International Civil Aviation Organization

Thirty-Second Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/32)

Video Teleconference, 1 – 3 December 2021

Schedule: 10:00 – 13:15 Bangkok Time [UTC+7]

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

3.1: **AOP**

REPORT ON THE FIFTH MEETING OF AOP SUB GROUP

(Presented by Chairperson of AOP/SG)

SUMMARY

This paper presents the outcomes of the Fifth Meeting of the APANPIRG Aerodrome Operations and Planning Sub Group (AOP/SG/5, Video Teleconference, 29 June to 2 July 2021) for review by APANPIRG/32.

Strategic Objectives:

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

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

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

Action by the Meeting is in paragraph 3.

1. INTRODUCTION

1.1 The Fifth Meeting of the APANPIRG Aerodrome Operations and Planning Sub Group (AOP/SG/5) was held from 29 June to 2 July 2021 as a video teleconference.

1.2 The meeting was attended by 184 participants from 25 States, 2 Special Administration Regions of China and 6 International Organizations.

1.3 A total of 19 Working Papers, 12 Information Papers and 2 Presentations covering 9 Agenda Items were considered by AOP/SG/5.

1.4 Based on the outcomes of discussions on various Agenda Items, the meeting adopted 6 (Six) Conclusions and 3 (Three) Decisions that were of a purely technical or operational nature. In addition, AOP/SG/5 formulated 1 (One) Draft Decision and 1 (One) Draft Conclusion for consideration by APANPIRG/32.

1.5 The full report of AOP/SG/5 is available at the following URL: https://www.icao.int/APAC/Meetings/Pages/2021-AOP-SG5.aspx

1.6 **Appendices** used in this Working Paper carry the same **Appendix** numbers as those in the Report of AOP/SG/5 for easy reference.

2. DISCUSSION

2.1 **Attachment A** to this Paper provides a Summary Report of AOP/SG/5 for review by APANPIRG/32.

2.2 Some important discussions of AOP/SG/5 are summarized in the ensuing paragraphs.

Asia/Pacific Air Navigation Plans (WP/04)

Amendment of ANP Volume I, Table AOP I-1 and ANP Volume II, Table AOP II-1

2.3 A template of the Proposal for the Amendment of the APAC ANP Volume I and II could be accessed at https://www.icao.int/APAC/Pages/APAC-eANP.aspx.

2.4 States and Administrations were reminded of the following items when preparing the Proposal for Amendment of Table AOP II-1 of APAC ANP Volume II:

a) The required level of protection expressed by means of an aerodrome rescue and firefighting (RFF) category number, determined in accordance with Annex 14, Volume I, 9.2, would be provided under column 2.

b) Changes in the level of protection normally available at an aerodrome for RFF would not be detailed in this Table, but shall be notified to the appropriate air traffic services unit and aeronautical information services units, in accordance with Annex 14, Volume I, 2.11.3 and 2.11.4. Further guidance was available in ICAO Doc 9137 Airport Services Manual, Part 1 – Rescue and Firefighting, Chapter 16.

c) The aerodrome reference code (RC) selected for aerodrome planning purposes in accordance with Annex 14, Volume I, 1.6 would be provided under column 3.

d) The critical design aircraft selected for determining RC, RFF category and pavement strength would be provided under column 6. Only one critical aircraft type would be shown if it was used to determine all three elements. Otherwise, different critical aircraft types would need to be shown for different elements.

2.5 As of 14 November 2021 there are **266** aerodromes used for international operations listed in Asia/Pacific Region ANP Volume I. However, the number of international aerodromes used for international operations in Asia/Pacific Region had reached to **353** based on information gather from Doc 7910 (Location Indicator), States Aeronautical Information Publication (AIP), CAA Websites and ICAO Missions.

2.6 AOP/SG/5 urged States to take note of **Conclusion AOP/SG/3-1**, and initiate and send proposals for amendment of APAC ANP Volume I, Table AOP I-1 and ANP Volume II, Table AOP II-1, as necessary.

Report of the Sixth Meeting of the Asia Pacific Airport Collaborative Decision Making Task Force (APA-CDM/TF/6) (WP/05)

2.7 AOP/SG/5 reviewed the Report of the Sixth Meeting of the Asia Pacific Airport Collaborative Decision Making Task Force (APA-CDM/TF/6) held as a video teleconference from 28 to 30 April 2021. The report of the Task Force meeting can be accessed at https://www.icao.int/APAC/Meetings/Pages/2021-APA-CDM-TF6.aspx.

