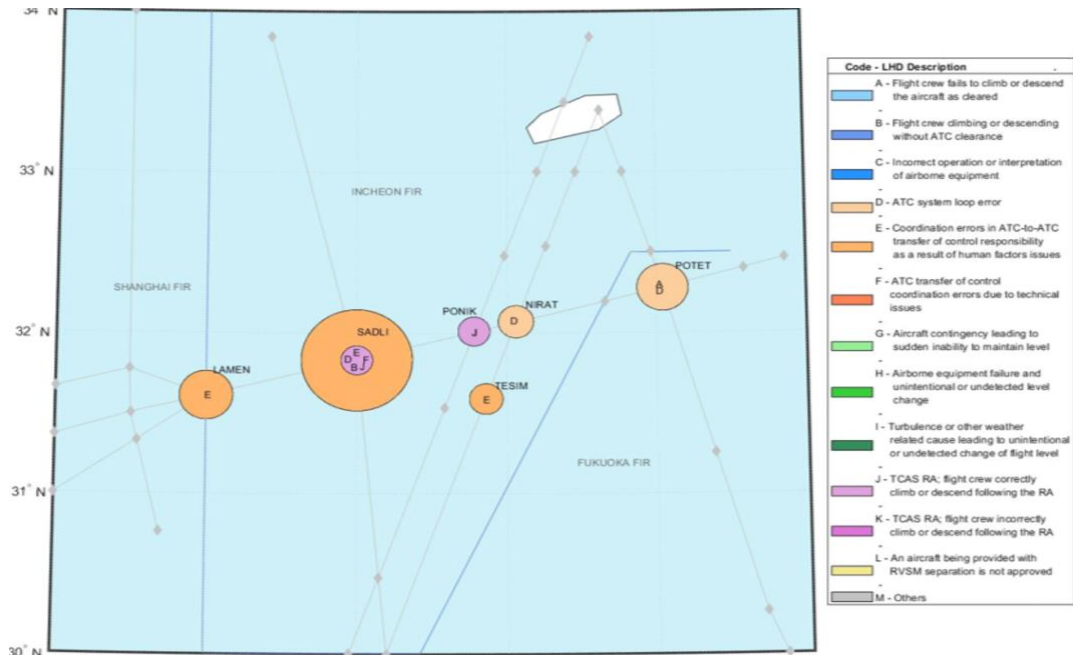


Figure 3: Locations of 2019 Reported AKARA Corridor LHDs

3.10 ICAO had thanked JASMA for Japan’s efforts to improve safety within this airspace. Noting that mitigations of this nature were insufficient to completely reduce risk due to the Annex 11 non-compliant airspace arrangements, ICAO stated that compliant operations must urgently replace the outdated current arrangement.

3.11 Japan and the ROK stated at the ATM/SG/8 that they supported the process of ‘normalising’ the AKARA – FUKUE, noting that the HQ-led Technical Working Group (TWG) was the appropriate forum for discussions on these matters.

3.12 Japan was urged to complete the process of updating its coordination agreement with the ROK as soon as possible, in order to facilitate a safe and orderly change so that only one ATC unit provided services within this airspace, which will have new additional ATS routes. Moreover, RASMAG/25 had noted that the lower traffic environment due to COVID-19 was probably an optimal time to consider change, and the need to assist airline recovery post-COVID-19 with greater efficiencies was also an important consideration. Japan and the ROK responded positively by agreeing that this was an ideal time to move forward with necessary ATS changes (traffic was reportedly only one quarter that of 2019 levels). The meeting requested ICAO HQ to convene a meeting of the TWG to agree to the finalised changes and implementation timeline.

3.13 The ROK had provided comprehensive information on its analysis process of the proposed changes to the AKARA – FUKUE Corridor arrangement, and its capability to provide ATS within the airspace concerned. After a period of slow progress due to the COVID-19 pandemic, the meeting noted that the States concerned had resumed negotiations. The ROK stressed that while the pandemic had temporarily reduced the air traffic volume, safety concerns may resurge at any time with an expected increase of traffic in the future. As such, ROK stated that they were convinced that a timely transition to the new ATS structure should occur now (**Flimsy 01** FUKUE-AKARA Corridor Consultations Update).

Call sign confusion

3.14 With regard to the Category D (Air Traffic Control – *ATC system loop error*) events, Japan had provided more detailed analysis to the meeting after ICAO asked whether English Language Proficiency (ELP) might be an issue. While acknowledging the potential role of ELP, Japan had noted that a number of these incidents were due to similar call signs.

3.15 In response to a query from ICAO, IATA clarified that its similar call sign initiative successfully implemented in the MID Region had not been able to progress in the APAC Region. One of the reasons for this had been the reluctance of aerodrome operators to implement change until an automated tool was available to accommodate alphanumeric call signs. Noting the grave safety risks from such occurrences, RASMAG/25 had agreed to the following Draft Conclusion, which was endorsed by the AOP/SG/4 and the ATM/SG/8:

Draft Conclusion RASMAG/25-3: Alphanumeric Call Sign Initiative

Noting:

1) the extreme safety risks associated with pilot-ATC miscommunication and the number of Category D (ATC Loop Error) Large Height Deviations (LHDs);

2) APANPIRG Conclusion 27/15. ATMSG Conclusions 5-5 and 5-6 regarding the Asia Pacific Alpha Numeric Call-Sign (ANCS) call sign project; and

3) alphanumeric call signs were a well-established call sign confusion mitigation, that:

leading Air Navigation Service Providers (ANSPs) and aerodrome operators, in coordination with CANSO and ACI, were urged to consider a trial to identify and overcome any barriers for the implementation of alphanumeric call signs, with a view to developing a project for the Asia/Pacific (APAC) Region.

Non-RVSM Operations

3.16 The meeting noted that State CAAs were advised to liaise with State Aircraft operators (such as military aircraft) regarding the verification and status of RVSM approvals, in order to prevent their flight plans from being rejected by EUROCONTROL:

- a) for States that have RVSM approval processes for State Aircraft equivalent to civil aircraft's, State CAAs were encouraged to share State Aircraft's approval data or confirming the approval status upon queried by the designated RMA; and
- b) for all aircraft and operators with no RVSM approvals, State CAAs should inform operators not to file 'W' in item 10 of the ICAO flight plan.

3.17 **Table 1** compared the number of non-RVSM airframes reported by each RMA annually:

Report	AAMA	China RMA	JASMA	MAAR	PARMO	Total
RASMAG/20	8	45	15	234	26	328
RASMAG/21	5	6	15	106	11	143
RASMAG/22	7	40	11	163	25	246
RASMAG/23	5	20	9	43	38	115
RASMAG/24	5	4	17	34	1	61
RASMAG/25	2	24	6	26	9	67

Table 1: Trend of Non-RVSM Airframes Observed

- 3.18 RASMAG/25 had determined that the following States had potential reporting issues:
- a) Afghanistan, which did not report any LHDs during 2020;
 - b) China, with an implausibly low proportion of 7% Category E events (*ATC – ATC Transfer Errors*) at 3% during 2018 and 7% in 2019, whereas for areas that did not generally use ATS Inter-facility Data Communication (AIDC), Category E LHDs constituted 78% average and with AIDC, Category E events averaged 29%;
 - c) India – Delhi and Kolkata FIRs (although Mumbai and Chennai had made distinct improvements); and
 - d) Mongolia had a rate of reported LHDs per hour that was very low, many factors less than that expected for the number of flight hours.

3.19 China stated that safety reporting was not an issue as ‘Just Culture’ had been implemented in China, meaning that there was no punishment for reporting of safety incidents. China recalled that the AKARA-FUKUE Corridor had been established in 1983, and had maintained a high level safety record, so it was not a new airspace structure. They also stated that there were different views with regard to the Corridor’s compliance with Annex 11. China suggested that the relevant issues were not suitable for discussion at APAC meetings before the TWG determined a formal solution, as many participants did not know about the background and detailed information.

3.20 In response, ICAO noted that the RASMAG/25 had identified that China’s Category E reporting had been well below what could be expected for an environment with only partial AIDC implementation [in 2018 and 2019]. ICAO also noted that with increased scrutiny from multiple States concerned, there had been a major increase in safety reports near position SADLI, at the interface between Chinese and Japanese service within the AKARA – FUKUE Corridor. RASMAG/25 had therefore noted that these were indicators of potential safety reporting issues, and invited China to study best safety reporting practice with a view to making appropriate improvements as necessary.

Seamless ANS Plan and Monitoring Update (WP06)

3.21 The meeting noted that the Asia/Pacific Region’s primary means of planning to support the ICAO Doc 9750 *Global Air Navigation Plan* (GANP) was the *Asia/Pacific Seamless ANS Plan*, which required the involvement and active participation of States and all stakeholders. At present, the *Asia/Pacific Seamless ANS Plan* had several important subsidiary plans, and it was expected that Aerodrome Operations (AOP)-related subsidiary plans would need to be developed as well.

3.22 A total of 28 States/Administrations (63.6% of the APAC States/Administrations), had submitted one or more report(s) on the ICAO Seamless ATM Reporting Portal (accessible through the ICAO Secure Portal). Among those 28 States/Administrations, only six States had submitted at least four reports from 2014 to 2018 (note: ‘regular reporting’ was measured over a period of three years).

3.23 As 2019 had been a review year for the *Asia/Pacific Seamless ATM Plan*, the meeting noted that it had been renamed as the *Asia/Pacific Seamless ANS Plan*, and now included a need to develop a National Air National Plan (NANP). A template for the development of a NANP is at <https://www.icao.int/APAC/Documents/edocs/National%20Air%20Navigation%20Template%20V6.0.docx>.

3.24 In general, the ten priority regional targets planned for Phase I (November 2015 - November 2019) Phase 1 had not been achieved, even three years after the initial target date. States had been urged by APANPIRG/27 to give higher priority both at CAA and ANSP levels, and to mobilize human and financial resources to complete the implementation of Phase 1 objectives.

3.25 The ten priorities had been updated by APANPIRG/30 to 16 priorities. However, the Seamless reporting portal had not been able to be updated thus far to match the 6th Edition of GANP and Version 3.0 of the *Asia/Pacific Seamless ANS Plan*, meaning that data was now unfortunately out-of-date. The meeting noted that States with ICAO Council Members were requested to advocate for an updated portal to be provided as soon as possible, in accordance with APANPIRG Conclusion 30-6. In response to an enquiry from Hong Kong China, ICAO clarified that States/Administrations should withhold updates until the new Seamless Reporting Portal was ready.

3.26 Ultimately, the *Asia/Pacific Seamless ANS Plan* was expected to be incorporated into Volume III of the Regional Air Navigation Plan (RANP), to become fully web-based.

3.27 Hong Kong, China provided an update on its AIDC implementation status. ICAO advised that the information should be provided to the CNS/SG to update information in the eANP Vol. II.

ANS USOAP Update (WP07)

3.28 WP07 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.

3.29 The average ANS Effective Implementation (EI) of APAC region was 68.52%, as at February 2020. **Figure 4** illustrates the EI ratings for ANS-related PQs of APAC States:

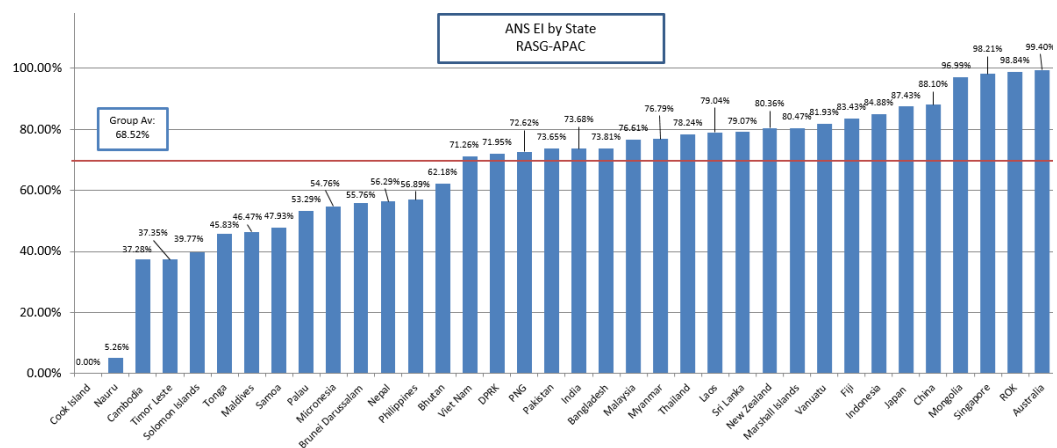


Figure 4: USOAP ANS EI Comparisons by State (July 2020)

3.30 The ROK commented on its State Safety Programme (SSP) implementation, describing their work on this area from 2016, including self-assessment and a voluntary assessment of ROK that had conducted by ICAO. The ROK offered to assist other States preparing for an SSP assessment.

Application of ATC Separation Standards (WP08)

3.31 ICAO presented data on surveyed ATC separation standards that were being applied within the Asia/Pacific Region compared to the provisions in the *Asia/Pacific Seamless ANS Plan*.

3.32 When improvements to ATS surveillance (and presumably communications) are made, a core principle of the *Asia/Pacific Seamless ANS Plan* was to ensure that the operational benefits are provided to airspace users, to provide some return for the cost of the improvements. However, in many cases, no benefit is provided other than safety monitoring of procedural separations.

3.33 **Figure 5** provided an indication of the efficiency of ATC separations as they were theoretically being applied within Flight Information Regions (FIRs) and at Transfer of Control (TOC) points as at the ATM/SG/8, according to the latest data available to the ICAO Regional Office.

ATM/SG/8
Report on Agenda Items

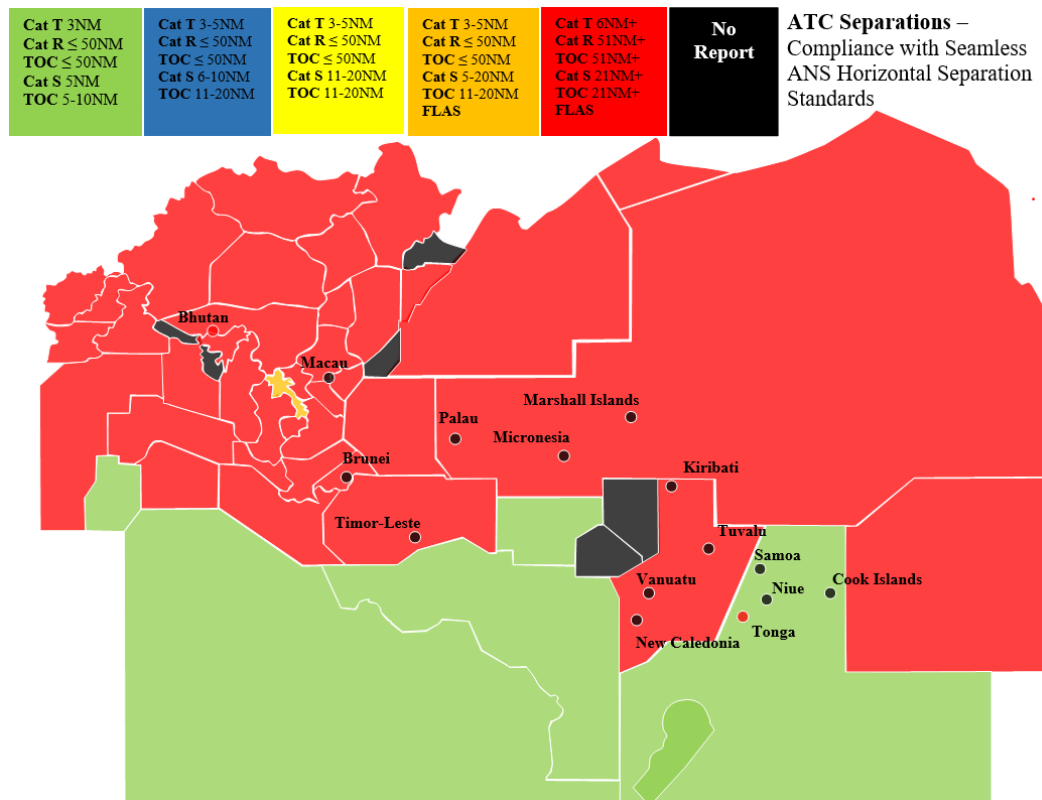


Figure 5: Compliance with Seamless ANS Horizontal Separation Standards

3.34 Except for China, according to survey data, no State in Asia had been applying ATC separation standards based on the provisions of the *Asia/Pacific Seamless ANS Plan* and ICAO Document 4444 – *PANS ATM*. Therefore, the Asian Region as a whole had failed to deliver the service levels new CNS systems were capable of. In particular, ICAO had noted that there were significant weaknesses in many Asian State’s application of terminal separations, so this area had now been included in the survey. This inefficiency, and the failure to implement proper Air Traffic Flow Management (ATFM) where necessary, sequencing mechanisms such as Arrival Manager (AMAN) and efficient Standard Terminal Arrival Routes (STARs) and use of runways for departures between arrivals, meant that many terminal airspace operations were operating well below potential capability.

3.35 The meeting noted that human decision-making at management level could be responsible for this poor result, indicating a region-wide paradigm shift in organisational culture was necessary. Asian States in particular were urged to recognise the problem and establish policies, rules and procedures for ANSPs to greatly improve the benefits from modern CNS/ATM systems, including training for senior managers to recognise the gap between current practice and best practice.

3.36 The ATM/SG/8 meeting had an extensive discussion on the most appropriate ATC separations and TOC spacing, against the background of the need for greater efficiency to respond to COVID-19 and the limited progress to implement PANS ATM separation standards and the expectations of the *Asia/Pacific Seamless ANS Plan*. Discussion topics included the background, barriers and the need for efficiency improvements that:

- a) utilised 5NM enroute and 3NM in terminal airspace, if ATS surveillance is in place and controllers are trained (given that PANS ATM separations included a buffer);
- b) declared the minimum separation standard for use within an FIR as being based on the State’s capability, not that of neighbouring FIRs;
- c) recognised that the minimum separation standard was expected to be used only as appropriate as required by controllers on an individual conflict pair basis;

- d) noted that the assessment of FLAS did not include airspace within 50NM of an FIR boundary;
- e) recognised that PBCS is not a factor in the application of ATS surveillance-based separations within VHF coverage; and
- f) recognised that possible degradation of normal performance should not be used to set the default separation standard, as this is a contingency situation.

3.37 The meeting noted that ICAO intended to circulate a new survey to update the data on separations/TOC/ Flight Level Allocation Scheme (FLAS) held by the Regional Office in December 2020 or January 2021. In this way, the improvements developed by States in response to COVID-19 could be taken into account. Thus, States were requested to support the new survey by providing their status data to ICAO.

3.38 Some States and Administrations opined that **Figure 5** was unable to show the application of minimum surveillance spacing within FIR and at TOC. To better reflect the status, ICAO agreed with Hong Kong China's suggestion to develop the chart as two separate figures, one for the separations and the other for the FLAS/TOC status.

Agenda Item 4: Air Navigation Service Deficiencies

Indonesia Corrective Actions on AIS and SAR Deficiencies (WP09)

4.1 Indonesia clarified the corrective action taken to remedy APANPIRG Deficiencies of Indonesia related to AIS Quality Management System, and the *Asia/Pacific SAR Plan*.

Air Navigation Service Deficiencies List (WP10)

4.2 The current List of APANPIRG Air Navigation Deficiencies in the ATM, AIS and SAR fields at **Attachment C** was reviewed by the meeting. The ATM/SG/8 agreed to the following change proposals for APANPIRG/31's consideration:

- a) AIS (WGS84) – Thailand deletion;
- b) AIS (Quality Assurance) – Indonesia and Thailand deletion;
- c) SAR capability – India and Indonesia deletion;
- d) Non Provision of Safety-related Data – Bangladesh, Bhutan, French Polynesia, Lao PDR, Pakistan deletion;
- e) LTHM – Malaysia deletion; and
- f) Data Link Performance Monitoring – Myanmar deletion.

4.3 IFALPA thanked ICAO for sharing the concerns of professional pilots, and invited States to contact them for any clarifications.

4.4 China, Hong Kong China, and India indicated that they were eager to follow up safety concerns but many of IFALPA's observations and descriptions were generic. The meeting had an extensive discussion on how to improve the way in which IFALPA issues were presented and addressed. Several States requested IFALPA to work more closely with States in a timely manner, particularly with evidence and details (such as time, place) that could enable States to assess the validity and take corrective actions as appropriate. The meeting considered that IFALPA 'deficiencies' could be better labelled as 'observations' or 'concern' to differentiate them from PIRG Deficiencies.

4.5 Hong Kong China suggested that a separate IFALPA Paper would be beneficial. Moreover, the meeting agreed that individual IFALPA concerns should not be discussed at the regional level of the ATM/SG, as they should be addressed at a State-IFALPA level (thus a separate paper to the ATM/SG by IFALPA would be an IP). ICAO informed IFALPA HQ of these suggestions.

4.6 For States wishing to contact IFALPA to discuss the IFALPA Deficiencies, the following list of contacts were provided by IFALPA:

- EVP Asia/Pacific- Ishtiaque Hossain (Bangladesh) ishtiaquehossain@ifalpa.org;
 - RVP Asia/East- Jaffar Hassan (Singapore) jaffar747@gmail.com;
 - RVP Asia/West- Shavantha Pedris (Sri Lanka) shavantha.pedris@gmail.com;
 - RVP NOP- Captain Max Masumoto, (max.matsumoto@alpajapan.org);
 - RVP SOP- Dave Griffin (New Zealand) david@griffin.org.nz; and
 - Senior Technical Officer/Regional Officer- Carole Couchman (Montreal) carolecouchman@ifalpa.org.
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Agenda Item 5: ATM Systems (Modernisation, Seamless ATM, CNS, ATFM)

Air Traffic Flow Management Steering Group Outcomes (WP11)

5.1 The meeting was informed of the outcomes of the 10th Meeting of the Air Traffic Flow Management Steering Group (ATFM/SG/10), held by Video Teleconference from 04 to 08 May 2020.

Related Meetings Outcomes (ATFM Information Exchange)

5.2 The APAC Flight Information Exchange Model (FIXM) 4.1 Extension, initiated by ATFM/SG and developed by the APAC System-Wide Information Management (SWIM) Task Force (SWIM TF), had been reviewed by the FIXM Change Control Board (CCB) and subsequently published on the FIXM website at <https://fixm.aero>. APANPIRG 30 subsequently adopted the FIXM extension under *Conclusion APANPIRG/30/12 (CNS SG/23/6-SWIM TF/3/4) – Asia/Pacific FIXM Extension for ATFM*. The FIXM extension was posted on the ICAO APAC Regional Office eDocuments web-page for immediate use by APAC administrations, where capability to do so existed.

5.3 The CNS/SG/23 meeting had, under *Conclusion CNS SG/23/1 (ACSICG/6/1) – ATFM/AMHS-Based Interface Control Document for ATFM* drafted by ATFM/SG/9, adopted the AFTN/AMHS-based Interface Control Document (ICD) for use by APAC Administrations in implementing cross-border ATFM communications in the non-SWIM environment. A further update of the ICD was also developed by ATFM/SG/10, which agreed to *Draft Conclusion ATFM/SG/10-3: Amendment of the AFTN/AMHS-based Interface Control Document (ICD)*. The Draft Conclusion was subsequently endorsed by the Seventh Meeting of the Aeronautical Communications Services Implementation Coordination Group (ACSICG/7, Web-Conference, 21 – 23 July 2020), for consideration by the 24th Meeting of the Communications, Navigation and Surveillance Sub-Group of APANPIRG, scheduled for 30 November – 04 December 2020.

BOBCAT Operational Update

5.4 The ATFM/SG/10 meeting had been informed of Bay of Bengal Cooperative ATFM (BOBCAT) traffic demand for the period from January 2018 – March 2020 (**Figure 6** included additional data to September 2020).

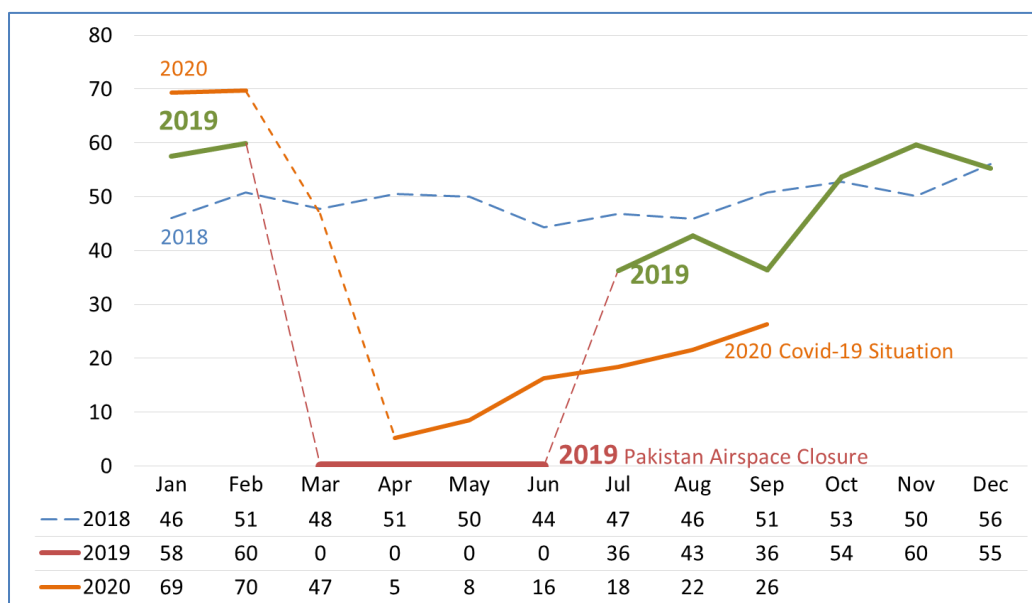


Figure 6: BOBCAT Traffic Demand from Slot Requests: January 2018 – September 2020

5.5 Overall, the percentage of flights achieving their BOBCAT slot-allocated (or better) flight levels was in the range 73 – 94%. Major causes of flights not entering the Kabul FIR at the BOBCAT slot-allocated level were non-compliance with Calculated Time Over (CTO, 46%), or Calculated Take Off Time (CTOT, 29%).

Progress Update from the Asia/Pacific Cross-Border Multi-Nodal ATFM Collaboration

5.6 The Asia/Pacific Cross-Border Multi-Nodal ATFM Collaboration (AMNAC, formerly the Distributed Multi-Nodal ATFM Network and composed of Cambodia, China, Hong Kong China, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam) had informed ATM/SG/10 of overall compliance with ATFM measures of 73% (Level 3 nodes) and 70% (Level 2). The AMNAC Common Operating Procedure was updated to resolve CTOT revision in cases where the revised CTOT was issued with insufficient time for stakeholders to react (**Figure 7**).

4.28 A revision of CTOT should also take into consideration the operational restrictions airspace users and airport operators are subjected to. To mitigate disruptions from insufficient reaction time for the processing of revised CTOT, stakeholders should lodge CTOT revision request as soon as practicable. In issuing a revised CTOT, Initiating ATFMU should ensure that the revised CTOT is not too early as to render stakeholders unable to react to it. **Table 9** specifies conditions for the revised CTOT.

Changes Initiated by	Earliest Revised CTOT Allowable	
	Revised CTOT is EARLIER	Revised CTOT is LATER
Airspace User	Current time + [max STT* + Buffer] New CTOT > Current time + 30 minutes	N/A
Initiating ATFMU	Current time + [reaction time] New CTOT > Current time + 45 minutes	

Table 9 - Lead Time Requirement for CTOT Revision Processing

*Max STT refers to maximum standard taxi-out time used in CTOT calculation among the airports in the network: for current operations, the maximum STT is 20 minutes

Figure 7: Revised Procedure for Revision of CTOT

5.7 Regarding CTOT compliance, IFALPA noted that ANSPs differed in their approach. In Thailand, for example, the ANSP was proactive in ensuring compliance, while some others were not.

NARAHG Update

5.8 The Northeast Asia Regional ATFM Harmonization Group (NARAHG – China, Japan and Republic of Korea) had, as the first steps towards interoperability, exchanged ATFM Daily Plans (ADPs). Exchange of CTOT with Hong Kong China had been agreed by Japan and was being planned by Republic of Korea. This was expected to help develop harmonization between AMNAC and NARAHG. China advised that, following a system upgrade, Shanghai ATFMU would share ADPs with AMNAC ATFMUs. There was no current plan for all China FIRs to share ADPs.

Progress of the ATFM/IR/SWG

5.9 The ATFM Information Requirements Small Working Group (ATFM/IR/SWG) had developed an ADP exchange procedure. ATFM/SG/10 had agreed to *Conclusion ATFM/SG/10-2: ADP Exchange Procedure Working Draft*, making the procedure available for use by Administrations pending its inclusion in the future amendment of the *Regional Framework for Collaborative ATFM*.

5.10 ATFM/IR/SWG had coordinated a collaborative effort among several ANSPs to mitigate cross-border ATFM issues for flights departing aerodromes in the Incheon (Republic of Korea) FIR for Da Nang, Viet Nam. While Viet Nam did not apply ATFM measures to these flights, they were subject to various ATFM and tactical restrictions by other ANSPs. **Table 2** summarizes the previous situation and planned or implemented mitigations agreed by the collaborating ANSPs.

FIR	Approach	Previously	Currently	When
Ho Chi Minh FIR Sanya FIR	Increase capacity	FL260 restriction	No longer exists	Nov 2019
	Increase capacity	30NM transfer	20NM transfer	Mar 2020
Sanya FIR Hong Kong FIR	Increase capacity	30NM transfer	20NM transfer	Mar 2020
Hong Kong FIR Taipei FIR	Increase capacity	30NM transfer	20NM transfer	Mar 2020
Fukuoka FIR	Reduce ATFM measures	(1) 12min FL340- (2) 35min	(1) 10min FL340- (2) 30min	Nov 2019
Incheon FIR	Implement ATFM	AIP publish for ATFM Tactical ATFM (CTOT)	Strategic/Pre-tactical/Tactical ATFM (CTOT, slot swapping, Reroute, etc.)	Mar 2020 (Jun 2019)

Table 2: Initiatives introduced for Flights Bound for Da Nang.

5.11 Viet Nam informed the meeting that it recognized the need to work collaboratively to mitigate the cross-border ATFM issues. Therefore, after upgrading to AMNAC level 3, Viet Nam planned to participate in NAHAHG ATFM practices to improve efficiency over cross-boundary fixes.

India Update on ATFM Operations

5.12 India had informed ATFM/SG/10 of the status of ATFM implementation and the integration of ATFM and Airport Collaborative Decision-Making (A-CDM) at major airports in India. A Beta version of India’s ATFM portal had been developed (www.atfmaai.aero/portal). Cross-border ATFM was planned for inclusion in Phase III of the ATFM project, for implementation in 2021 or later. An agreement for ATFM assistance to Nepal was being considered by the Ministry of Civil Aviation.

Regional ATFM Implementation Status

5.13 APAC ATFM implementation status was reported against the performance expectations of the *Regional Framework for Collaborative ATFM*. States were assessed as having *Robust* (90-100%), *Marginal* (70-89%) or *Incomplete* (0-69%) implementation.

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5.14 Reports due by 30 April each year were assessed as follows:

- several States were recorded as *Incorrect Report*, reporting against the criteria applicable to States that were not required to implement ATFM under performance expectations of the *Asia/Pacific Seamless ANS Plan* and *Regional Framework for Collaborative ATFM* (the remaining APAC States were recorded as *Did Not Report*);
- India, Singapore and USA were assessed as having *Robust* implementation;
- *Marginal* implementation was recorded for Australia, Cambodia, China, Japan, Republic of Korea, and Thailand; and
- Bangladesh, Hong Kong China, Macao China, Indonesia, Maldives, Myanmar, Nepal, New Caledonia, New Zealand, Pakistan, Papua New Guinea, Philippines and Viet Nam were assessed as *Incomplete*.

5.15 The meeting was informed that most AMNAC Level 3 Nodes had completed the implementation of ATFM data exchange capability over AFTN/AMHS using Slot Allocation Messages (SAMs), Slot Revision Messages (SRMs) and Slot Cancellation Messages (SLCs) (**Table 3**).

Level-3 ATFM nodes	Status	Remark
AEROTHAI	Completed	
SANYA ATFMU	Completed	Only SAM implemented
CATS	Completed	
HKCAD	Completed	
CAAS	In-Progress	Reliability testing, estimated completion Q2 2020.

Table 3: ATFM Data Exchange Capability – AMNAC Level 3 Nodes

Missing Departure (DEP) Messages

5.16 The meeting was provided with an update on the issue of missing Departure (DEP) messages, as previously discussed at ATM/SG/7. The following ANS Deficiencies had been agreed by APANPIRG/30, where the most recent regional analysis indicated 5% or more of the required DEP messages were not received by enroute and/or destination ATS units:

- Deficiency deleted: Indonesia, Myanmar, Philippines, Republic of Korea;
- new Deficiency recorded: Maldives, Nepal; and
- Deficiency remaining in place: Bangladesh, India, Malaysia, USA.

5.17 Due to the impact of the COVID-19 pandemic on traffic volumes, the DEP message data gathering and analysis activity planned for March-April 2020 would render any such analysis unrepresentative. The activity was deferred until such time as international traffic reached more normalized levels. However, in response to a request from the Secretariat Thailand had provided a detailed analysis of the monthly non-receipt of DEP messages for the period January 2018 to March 2020, for the Bangkok FIR. While the non-receipt of DEP messages from all originators had reduced from 17% to 10%, the overall performance of APAC Administrations had improved from 12% to 3%.

5.18 Thailand had provided further data for the period from March to October 2020 (**Table 4** and **ATM/SG/8 WP/11 Attachment 1**). While acknowledging that the traffic sample data had been disrupted by the pandemic, the meeting was invited to note the apparent continuing poor performance of the EUR and MID Region originators. Analysis of incorrect FPL addressing requirements in AIP would continue, with a plan to raise APANPIRG Air Navigation Deficiencies against non-compliance with ICAO Annexes and PANS.

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2020	March	April	May	June	July	August	September	October
All	10%	8%	10%	10%	11%	11%	12%	11%
APAC	3%	3%	4%	5%	5%	5%	6%	6%
EUR	39%	30%	49%	46%	40%	36%	41%	41%
MID	15%	21%	13%	18%	21%	17%	16%	14%

Table 4: Missing DEP Messages Summary – Bangkok FIR

ATFM Post-Operations Analysis Recommended Framework

5.19 The meeting agreed to the following Conclusion, adopting the final version of the ATFM Post-Operations Analysis Recommended Framework, initially developed for ATFM/SG by the core team of AMNAC and further improved by input from Australia, India and Japan:

Conclusion ATM/SG/8-1: ATFM Post-Operations Analysis Recommended Framework

That:

1. The ATFM Post-Operations Analysis Recommended Framework Version 1.0 at **ATM/SG/8 WP11 Attachment 2** be uploaded to the ICAO Asia/Pacific Regional Office eDocuments web-page, to replace the existing working draft version; and
2. States are urged to utilize the guidance provided in the document when implementing ATFM post-operations analysis in accordance with the performance expectations of the Regional Framework for Collaborative ATFM.

Asia/Pacific Unmanned Aircraft Systems Update (WP12)

5.20 ICAO provided information on developments in the field of Unmanned Aircraft Systems (UAS), recalling that ATM/SG/7 had adopted the *Asia/Pacific Regional Guidance for the Regulation and Safe Operation of UAS within National Airspace (Conclusion ATM/SG/7-9)*.

5.21 The UAS Advisory Group (UAS-AG) of the Remotely-Piloted Aircraft Systems (RPAS) Panel had developed the ICAO UAS Toolkit, which was a repository of information on the UAS management that fell outside the scope of Standards and Recommended Practices (SARPs) and Procedures for Air Navigation Services (PANS) developed for RPAS operations. The toolkit was available at:

<https://www.icao.int/safety/UA/UASToolkit/Pages/default.aspx>.

5.22 The ICAO COVID-19 Series Webinars webinars on UAS-related topics included:

- Enabling UAS Operations ([link](#));
- Enabling UAS Operations Part II – Panel Discussion ([link](#));
- Introducing ICAO UAS Model Regulations ([link](#));
- UAS Beyond Visual Line of Sight Operations – for Regulators ([link](#)); and
- ICAO UAS Traffic Management (UTM) Framework ([link](#)).

5.23 The ICAO DRONE ENABLE 2021 Symposium would be held by VTC from 13 – 15 and 20 – 21 April 2021. More information was available at www.icao.int/meetings/droneenable4.

Annex 11 and PANS-ATM Amendments (WP13)

5.24 ICAO informed the meeting of Amendment 52 to Annex 11 Air Traffic Services, and Amendments 9 and 10 to ICAO Doc 4444 – *PANS-ATM*, applicable from 05 November 2020. Related State Letters were as follows:

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- AN 13/13.1 -20/39 dated April 2020;
- AN 13/2.1-20/27 dated 15 June 2020; and
- AN 10/1.1, AN 11/1.3.33, AN 11/6.3.32, AN 3/5.13, AN 4/1.2.29, AN 2/2.7, AN 13/2.1, AN 4/27 and AN 2/33-20/73 dated 30 July 2020.

5.25 Amendment 52 to Annex 11 addressed contingency planning in relation to conflict zones, and consequential amendments related to a new provision on read-back by drivers of operational vehicles on aerodromes.

5.26 Amendment 9 to PANS-ATM, addressed the requirements and procedures for separation methods and minima, ATS surveillance services, procedures related to in-flight contingencies in oceanic airspace, wake turbulence categories of aircraft, special air-reports and strategic lateral offset procedures (SLOP). Hong Kong, China queried when the guidance material that facilitates SLOP in the ATS surveillance environment would be available. ICAO responded that this guidance may be included in ICAO Circular 354 and expected to be available in the near future.

5.27 Amendment 10 to PANS-ATM was one of a number of amendments to relevant Annexes and PANS postponing until 04 November 2021 the applicability date of provisions related to the enhanced global reporting format (GRF) for assessing and reporting runway surface conditions.

Recent CNS-Related Developments (WP14)

5.28 ICAO provided information on recent developments in the Communications, Navigation and Surveillance (CNS) area relevant to ATM, including several Draft Conclusions that would be presented to the Twenty-Fourth Meeting of the CNS Sub-Group APANPIRG (CNS SG/24, 30 November – 04 December 2020).

5.29 The meeting noted that a Flight Inspection and Procedure Validation (FIPV) Seminar had established an ad hoc group, which successfully completed the ICAO *APAC Flight Inspection Guidance Material*.

5.30 An Asia/Pacific Cyber Safety and Resilience Workshop with Tabletop Exercise had been held from 19 – 21 November 2019 to develop awareness on cyber issues affecting aviation, and foster a cyber-safety culture that will promote a resilient and secure cyberspace.

5.31 The Mode S Downlink of Aircraft Parameters (DAPs) WG/3 had explored the utilization of Mode-S DAPs data, Assignment of Interrogator Codes for Multilateration (MLAT) and Automatic Dependent Surveillance – Broadcast (ADS-B), to propose an APAC regional plan.

5.32 The Sixth meeting of the AIDC Task Force (APA TF/6, VTC, 14 – 16 July 2020) had highlighted new AIDC connections between:

- a) Shenyang and Khabarovsk (OLDI);
- b) Kuala Lumpur and Chennai;
- c) Singapore and Kuala Lumpur;
- d) Bangkok and Kuala Lumpur;
- e) Bangkok and Vientiane;
- f) Manila ACC and Hong Kong;
- g) Manila and Singapore; and
- h) Manila and Taipei.

5.33 The Seventh Meeting of the Aeronautical Communication Services Implementation Coordination Group (ACSICG/7) had revised the *Aeronautical Mobile Service (AMS) Strategy and Strategy for Implementation of the Air-Ground Data Link in the Asia/Pac Region*. The meeting recommended postponing the target year of regional implementation for the Common Regional Virtual Private Network (CRV) from 2020 until the end of 2021.

5.34 The Fifth Meeting of the Surveillance Implementation Coordination Group (VTC, 22 – 24 September 2020) had, *inter alia*, shared an Operational Evaluation of Space-Based ADS-B (SB ADS-B) and proposed sharing surveillance data over System Wide Information Management (SWIM)/CRV. The meeting was informed that 30 States/Administrations had installed ADS-B ground stations, 12 States had issued ADS-B mandates and eight States used ADS-B for separation.

5.35 The ATM Automation System Seminar and TF /1 (28 – 30 October 2020) had shared experiences and information from CAA/ANSPs and industry. The meeting had proposed the *Recommended Functions and Performances of Air Traffic Management Automation System* (Edition 0.0) as the basis to develop regional guidance.

5.36 The meeting discussed the need for intensified coordination between the APAC and MID Regions to resolve the long standing AIDC issue between Oman (which used the European On-Line Data Interchange system – OLDI) and Mumbai, preferably through means of a small working group. India informed the meeting that the OLDI vendor in Oman was the same that supplied the Kolkata ACC's system.

Establishment of ADS-B Out Exclusive Airspace (WP15)

5.37 Singapore presented its plan to establish ADS-B out exclusive airspace in the Singapore FIR in phases to fulfil the objectives of the *Asia/Pacific Seamless ANS Plan* with the aim of enhancing safety and optimising airspace use. The implementation Plan is:

- a) Phase 1 – from April 2021, Singapore would utilise ADS-B for ATC monitoring, at and above FL290, with no requirement for aircraft to be ADS-B equipped for the airspace in the remainder of Singapore FIR [beyond the ADS-B out exclusive airspace that had already been designated in December 2013]; and
- b) Phase 2 – from January 2022, Singapore would operationalise ADS-B out exclusive airspace and require aircraft operating at and above FL290 in the north-eastern portion of the Singapore FIR to be ADS-B equipped, and extend the mandate to the whole Singapore FIR from January 2023.

5.38 ICAO recalled the need for a Doc. 7030 amendment to contain a regional air navigation agreement for a mandate within that portion of international airspace over the 'high seas'. The meeting also noted that there were a number of other States contemplating the use of ADS-B within international airspace, including SB ADS-B, so it would be better to have several States jointly submit a PfA. The Chair encouraged a Small Working Group of interested States to work on the PfA. ICAO indicated that this initiative would be notified to the upcoming CNS/SG meeting for their information.

Regional Air Navigation Plan Update (WP16)

5.39 ICAO presented an update on the progress of the electronic Air Navigation Plan (eANP) development for the Asia/Pacific, which was intended to replace ICAO Doc. 9673. Meeting participants were invited to review the FIR and Search and Rescue Region (SRR) data affecting their administration, and provide feedback to ICAO on the data's accuracy. By 01 April 2021, the FIR data review from States was expected to be completed and the data that had been verified for the FIR Table would be entered into the eANP after approval by the President of the Council on behalf of the ICAO Council. The SRR review was also expected to be conducted from 2021.

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5.40 As at November 2020, thirty-one FIRs were either in the process of completing their verification by Proposal for Amendment (PfA) to the ANP, or had been verified already (**Figure 8**).

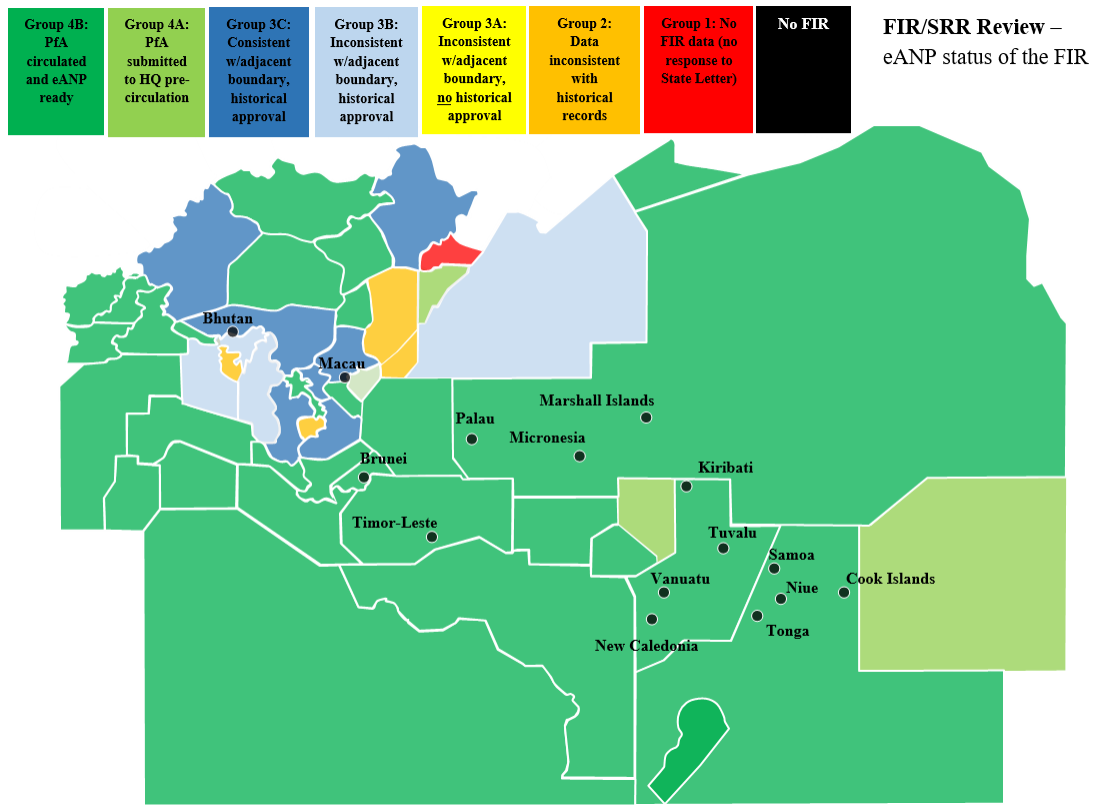


Figure 8: FIR Review Status

5.41 Thirteen PfAs that were pending the validation of coordinates had been received.

5.42 The ANP was currently in the form of pdfs on the APAC website. The electronic ANP (eANP) with full hyperlink and html functionality was expected to be available at the end of 2021.

5.43 China asked about the process of PfA circulation, as some PfAs for APAC FIRs had apparently not been received. ICAO informed that PfAs had been circulated strictly in accordance to a formal list of addressees provided by the States. They were also circulated to concerned trans-regional States and certain Council Members, as well as International Organisations. Therefore, it was suggested that China confirm that their internal procedures received and circulated the PfAs to relevant offices as expected. ICAO further clarified that WP10 Attachment F was still in draft form.

5.44 China recalled the strict process that governed the PfA process, including the final entry into the eANP in the FIR Table after approval by the President of the Council on behalf of the ICAO Council. ICAO confirmed that this process as described was being followed for the Vol. I amendments, noting that only a couple of PfAs had been processed by the President, even though a large number of PfAs had been circulated successfully.

5.45 China stated the Shanghai and Taipei FIR PfAs had been based on historical documents, so were not new proposals. Since 1983 a note had been published in its State Aeronautical Information Publication (AIP): *The present delineation of the boundaries of Shanghai and Taipei FIRs over the sea area is unreasonable and unfavourable to safety, regularity and cost-effectiveness of flight operations and is therefore unacceptable to China...*. ICAO responded by advising that State AIPs were not a legal source of FIR information, unless supported by an approved PfA.

5.46 India asked about the status of the Kolkata FIR's verification, stating that the PfA had been submitted after validating the data published in the AIP of all adjacent FIRs, and as such there was no difference at the date of submission. ICAO advised that significant work needed to be conducted before PfA circulation to ensure that the possibility of an objection was minimised.

Mode S Conspicuity Code (WP17)

5.47 The meeting was provided with a update on the Asia/Pacific Secondary Surveillance Radar (SSR) Codes Allocation Plan, with respect to the reservation of a Mode S Conspicuity Code. The *Surveillance Strategy for the Asia/Pacific Region*, adopted by APANPIRG/27, stated that States should make full use of aircraft Mode S capabilities where suitable surveillance systems are available, to reduce reliance on 4-digit octal codes.

5.48 ATM/SG/6 had agreed to *Conclusion ATM/SG/6-3: Proposed Air Navigation Plan Volume II Amendment*, proposing the withdrawal of Mode A SSR Code 1000 from the RANP Table ATM II-APAC-2 (SSR codes allocation plan) and identifying it as the Mode S conspicuity code for the APAC Region. A PfA to the RANP had been circulated and approved. Code 1000 had been removed from the RANP table, and a specific regional requirement that Mode A Code 1000 had been reserved for use as a Mode S conspicuity code in Part IV – *Air Traffic Management (ATM)*.

5.49 The 2019 update of the *Asia/Pacific Seamless ANS Plan* had also included a related performance expectation, noting that ATC units operating within controlled airspace wholly served by Mode S SSR and/or ADS-B surveillance should implement the use of the standard non-discrete Mode A code 1000 for Mode S transponder equipped aircraft, to reduce the reliance on assignment of discrete Mode A SSR codes.

Airspace Capacity Optimisation Initiatives (IP02)

5.50 Taking advantage of the reduced traffic situation due to the COVID-19 pandemic, Hong Kong, China had taken several initiatives to improve efficiency and support airline recovery. Airspace capacity enhancement initiatives included:

- a) enhancement of longitudinal spacing on major air routes to 20NM;
- b) airspace restructure of the southern Hong Kong FIR in June 2020 to reconfigure and optimise enroute sectors with the introduction of two unidirectional parallel tracks 8 NM laterally apart; and
- c) enhanced utilization of AIDC operations.

5.51 In response to a query from ICAO, Hong Kong China confirmed that the exchange of AIDC Transfer of Control/Acceptance of Control (TOC/AOC) messages has facilitated the transfer of radar identification between Hong Kong ATCC and Taipei ACC in addition to enhancing flight information transfer capability. Hong Kong, China was considering expanding this radar transfer procedure with Guangzhou ACC and Sanya ACC in the future. In the long term, the 'tracks' connecting South East Asia and East Asia were eventually planned to be developed into ATS routes.

Mumbai RNP Approach and Revised PBN SID/STARs (IP03)

5.52 IP03 discussed the implementation of Required Navigation Performance (RNP) Approach (APCH) procedures at Mumbai in September 2020, which complimented the Area Navigation (RNAV) 1 Standard Instrument Departures/Standard Terminal Arrival Route (STAR) established in 2008. The paper noted the need for PBN approaches to cater for contingency scenarios when conventional landing aids may not be available, and to support operations during adverse weather conditions.

Space-Based ADS-B Coverage Over Indian FIRs (IP04)

5.53 India provided the meeting with news on the positive development of SB ADS-B surveillance over the entire Indian oceanic airspace, commencing 01 January 2021.

5.54 India described the many benefits of this deployment, including traffic awareness and monitoring during Phase I. During Phase II, more efficient separation minima would be introduced to enhance airspace capacity, maintaining the same or improved level of safety with the application of Advanced Surveillance Enhanced Procedural Separation (ASEPS).

5.55 ICAO noted that the provisions for ASEPS were now in ICAO Doc. 4444 – *PANS ATM* (Amendment 9 to Edition 16, Chapter 8, Section 8.7.4). This allowed the use of RNP 4 or RNP 2, CPDLC (RCP 240) and SB ADS-B to enable separations of 19NM or less, subject to the caveats contained within PANS ATM (including a safety case).

5.56 India confirmed that after at least six months of testing then results would be presented to FIT-Asia. If the performance was as expected, then Phase II could be implemented in coordination with adjacent FIRs, to provide surveillance-based separations with the SB ADS-B technology.

Future Air Traffic Systems of Japan (CARATS) Vision (IP05)

5.57 Japan presented its long-term vision for the future air traffic systems of Japan – *CARATS: Collaborative Actions for Renovation of Air Traffic Systems*.

5.58 IP05 provided a high level overview of CARATS' goals, including improvements in safety, capacity user-friendliness (and by inference, environmental impacts). Examples of such initiatives included continental Controller Pilot Data Link Communications (CPDLC), the optimisation of Tokyo Haneda's airspace and use of DAPS to improve ATC situational awareness.

5.59 Given the fiscal situation, Japan stressed that decisions to implement were only made following a collaborative framework with industry, academia and government.

Introduction of Domestic CPDLC in Japan (IP06)

5.60 Japan provided information on the implementation of CPDLC within the domestic en route environment [at or above FL335 by Sapporo, Tokyo, Kobe, Fukuoka ACCs] where radar surveillance service is available, in order to increase ATC capacity and improve safety.

Need for Collaboration and Role of Stakeholders for CARATS (IP07)

5.61 IP07 presented the results of a review of Japan's efforts and challenges with regard to CARATS, the future vision for its air navigation system. A CARATS Committee had been established to ensure that industry, government and academia stakeholders were represented. Significantly, stakeholders participated closely during the evaluation of investment decisions, to clarify who would benefit, how the system would be used and the benefits involved. These evaluations were also conducted with the *Asia/Pacific Seamless ANS Plan's* provisions in mind.

5.62 ICAO commented that this process allowed airspace user stakeholder consultation to be taken into account in modernisation plans, especially in light of the COVID-19 economic situation.

ATM Automation System Transition Lessons Learned (IP08)

5.63 Thailand provided a summary of lessons learned from the implementation of its new ATM Automation System. The transition was completed in Q1 2020, supporting one ACC, seven approach control units and thirty-six aerodrome control units, along with associated CNS systems.

5.64 Thailand noted that when implementing AIDC to facilitate automated transfer of control to neighbouring ATS units, starting with the minimum message set specified in the *Asia/Pacific Seamless ANS Plan* should help minimize problems.

5.65 The centralized national flight plan (FPL) and ATS message management function had helped to ensure that FPL and ATS messages routed into ATM automation systems were not duplicated and could be properly processed. The paper also discussed the need for integrated ATFM capability, procurement processes for large ATM systems and the associated management of vendor relationships and transition planning, including training.

5.66 ICAO queried about the status of the civil-military cooperation function for the Bangkok ACC with respect to the location of military coordinator relative to ACC supervisor. Thailand clarified that their civil-military cooperation was organized into pre-tactical planning and tactical operations. The tactical military liaison was located within the Bangkok ACC operations room with direct access to the ACC supervisor, the ATS automation system for airspace status modification and direct communication with military ATS units concerned. In addition, pre-tactical military liaison supporting pre-tactical planning of special airspace usage was located within the Airspace Management Cell, which was co-located with the Bangkok ATFMU within the ATM Network Management Centre (ATM NMC) at another operations room in the same building.

Agenda Item 6: ATM Coordination (Meetings, Route Development, Contingency Planning)

Trans-Regional ATS Coordination (WP18)

6.1 ICAO presented information on trans-regional Air Traffic Services (ATS) coordination, focusing on Asia/Pacific Region's (APAC's) interfaces with the ICAO African (AFI), Middle East (MID) and European Regions (EUR). No specific ATM-related trans-regional meeting had taken place in 2020.

6.2 India informed the meeting that an ATS Letter of Agreement (LOA) between Mogadishu and Mumbai had been signed, effective 08 December 2020. India also informed that AIDC testing was underway between Mumbai and Mogadishu ATCC, and once the technical issues were resolved operational trials were planned.

IPACG Update (WP19)

6.3 WP19 provided an update from the Forty-Sixth Meeting of the Informal Pacific ATC Coordinating Group (IPACG/46, VTC, 20 – 23 October 2020). Discussions included a redesign of the North Pacific (NOPAC) routes and initiatives to improve North and Central Pacific ATS efficiency.

6.4 Japan reported that due to COVID-19, the Fukuoka FIR's traffic was about 350 per day, compared with more than 600 per day in 2019. With the lower traffic volume, Japan was working to temporarily remove all altitude restrictions for User Preferred Routes (UPR).

6.5 Japan was also planning an airspace redesign project to optimize ATC handling along predominant traffic flows by dividing the airspace at FL335. By the end of 2025, the whole upper airspace over Japan would be controlled by a single ATC unit – Fukuoka ACC, and the lower eastern and western airspace would be controlled by Tokyo and Kobe ACCs respectively.

6.6 The United States had been working to implement 23 NM lateral PBCS separation. New procedures had been developed to generate Pacific Organized Track System (PACOTS) routes when volcanic ash (VA) is present.

6.7 Discussions with aircraft operators and IATA had indicated that a 90% PBCS approval equipage level would be reached in early 2021. However, after the COVID-19 pandemic, the level had dropped due to an increase in NOPAC cargo flights.

6.8 The meeting noted that IATA had committed to providing updated information on the future plans of non-PBCS approved aircraft operators, which was important to develop an implementation timeline for 23 NM laterally spaced NOPAC routes.

6.9 IATA commented positively on the progress of the IPACG meeting and the plan to enable more UPR procedures within the airspace concerned.

6.10 Hong Kong, China appreciated the USA's effort in taking positive steps to reduce the impact of 'ATC-Zero' events, which meant an ACC might be closed for several hours for COVID-19 deep cleaning. Hong Kong, China stated that the restrictions received from downstream ANSPs did not match with restrictions from the Anchorage ACC, which had caused confusion to aircraft operators.

6.11 The USA commented that the pandemic had caused several ATC facilities to be closed in the past. They were dedicated to keeping air traffic safe, and eliminating the need for ATC-Zero.

6.12 Regarding the use of SB ADS-B, the USA stated that the cost of this service had to be recouped by means other than overflight charges so there needed to be a cost cross-subsidisation study to determine if this could provide benefits beyond the current trials. The USA would continue its cost-benefit analysis based on outcomes from the current trials.

Need for Effective Implementation of Himalaya 2 Route (WP20)

6.13 Nepal presented information on its request to develop a new ATS route between Nepal and China (Himalaya 2). In 2011 India had agreed to the route development through its airspace.

6.14 Myanmar had agreed to the route, and planned to support the initiative by installing a new surveillance system and Very High Frequency (VHF) station at Myitkyina Airport by 2022.

6.15 Nepal requested China to support the implementation of the long requested Himalaya 2 route for efficiency and environmental protection, and also to decongest Bay of Bengal traffic. China stated that it was not possible to agree to this proposal, suggesting instead to use an existing LINSO entry/exit waypoint (IIM = IMPHAL, LSO = LASHIO as an alternative). Myanmar did not agree with this suggestion. India suggested that in light of this, and the delay of more than nine years since its agreement and the positions of Myanmar and China, Nepal may wish to consider a new proposal.

ATS Route Catalogue (WP21)

6.16 WP21 described the review process conducted by the ICAO APAC Regional Sub-Office for the *Asia/Pacific Region ATS Route Catalogue*, including correspondence with all concerned States/Administration 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 and agreed by the meeting as Version 20, to be uploaded to the APAC website.

6.17 The meeting discussed and affirmed the established management protocols for the *Asia/Pacific Region ATS Route Catalogue*. This required that route proposals without progress for more than five years, or which had a Priority C or D (more than 36 months) by States and were assigned a LOW priority by IATA would be deleted.

6.18 Nepal suggested that as the Himalaya 2 route was acceptable to India and Myanmar and China had some alternative suggestions, it would be logical if the State priority was upgraded from D to either B or C in the ATS Route Catalogue. Furthermore, IATA was also requested to consider upgrading their priority for the Himalaya 2 route.

Asia Pacific Region ATS Route Catalogue – IATA Review (WP22)

6.19 IATA presented the results of its 2020 review of the *Asia/Pacific ATS Route Catalogue*. IATA requested States to urgently conduct a detailed review of routes in their area of responsibility for possible implementation, given the changed COVID 19 pandemic environment and expected ‘new normal’ for aviation operations. IATA advocated that flexibility and efficiency were key areas to support a recovery for aviation, noting that ‘we should be aiming to come out of this crisis stronger and more efficient than we went into it’.

Civil/Military Cooperation Update (WP23)

6.20 WP23 highlighted Asia/Pacific’s civil-military cooperation issues and initiatives, which were critical for safety and efficient procedures relevant to COVID-19 recovery to support airlines. The meeting recalled that civil-military cooperation remained one of the highest priority items in the Asia/Pacific Region, as evidenced by the eleven Seamless ATM elements on this subject.

6.21 Unlike past years, during 2020 the ICAO Regional Office had not received reports of significant disruptions or rocket debris from launches originating from China’s Jiuquan and Taiyuan sites landing near populated areas in other States. However, the meeting reviewed details of ballistic launch and re-entry activities emanating from Hainan Island that had been notified by China affecting Viet Nam’s international and national (territorial) airspace during July and September 2020. The meeting noted that it appeared that these notifications and the process of expected consultation did not comply with regional policy set out by APANPIRG and the *Asia/Pacific Seamless ATM Plan*. ICAO HQ was involved in discussing this matter with China.

6.22 Viet Nam expressed its thanks to ICAO for highlighting the significant concerns related to ballistic launch and space re-entry from Hainan Island. According to Viet Nam, the space flight activities from China potentially created significant hazards to the safety of flight operations within its FIRs (especially those operations on high density ATS routes). Moreover, ‘restricted areas’ were established by China outside its sovereign airspace, and civil flight activity was ‘forbidden’ over the high seas, which was inconsistent with the Chicago Convention and UNCLOS, to which China is a Party. Viet Nam requested China to strictly comply with international law, ICAO SARPS and regional policy set out by APANPIRG and the *Asia/Pacific Seamless ATM Plan*, to ensure the safety of flight operations. Viet Nam stated that it supported ICAO having a leading role in resolving this matter.

6.23 In response, China stated that it had strictly followed the regional policy, and that issues relating to civil-military operations were too sensitive and political to be discussed at the ATMSG. China proposed to have a bilateral meeting between China and Viet Nam to resolve this issue.

6.24 The United States recalled that Mauritius and Australia had very good examples of space re-entry coordination procedures.

6.25 ICAO extended its appreciation to the Air Traffic Management Bureau (ATMB) of the China Civil Aviation Administration (CAAC) for the effort undertaken to reduce ATM delays, with fewer reports of this nature reported in 2020.

6.26 The meeting noted that there had been no change to the Air Defence Identification Zone (ADIZ) ad hoc conditions that had been imposed by Bangladesh within international airspace in 2018.

6.27 With respect to Special Use Airspace (SUA), there had been a number of restricted areas identified designated within international airspace, which was not permissible. The meeting noted that SUA in Chinese, Japanese, Korean and Malaysian airspace could be subject of a Deficiency, unless the airspace was re-designated as a danger area or disestablished before APANPIRG/32.

6.28 The meeting was informed that ICAO Doc. 10088 – *Civil/Military Cooperation in Air Traffic Management* was at a final drafting stage by ICAO HQ, and was expected before 2021. Thailand confirmed that the manual was in final draft form, and offered to circulate the draft for information.

6.29 China stated that the explanation of ‘international airspace’ in this paper was not agreed by China. China hoped to get an authoritative explanation from ICAO HQ. China pointed out that it would be difficult for ICAO to determine international airspace. ICAO noted that the ATM/SG and APANPIRG had consistently discussed international airspace, and the APANPIRG-endorsed guidance on this had been developed in coordination with ICAO HQ (international airspace guidance material at: <https://www.icao.int/APAC/Documents/edocs/International%20Airspace%20and%20Civil-Military%20Cooperation.pdf>). ICAO recalled that the information provided on international airspace and its associated requirements had been coordinated with HQ, and APANPIRG had endorsed the information that appeared on the APAC website.

6.30 India reminded the meeting of the work conducted to develop a Flexible Use Airspace (FUA) Manual, which had been migrated as a template to the APAC website.

Regional ATM Contingency Planning and Status Reporting (WP24)

6.31 ICAO provided information on contingency planning. The meeting was reminded that Annex 11 Section 2.32 *Contingency Arrangements* required that ATS authorities must develop and promulgate contingency plans. The *Asia/Pacific Regional ATM Contingency Plan* also included relevant performance expectations that were expected to be implemented by 10 November 2016, reflecting the Annex 11 requirement which had been applicable since November 2003.

6.32 Based on annual status reports, the implementation of ATM contingency planning by APAC Administrations were assessed as *robust* (90 – 100% implementation), *marginal* (70 – 89%) or *incomplete* (0 – 69%).

6.33 Australia, Indonesia and Singapore were assessed as having *robust* contingency plans implemented. Marginal implementation was recorded for Malaysia, Pakistan, Republic of Korea and Viet Nam. The contingency planning of Bangladesh, Cambodia, Hong Kong China, Macao China, Japan, Maldives, Mongolia, Myanmar, Nepal, New Caledonia, Papua New Guinea, Philippines, Sri Lanka and Thailand was assessed as *incomplete*.

6.34 The following States had not reported their contingency planning status:

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

6.35 The meeting was informed of APAC activities relating to ATM contingency planning in response to the COVID-19 pandemic. Activities included ATM-specific seminars held by VTC, and presentations and proposed recommendations to the Asia/Pacific COVID-19 Contingency Recovery and Planning Group (ACCRPG). Outcomes of these activities included the development of the APAC Regional Strategy for COVID-19-related ATM Contingency Recovery (**ATM/SG/8 WP/24 Attachment B**).

6.36 The meeting was particularly urged to consider the impact of re-opening of traffic to service travel bubbles or city pairs, and the need to ensure that the ATM capacity of all affected FIRs was taken into account, as described in the list of ANSP and ICAO actions in the strategy document.

6.37 States and organizations participating in the Ad Hoc Afghanistan Contingency Group, as per the *Inter-Regional Afghanistan Contingency Arrangements (ATM/SG/8 WP/24 Attachment C)* were invited to update details contained within the plan, and their Contingency Coordination Team (CCT) details.

6.38 East Asia and North Pacific CCT participants were also invited to update the East Asia and North Pacific CCT Points of Contact document (**ATM/SG/8 WP/24 Attachment D**).

6.39 ICAO stressed that ANSPs needed to be aware of the imminent increase of freight flights delivering vaccines worldwide, so they should consider the capacity and contingency ramifications of this as part of their planning in the next few weeks. IATA expressed its thanks to the ICAO Regional Office for its efforts to strengthen contingency planning. IATA estimated that about 8,000 extra flights would be undertaken over a period of some months for vaccine distribution, depending on the production of vaccines. IATA informed the meeting that vaccine guidance material was available at:

<https://www.iata.org/en/programs/covid-19-resources-guidelines/>

<https://www.iata.org/en/programs/cargo/>

BIMT7 Meeting Outcomes (IP09)

6.40 IP09 provided a summary of the outcomes from the Seventh Meeting of the Bangladesh, India, Myanmar, Thailand ATM Coordination Group (BIMT/7, Dhaka, Bangladesh, 05 – 06 February 2020). Key highlights included development of the route network, discussion about a timeline for the Secondary Surveillance Radar (SSR) Mode S Conspicuity Code Transition, AIDC implementation, ATFM matters (including non-receipt of DEP messages), LHDs, and ATM contingency planning. Due to the on-going ICAO validation of FIRs, Bangladesh had also made proposals to amend the Dhaka FIR boundary to be coincident with its territory, which needed to be addressed by India and Myanmar.

Mekong ATM Coordination Group Outcomes (IP10)

6.41 Cambodia, China, Hong Kong China Lao PDR, Myanmar, Thailand, Viet Nam and IATA discussed the main outcomes from the Eighth Meeting of the Mekong ATM Coordination Group (MK-ATM/CG/8, Da Lat, Viet Nam, 11 – 13 December 2019). The meeting discussed route development, ATFM, SWIM implementation and ATM contingency planning matters.

Implementation of Unidirectional Parallel Tracks (IP11)

6.42 Hong Kong, China discussed the successful introduction of two unidirectional parallel ‘tracks’ connecting A1/P901 IKELA and G86 KAPLI within the Hong Kong FIR, by modification of the original single bi-directional track. Hong Kong, China stated that the tracks had greatly enhanced operational safety and efficiency in the enroute ATC sectors, and noted that the benefits would be further optimised if the tracks could be extended into adjacent FIRs.

6.43 The meeting noted that this was a welcome example of proactive capacity building that would assist the post-COVID recovery. Furthermore, Hong Kong, China would continue to work with adjacent ANSPs to formally establish ATS surveillance-based ‘tracks’ as a parallel route system based on an RNAV/RNP specification.

Implementation of Extended RNAV 2 Domestic En Route (IP12)

6.44 Indonesia presented information on its implementation of RNAV 2, in order to develop a navigation structure suited to current aircraft technology, to facilitate a commensurate increase in capacity and efficiency within Indonesian airspace. In addition, PBN SID/STARs had been introduced at a number of airports, and others were planned.

6.45 IP12 described the PBN implementation challenges as being the fleet's airworthiness status, the ATC operating environment, and the existing structure of conventional routes, which were very complex.

6.46 ICAO recalled that, in accordance with the policy already approved by the ATM/SG (<https://www.icao.int/APAC/Documents/edocs/Establishing%20the%20Correct%20PBN%20Specifications%20for%20ATS%20Routes.pdf>), it was unnecessary to re-designate conventional routes within airspace with ATS surveillance as RNAV, unless there was a clear operational benefit.

Implementation of RNP 4 on ATS Routes M767 and N884 (IP13)

6.47 Singapore and the Philippines presented IP13 on their joint development of RNP 4 route specification for ATS routes M767 and N884, in addition to the current RNP 10. The paper noted that RNP 4 enabled a reduction of longitudinal and lateral separation between suitably equipped aircraft to enhance airspace capacity and increase air traffic management efficiency. There were plans to re-designate the two routes to RNP 2 in the future.

6.48 ICAO thanked Singapore and the Philippines for the work to enhance capacity on these routes, especially for considering fleet equipage. ICAO recalled that it was important to recognise the advantages of starting the transition process from RNP 4 where possible, and that there was a regionally-recognised equivalence if the fleet equipage for RNP 2 was not high enough. The relevant regional policy within the *Asia/Pacific Seamless ANS Plan* is replicated below for ease of reference.

7.14 *As far as practicable, all new ATS Routes should be PBN Routes in accordance with the following specifications to support APTA-B0/1 – 8, and APTA-B1/1 – 5:*

- *Category R airspace – RNP 4, RNP 10 (RNAV 10) (other acceptable navigation specifications – RNP 2 oceanic); and*
- *Category S airspace – RNAV 2 or RNP 2.*

Note 1: ATS routes should be designated with a navigation performance specification commensurate with the CNS/ATM operational environment (within Category S airspace, the PBN specification is not significant to ATC as it is used for track-keeping assurance, not ATC separation). The ATS route navigation performance specification selected should be harmonised and utilise the least stringent requirement needed to support the intended operation. When obstacle clearance or ATC separation requirements demand, a more stringent navigation specification may be selected.

Note 2: RNP 2 is expected to be utilised before Phase 2, when the RNP 2 instrument procedure design, ATC separation standards and operational approval are in place. The Asia/Pacific recognises an equivalency for RNP 2 as being an aircraft approved for RNAV 2, RNP 1 and with GNSS. Prior to the ICAO standard flight plan being updated to recognise RNP 2, States should ensure that aircraft operators with RNP 2 approval file designator 'Z' in field 10 and 'NAV/RNP 2' in field 18 (in addition to designator 'R' to indicate PBN approved).

Note 3: within Category R airspace, transition to RNP 4 or RNP 2 oceanic specifications is recommended at the earliest opportunity. RNP 4 and RNP 2 requires ADS-C and CPDLC, whereas RNP 2 oceanic requires dual independent installations.

Agenda Item 7: AOP, AIM, MET, SAR

AOP Subgroup Outcomes (WP25)

7.1 WP25 presented the outcomes of the Fourth Meeting of the APANPIRG Aerodrome Operation and Planning Sub-Group (AOP/SG/4, VTC, 10 – 13 November 2020).

7.2 The AOP/SG/4 meeting had endorsed the Draft Decision on proposal for the amendment of the Asia Pacific Airport Collaborative Decision Making Task Force (APA-CDM/TF) Terms of Reference (ToR) for consideration by APANPIRG/31, to align the requirement of the A-CDM implementation at aerodromes in accordance with the *Asia/Pacific Seamless ANS Plan* Version 3.0.

7.3 The AOP/SG/4 Meeting had reviewed and endorsed the *Draft Conclusion RASMAG/25-3: Alphanumeric Call Sign Initiative* originally formulated by RASMAG/25.

7.4 The AOP/SG/4 had also urged States to submit wildlife strike reports either through ECCAIRS.e5f files, or through an European Co-ordination centre for Accident and Incident Reporting Systems (ECCAIRS) Excel-based form and to the following email addresses:

wildlife@icao.int; icaohq@icao.int; aoi@icao.int and iaa@icao.int

7.5 In order to assist States in implementation and tracking the progress of implementation of Global Reporting Format (GRF) related provisions, ICAO APAC Office prepared a GRF Implementation Action Plan Template. The template identified **15** action items and a number of action parties to facilitate States in their preparation for GRF implementation. The GRF Implementation Action Plan Template would be available on the ICAO APAC Website under APAC eDocument after endorsement by APANPIRG/31.

7.6 Considering the importance of RST, AOP/SG/4 endorsed the Draft Conclusion on Establishment of the Runway Safety Teams (RSTs) in accordance with PANS-Aerodromes (Doc 9981) and ICAO RST Handbook and their participation in the ICAO RST Survey to register their RSTs for consideration by APANPIRG/31. AOP/SG/4 also urged States in need of assistance in the area of runway safety and GRF to request for ICAO Runway Safety Go-Team (RSGT) Assistance Missions through ICAO APAC Office and/or its corresponding COSCAPs.

7.7 Bangladesh reported that Sylhet Airport / VGSY had been certified on 18 November 2020. An official notification would be sent to the ICAO APAC Office.

AIS – AIM Implementation Task Force Outcomes (WP26)

7.8 The outcomes of the Fifteenth Meeting of the Aeronautical Information Services (AIS) – Aeronautical Information Management (AIM) Implementation Task Force (AAITF/15, Video Teleconference, 01 to 05 June 2020) were reported to the meeting.

AIS-Related Air Navigation Service Deficiencies

7.9 Three AIS-related Air Navigation Deficiencies had been updated by APANPIRG/30:

- WGS-84 not implemented (11 States, compared to 12 States at AAITF/14);
- AIP Format (2 States – no change since AAITF/14); and
- Quality Management System not implemented (22 States).

7.10 The AAITF/15 meeting agreed that deficiencies be deleted as proposed by Indonesia and Thailand, subject to further offline coordination of documented evidence of implementation, and subsequent sampling of aeronautical information products by the ICAO Regional Office. The criteria used by ICAO Regional Office were provided at **ATM/SG/8 WP26 Attachment A**. The following deficiencies were proposed for deletion:

- Quality Management System not implemented – Indonesia and Thailand; and
- WGS-84 not implemented – Thailand.

7.11 The meeting was invited to once again note the ongoing, high level of concern about poor quality management of aeronautical information in the APAC Region, and the apparent lack of organizational priority for this safety-critical requirement.

NOTAMS

7.12 Information was provided on NOTAM proliferation, and on the Regional Office process for recording Air Navigation Deficiencies for non-compliance with the relevant provisions of Annex 15 and PANS-AIM relating to NOTAM management. In this regard, the meeting was reminded of Conclusion ATM/SG/6-14: Management of NOTAMS which had urged States to take immediate action to reduce the large numbers of permanent or long duration NOTAMS (more than 90 days' validity). A detailed analysis was provided in **ATM/SG/8 WP/26 Attachment B**.

7.13 As of 01 September 2020 a total of 6,844 NOTAMS were valid in the APAC Region, and 1469 of them had been published before 01 June 2020. In comparison with the data reported in 2019, by September 2020 the total number of valid NOTAMS in the APAC Region had increased by 17%, while the number of old-aged NOTAMS had decreased by 14.8%. The percentage of valid NOTAMS that were old-aged had decreased by 8%, remaining unacceptably high. **Figure 9** illustrated the APAC Administrations having more than 10 old-aged NOTAMS at April and September 2020.

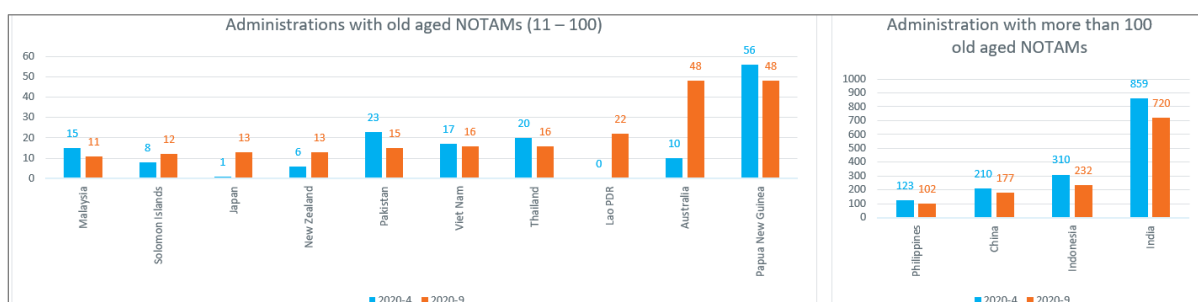


Figure 9: Administrations with more than 10 old aged NOTAMS – April/September 2020

7.14 In addition to globally coordinated ICAO efforts to reduce NOTAM proliferation, local action within the APAC Region would include direct action to encourage compliance with the provisions of Annex 15 and PANS-AIM, in addition to consideration of APANPIRG ANS Deficiencies where appropriate. The meeting was also informed of the NOTAMETER application available at <https://www.icao.int/safety/iStars/Pages/Notameter.aspx>.

7.15 AAITF/15 had considered proposals for additional NOTAM Codes to be listed in ICAO Doc 8400 PANS – ICAO Abbreviations and Codes (PANS-Codes) Section 7. A total of 37 new Q23 codes (i.e. the second and third letters, identifying the subject) and 19 Q45 codes (denoting the status of the subject) were proposed. Of these, three were considered supportable by the ICAO Regional Office. AAITF/15 meeting participants had been requested to provide detailed argument supporting a further 12 codes that were considered to merit further discussion. No such supporting information had been received by ICAO. It was noted that the amendment of information in ICAO PANS would be a task for a specific working group of experts appointed by the relevant ICAO technical panel.

7.16 The meeting was also informed of ICAO State Letter AP086/20 (ATM), dated 26 March 2020, responding to global concerns about the quality of NOTAMS promulgating information on COVID-19-related aerodrome and/or ATS contingency operations. The State Letter included template NOTAMs for guidance.

Regional Implementation Status of AIM Performance Expectations

7.17 A summary of the implementation progress of the AIM performance expectations in the APAC Regional Plan for Collaborative AIM was provided. The total number of Administrations providing reports in 2020 (13) compared poorly with the 26 Administrations that had reported in time for AAITF/14 in 2019.

7.18 Administrations that had reported their implementation status were:

Australia, Bangladesh, Cambodia, China, Hong Kong China, Indonesia, Japan, Mongolia, Pakistan, Singapore, Sri Lanka, Thailand and Viet Nam.

7.19 **Figures 10 and 11** illustrated overall regional implementation of Phase I (immediate implementation expected) and Phase II (implementation expected by November 2019) elements of the Regional Plan for Collaborative AIM; approximately 51% percent for Phase I, and 38% for Phase II.

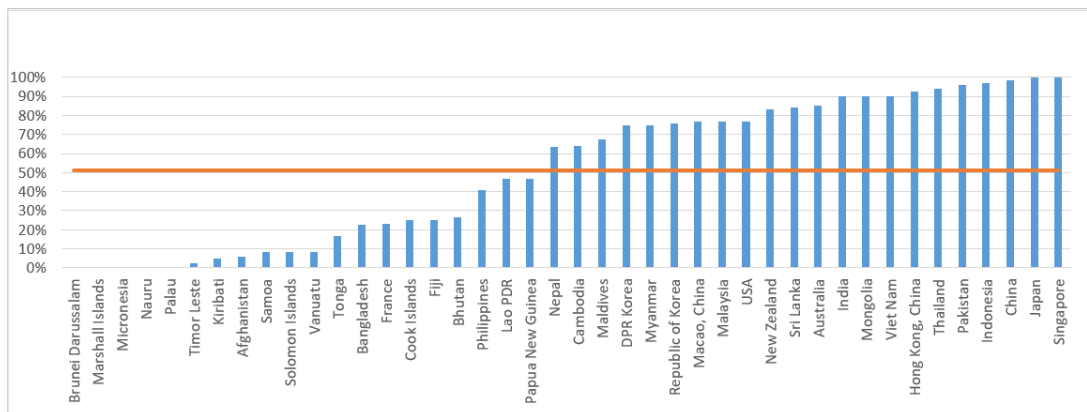


Figure 10: Regional Phase I Implementation Progress (updated on 17 November, 2020)

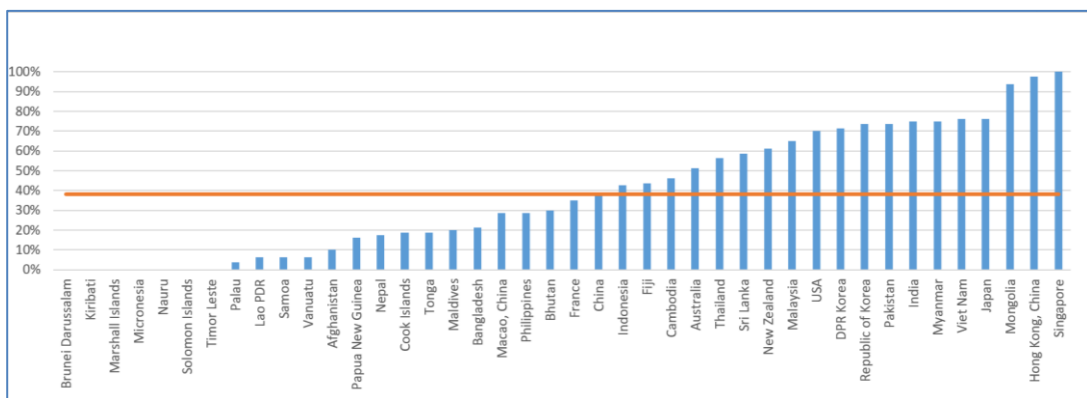


Figure 11: Regional Phase II Implementation Progress (updated on 11 November, 2020)

7.20 Regional implementation of Phase III elements, expected to be implemented by 2025, was approximately 10%.

7.21 Japan and Singapore reported implementation of all Phase I elements. Only Singapore reported implementation of all Phase II elements. No Administration reported implementation of all Phase III elements.

APAC ICARD Status and 5LNC Duplicate Resolution

7.22 AAITF/15 had been informed of the status of the ICAO International Codes and Route Designators (ICARD) application and the resolution of APAC 5-letter name code (5LNC) duplicates.

7.23 ICAO Headquarters had compiled a full global list of duplicated 5LNC in 2018. There were at that time 3905 duplicated 5LNCs worldwide, of which 2,733 were within the APAC Region.

7.24 Due to limited information on actions taken to resolve duplicates, APAC Administrations were requested to review and maintain the ‘APAC 5LNC Status’ data prepared by ICAO and provided at AAITF/15, and send an update to the ICAO Regional Office at least once per year.

7.25 **Figure 12** illustrated the number of 5LNCs registered globally, and in the APAC Region.

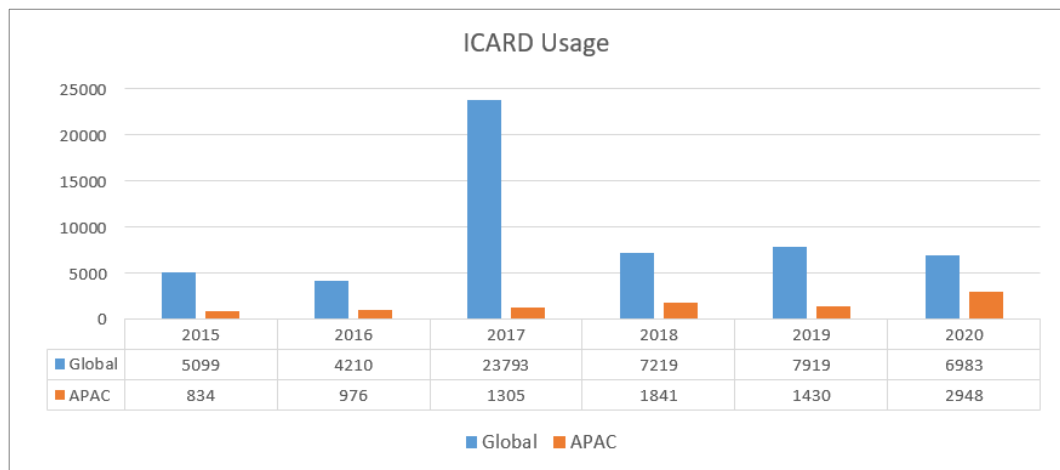


Figure 12: ICARD usage of the last 5 years

7.26 The meeting was also informed that ‘special request’ creation of 5LNCs that did not exist in the ICARD database would only be made available to ensure that 5LNCs currently published in AIP were registered in ICARD.

7.27 ICAO acknowledged the substantially increased effort by some APAC Administrations to comply with Annex 11 Appendix 2 requirements by registering 5LNCs in ICARD and actively resolving duplicated 5LNCs.

SNOWTAM

7.28 AAITF/15 had agreed to *Conclusion AAITF/15-1: Guidance on the Issuance of SNOWTAM*, supporting the APAC use of the *European and North Atlantic Region Guidance on the Issuance of SNOWTAM*, pending a future update of the APAC Operating Procedures for Aeronautical Dynamic Data (OPADD). Subsequent to AAITF/15, ICAO had issued State Letter 2020/73, dated 30/07/2020, notifying the postponement of the applicability of SARPS and PANS related to the GRF until 04 November 2021. The guidance document on the APAC Regional Office eDocuments web-page had been updated to reflect the changed applicability date.

AIS Points of Contact

7.29 AIS Points of Contact (POC) were included in the consolidated APAC ATM Contact List (ATM/SG/8 WP/32). The following APAC Administrations had not yet nominated any AIS POC:

Brunei Darussalam, France (French Polynesia and New Caledonia), Kiribati, Marshall Islands, Micronesia, Nauru, Palau, Samoa, Solomon Islands and Tonga.

PBN Approach Chart Identification Transition

7.30 The meeting was informed of ICAO Electronic Bulletin (EB) 2020/21. The EB advised States to limit as far as possible new or amended information provided under the Aeronautical Information Regulation and Control (AIRAC) system, due to the COVID-19 pandemic and consequent contingency operations of aeronautical data houses. However, noting that the APAC Regional Transition Plan for RNP APCH Chart Identification plan was part of a globally coordinated and agreed plan to ensure implementation by the November 2022 applicability date, the significant number of APCH charts that some APAC Administrations must transition, and the APANPIRG Conclusion supporting the Regional transition plan (*Conclusion APANPIRG/30/14*), AAITF/15 stressed that APAC Administrations should continue to process chart changes in accordance with the plan.

AAITF Terms of Reference

7.31 The meeting agreed to minor changes to the AAITF TOR to incorporate reference to PANS-AIM, and to reflect the renaming of the APAC Seamless ANS Plan:

Draft Decision ATM/SG/8-2: Amend AAITF Terms of Reference

That, the amended AAITF Terms of Reference at **Appendix D to the Report** be adopted.

Meteorology Issues Relevant to ATM (WP27)

7.32 WP27 presented an overview of Aeronautical Meteorology (MET) issues relevant to ATM arising from the work programme of the Meteorology Sub-group (MET SG) and its contributory bodies.

7.33 The paper discussed the development and implementation of tailored meteorological information and services to support effective ATM. APANPIRG/29 (Sep 2018) approved the *Asia/Pacific Regional Guidance for Tailored Meteorological Information and Services to Support Air Traffic Management Operations* as a reference for States and Organizations concerned [Conclusion APANPIRG/29/25: *APAC Regional Guidance for MET Information Supporting ATM* referred].

7.34 The meeting noted that in accordance with Annex 3, the space weather information service to support international air navigation had been implemented on 7 November 2019.

7.35 In order to inform ICAO and States of the provision of current and future MET information services by States specifically to support ATM, and in particular ATFM, the MET SG/24 (November 2020) would consider conducting a survey of State Meteorological Information Supporting Air Traffic Management, for circulation to States in early 2021.

7.36 The meeting was informed that the MET SG/24 (November 2020) would consider supporting further development on the proposed *APAC User Requirements for SWIM-based MET Information Services Supporting ATFM*. The work would specifically consider the needs of ATFM in the APAC Region, and aim to facilitate the development of future SWIM-based MET information services.

7.37 India asked about the MET data format used to support ATFM. ICAO informed the meeting that the standardized format for promulgation of aeronautical information was prescribed in Annex 3. The ICAO Meteorological Information Exchange Model (IWXXM) exchange model, which defined the format for digital MET information, was also available. It was currently expected that this would become the sole format for distribution of MET information from 2026 (*Conclusion APANPIRG/30-17* and *Conclusion APANPIRG/30-18* referred).

Asia/Pacific Search and Rescue Update (WP28)

7.38 The Fifth Meeting of the Asia/Pacific Regional Search and Rescue Work Group (APSAR/WG/5) had been held from 09 to 11 June 2020 by VTC.

7.39 ICAO HQ had presented a summary of the activities undertaken by ICAO at the global level to support the implementation of the Global Aeronautical Distress and Safety System (GADSS), including developments relating to the location of an aircraft in distress repository (LADR). The meeting was informed that the PANS-OPS Volume III GADSS Autonomous Distress Tracking (ADT) and LADR procedures were now envisaged for applicability on 4 November 2021, while the Annex 6 ADT aircraft equipage requirements were delayed from 01 January 2021 until 01 January 2023. Provisions included procedures for aircraft operators to track aircraft, responding to tracking systems in an appropriate manner and forwarding information received from an ADT to the LADR.

7.40 States had provided updates on their SAR-related APANPIRG Deficiencies to the meeting. The USA had commented on Indonesia's positive progress. Indonesia had expressed its desire to conclude a SAR LOA with India. India also expressed its desire to have a LOA with Indonesia at the earliest opportunity.

7.41 India stated that SAR LOA had been progressed with several neighbouring States, and there was also an opportunity for a LOA with South Africa on matters of mutual cooperation, notwithstanding the fact that South Africa and India did not share a common SRR boundary. The APSAR/WG/5 had agreed that India and Indonesia's status reports were sufficient to recommend the deletion of the current SAR-related Deficiency to the ATM/SG/8 and APANPIRG/31.

7.42 The meeting had noted that in 2018, the SAR false alert rate was 96.85%, or about one real alert confirmed in 32 alerts received. The rate of false reports had not changed substantially since 2014. Cospas-Sarsat had reported an increase in the number beacons that report location in an alert message (87.4% in 2018), and the number of 406 MHz beacons worldwide by about 7%.

7.43 An analysis of the 26 USOAP SAR-related PQs indicated that the overall SAR EI had risen for the Asia/Pacific Region since 2015 from 50.7% to 60% in May 2020. The APSAR/WG/5 noted that this represented positive progress, although the average achieved fell well short of what would be a satisfactory level to SAR experts. From the PQ analysis, there had been little improvement in the major areas of weakness in SAR, which were in the areas of:

- **CE-3:** 7.517 (28%) – [SAR service provider] SAR coordination agreements;
- **CE-4:** 7.497 and 7.499 (42% and 37%) – [SAR regulatory oversight] SAR inspector's training plan and training programme effectively implemented for SAR inspectors;
- **CE-7:** 7.505 and 7.545 (31% and 43%) – [SAR regulatory oversight] effective regulatory surveillance oversight of SAR, and checks that SAR operational personnel have regular training, including the conduct of SAREX; and
- **CE-8:** 7.507 (43%) – [SAR regulatory oversight and service provider] mechanism to eliminate SAR regulatory deficiencies.

7.44 The SAR Plan-based 41 element assessment provided a metric of *Asia/Pacific SAR Plan* implementation as at November 2020, taking into account updates from Afghanistan, Cook Islands, Fiji, French Polynesia, New Caledonia, Pakistan, Republic of Korea and Viet Nam (**Figure 13**).

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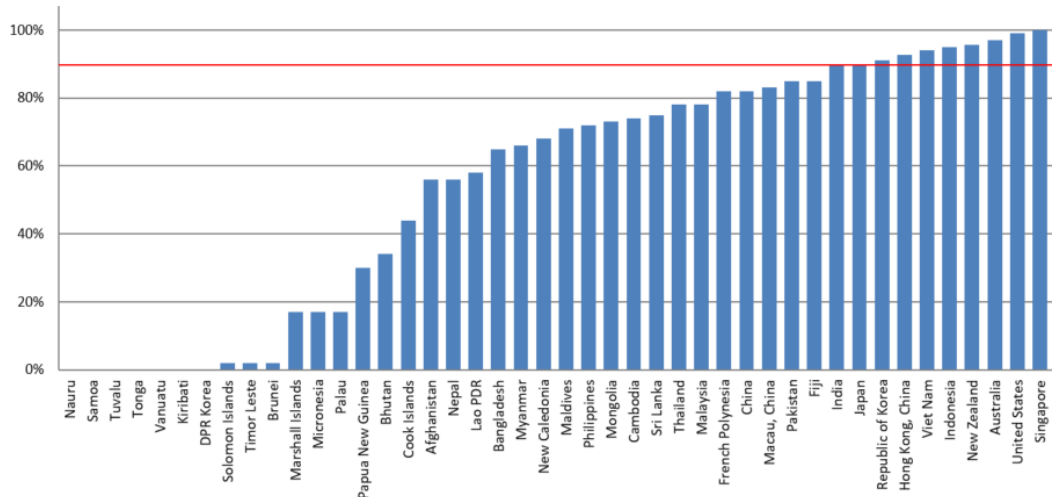


Figure 13: Asia/Pacific SAR Plan Implementation Status (November 2020, average 55%)

7.45

The overall Asia/Pacific SAR Plan compliance is illustrated in **Figure 14**.

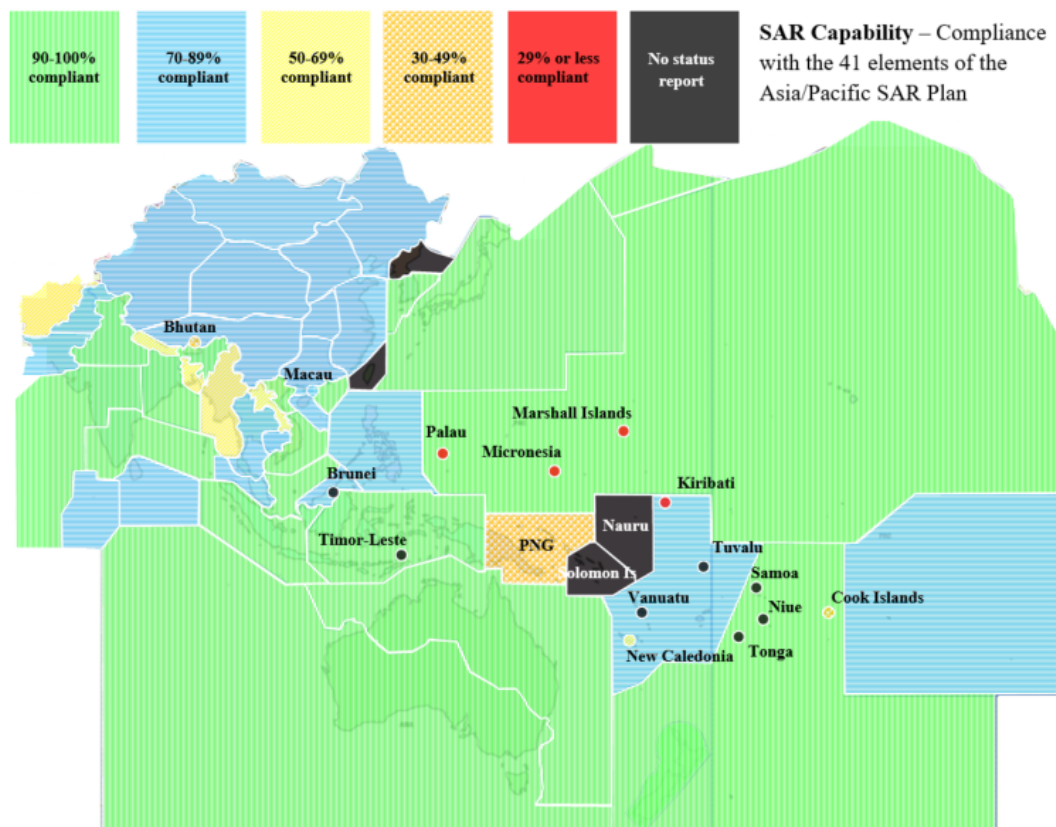


Figure 14: Asia/Pacific SAR Plan Implementation Status (November 2020)

7.46

The Asia/Pacific SAR Plan Compliance Tracking Sheet is at **Appendix E**. The SAR Agreements List and SAR Agreement Matrix (**Appendix F**) were reviewed and updated accordingly.

7.47

The USA congratulated the APAC Region for its continued work to support SAR, which had been recognised at HQ level.

Indonesia 5LNC Status and Progress (IP14)

7.48 Indonesia presented information on the Five Letter Name Code (5LNC) handling progress and its web-based application to manage 5LNCs.

7.49 Indonesia had presented a Working Paper to AAITF/15 about ICARD 5LNC and their status and handling process. Since AAITF/15, Indonesia had been actively working on 5LNC registration and duplicates. The ICAO Regional Office had transferred 120 5LNCs to Indonesia from other ICAO Regions, created 232 new 5LNCs in the ICARD database and accepted 846 5LNC registration requests.

Agenda Item 8: Update the ATM Task List

APANPIRG ATM Subgroup Task List (WP29)

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

Agenda Item 9: Any Other Business

ATM Points of Contact Update (WP30)

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

ATM Security Requirements (WP31)

9.2 WP31 presented information on ANSP/ATM ICAO security requirements, and additional information relating to the establishment and dissemination of the 1st Edition of the *ICAO Cyber Security Action Plan* and ongoing developments in related guidance material and resources.

9.3 Noting the output of the ICAO Cyber Security Study Group and the provisions of the *Cybersecurity Action Plan, Training Roadmap* and *Trust Framework*, States were urged to disseminate the *Cybersecurity Action Plan* and coordinate its implementation with all relevant national agencies, industry, and stakeholders in accordance with State Letter AS8/1.9.1-20/114 (05 November 2020).

COVID-19 ATM Economics (WP32)

9.4 IATA stressed that the airline industry was in an extremely precarious financial position, so every cost must deliver a benefit. To ensure the significant benefits offered by air transport continue, WP32 noted that a whole-of-government response is required to recover from COVID-19. This must include government support for key system enablers like ANSPs in order to avoid unsustainable cost increases that airlines would be unable to absorb.

9.5 IATA announced that major industry losses would continue into 2021, even though performance was expected to improve over the period of the forecast. A net loss of \$118.5 billion was expected for 2020. A net loss of \$38.7 billion is expected in 2021. Performance factors were expected to show improvements in the second half of 2021 after a difficult 2021 first half. Airlines had cut costs by an average of 45.8%, but revenues were down 60.9%. The result is that airlines would lose about \$66 for every passenger carried in 2020, for a total net loss of \$118.5 billion. More data is at: <https://www.iata.org/en/iata-repository/publications/economic-reports/airline-industry-economic-performance---november-2020---report/>

9.6 Regarding Capital Projects (CAPEXs) or an Operational Initiatives (OPEXs), IATA also stated that a post-COVID-19 review of services required consideration of rationalisation of services or an assessment of graduated services to reflect the reality of the new operating environment. Most importantly, any change must ensure a tangible benefit to airspace users with safety improvements, and efficiency or fuel savings.

9.7 IATA stated that to help drive growth, ANSPs should reduce current charges in order to stimulate flights, which drives revenue. In analysing the elasticity of demand, analysis had shown that a combination of lower rates driving more rapid growth in flight numbers can increase ANSP revenue more rapidly. However, maintaining or increasing charges is likely to stymie any recovery, as most airlines will be unable to operate. The meeting agreed to the following Draft Conclusion, for APANPIRG/31's consideration:

Draft Conclusion ATM/SG/8-3: Review of National Air Navigation Plans (NANPs)

That, States should review their NANPs in accordance with a whole-of-government approach and the requirements of the Regional Air Navigation Plan to:

- (1) include airspace user consultation to determine post COVID-19 service provision levels and the related investment and expenditure required, including identifying temporary or permanent service provision modification to reduce operational costs; and
- (2) seek government support for their Air Navigation Service Providers (ANSPs) during the post-COVID-19 recovery.

9.8 Indonesia expressed appreciation for the letter from IATA to its government regarding the implementation of UPRs to support airline recovery.

ATM Economics Seminar Outcomes (IP15)

9.9 This paper presents the outcomes of the COVID-19-Related ATM Economics Seminar (VTC, 08 October 2020). A total of nine presentations were made during the Seminar, which are available at: <https://www.icao.int/APAC/Meetings/Pages/2020-COVID-19-ATM-Seminar.aspx>.

9.10 The Seminar had noted that if ANS losses during the pandemic had been high at USD 7.5 billion by October 2020, then this had only been 3.7% of airline losses (APAC the most). ICAO had noted the positive efforts of some ANSPs to improve efficiencies to support airlines, including India and Indonesia. However, in general, ICAO hadn't noted many ANSPs taking action in accordance with the Council's Aviation Recovery Task Force (CART) Recommendation 10, which requested States to consider appropriate extraordinary emergency measures to support financial viability and to maintain an adequate level of safe, secure and efficient operations.

9.11 ICAO had stressed that the pandemic taught that it was necessary to work together across traditional lines for a cohesive national response – bringing together different government agencies, civil and military entities; and understanding the public need, as this is the national interest. The Seminar had noted that the Indian Government had supported airline recovery by establishing a civil/military cooperation Airspace Review Committee for a significant optimisation of airspace.

9.12 CANSO had stated that with reduced traffic levels, there were opportunities to review current airspace restrictions and to look for ways to improve service provision to minimise operational delays and inefficient routings. CANSO noted that ANSPs were likely to be dealing with more modern and better equipped fleets, so this was an opportunity for ANSPs to advance projects such as PBN and ADS-B which typically required relatively lower capital, leading to modernised airspace while potentially reducing ATM costs.

9.13 The United States had created the Pacific Operators' Technical Information Meeting (TIM) with airlines and IATA to discuss efficiency options in Oceanic and Arctic airspace.

9.14 The New Zealand ANSP described actions such as stakeholder engagement, government assistance and capital raising programmes at the high level, while also addressing operational matters such as capital programme delays, operating cost savings and staff rationalization. Airways NZ also offered discounted services or products, reasoning that any cash flow was better than none, and ‘as an industry we are all in this together’.

9.15 Singapore described measures to reduce fuel burn such as direct routings. Singapore had also offered significant rebates to airlines on landing charges, airport rentals, parking charges and regulatory fees.

9.16 IATA expressed its appreciation to ICAO for holding the ATM Economics Seminar, and for the participation of States and their presentations. IATA noted that savings facilitated by States had been extremely valuable, for economic and environmental benefits.

COVID-19 Contingency Action and Recovery Measures (IP16)

9.17 IP16 provided more detail on the actions taken by India for COVID-19 Contingency, recovery and support for airline operations. The meeting noted that with meticulous planning, implementation monitoring and review, India had been able to maintain services, including enroute alternative aerodromes throughout the contingency by rostering of shifts, combining of sectors, quarantine and hot standby procedures.

9.18 Of the many actions taken to enhance efficiency, one of the most significant was the release of SUA under Flexible Use Airspace (FUA) provisions above FL325 north of latitude 16N, and all airspace south of latitude 16N above FL255.

9.19 The Chair thanked India for its efforts, especially for the coordination with military services and for keeping services open during the pandemic period. IATA also extended its appreciation to India for the positive measures on behalf of its member airlines, including removal of FLAS restrictions. India informed that over a 15 day period in the Kolkata terminal airspace alone, providing the shortest possible routes had resulted in a saving of about 4,300 NM of flight travel. ICAO requested States to consider institutionalising the improvement for a long term benefit.

9.20 Malaysia informed the meeting that it had undertaken various measures to reduce airline costs and improve efficiencies. Information on these improvements had been published on the Civil Aviation Authority of Malaysia’s website.

COVID-19 Related ATM Contingency Recovery (IP17)

9.21 Indonesia discussed its contingency measures to prevent and reduce the risk of COVID-19 in air transportation, particularly the protection of air navigation operations. The meeting noted that Indonesia’s ATM contingency plan included special arrangements for handling public health emergencies, such as managing changes to operational hours, staff rostering, and capacity. NOTAMs related to pandemic risk prevention and operational arrangement had been continuously reported to the ICAO Regional Office,

9.22 Some examples of the innovations pursued during the COVID-19 pandemic in order to stimulate traffic growth and enhance operational efficiency included flexibility of slot management policies, remote ATS services, use of Traffic Information Broadcast by Aircraft (TIBA) procedures and online coordination meetings between Indonesian and Australian regulators and ANSPs.

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9.23 Indonesia described its coordination with the Philippines to improve longitudinal spacing to 50NM. IATA also acknowledged the work of Indonesia, in rapidly addressing the situation and coordinating with airlines to develop new efficiencies such as UPRs. CANSO noted that CANSO and IATA had issued a letter in April 2020 proposing actions for COVID-19, so was very pleased to see the positive outcomes from this effort.

Outcome of the webinar on ATM Safety Assessment in Change Management

9.24 A brief presentation on the outcomes of the ATM Safety Assessment in Change Management webinar (03 – 05 November 2020) was made by the ICAO Regional Sub-Office (RSO).

Agenda Item 10: Date and venue for the next meeting

ATM/SG/9

10.1 The tentative timeframe and venue for the ATM/SG/9 is August 2021, Bangkok, Thailand.

Closing

10.2 The Chairman thanked the meeting participants and the Secretariat for their valuable work. IATA and several States commented positively on the significant contributions to the meeting by the ICAO Secretariat.

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