2.8 APA-CDM/TF/6 discussed the development of joint operational procedure guidance for the integration of ATFM and A-CDM operations under APA-CDM/TF/6 WP/03, presented by Hong Kong China, China, India, Republic of Korea, Thailand and CANSO. The meeting also discussed the approach that should be taken to further carry out this task by another appropriate body of APANPIRG. It was noted that ATFM/SG, which, it was anticipated, would assume the responsibility for progressing A-CDM matters under APANPIRG, had a current task assigned to its ATFM Information Requirement Small Working Group (ATFM/IR/SWG), to develop operational requirements for the exchange of ATFM data. The proposed activity aligned with that work.

2.9 After deliberation, the meeting agreed that this activity would be included in the APA-CDM/TF Task List (**Appendix A to the AOP/SG/5 Report**) as updated by the meeting, with a view to its subsequent inclusion in the ATFM/SG Task List.

2.10 The AOP/SG/5 meeting adopted 3 (Three) Conclusions relating to A-CDM matters, as proposed by APA-CDM/TF/6:

Conclusion AOP/SG/5-1: A-CDM Frequently Asked Questions (FAQs)

That:

1. the Frequently Asked Questions (FAQs) on A-CDM at **Appendix B to the AOP/SG/5 Report** be uploaded to the ICAO Asia/Pacific Regional Office Website for reference; and

2. the document be updated when and as required to include new FAQs and answers.

Conclusion AOP/SG/5-2: Framework for Monitoring the Implementation of A-CDM

That, the survey questionnaire at **Appendix C and Appendix D to the AOP/SG/5 Report** be uploaded to the ICAO Asia/Pacific Regional Office website for use by States for self-assessment of their A-CDM implementation projects and to report the progress of A-CDM implementation to APAC Office in the format provided in **Appendix D**.

Conclusion AOP/SG/5-3: Amendment to APAC A-CDM Implementation Plan

That, the Asia Pacific A-CDM Implementation Plan, Second Edition, 2021, at **Appendix E to the AOP/SG/5 Report** be made available on the ICAO Asia/Pacific Regional Office Website for reference by States/Administrations.

2.11 The above mentioned documents are available on the ICAO Asia/Pacific Regional Office eDocuments web-page: https://www.icao.int/APAC/Pages/eDocs.aspx under AGA heading.

2.12 Noting that the Asia Pacific Airport Collaborative Decision Making Task Force had achieved its objectives and accomplished the most of the tasks assigned under its Terms of Reference, the AOP/SG/5 agreed the following Draft Decision formulated by the APA-CDM/TF/6 for consideration by APANPIRG/32.

Draft Decision APANPIRG/32/xx (AOP/SG/5-4): Dissolution of the APA-CDM/TF	
What: that: a) the Airport Collaborative Decision Making Task Force (APA-CDM/TF), having completed most of the tasks assigned under its Terms of Reference, be dissolved, and any further Asia/Pacific	Expected impact: ☐ Political / Global ☐ Inter-regional

Regional work in the A-CDM field (including Task List in **Appendix A to the Report**) be undertaken by the Air Traffic Flow Management Steering Group (ATFM/SG) or other appropriate body determined by APANPIRG; and b) A-CDM Experts nominated by States and International Organisations are encouraged to attend the ATFM/SG Meetings.	☐ Economic ☐ Environmental ☒ Ops/Technical
Why: To dissolve the APA-CDM/TF and merge with the ATFM/SG, subject to APANPIRG agreement, so that further coordination on matters related to A-CDM implementation and the integration and interoperability of A-CDM with ATFM and with other systems be undertaken by ATFM/SG.	Follow-up: ☒Required from States
When: 24-Nov-21	Status: Draft to be adopted by PIRG
Who: ☒Sub groups ☐APAC States ☒ICAO APAC RO ☐ICAO HQ ☐Other:	

2.13 The above Draft Decision was presented to ATM/SG/9 under ATM/SG/9 WP/33 and supported by the ATM/SG/9.

Report of the Third Meeting of the Asia/Pacific Wildlife Hazard Management Working Group (AP–WHM WG/3) (WP/06)

2.14 AOP/SG/5 noted and thanked Australian Aviation Wildlife Hazard Group (AAWHG) for their generous support in conducting Webinar on Wildlife Hazard Management on 23 September 2020 and 18 May 2021. Webinars on "Reporting and Recording Data on Wildlife Strikes" and "Wildlife Safety Risk Assessment" were also delivered on 20 July and 14 September 2021, respectively.

2.15 AOP/SG/5 adopted 2 (Two) Conclusions formulated by the AP-WHM/WG/3:

Conclusion AOP/SG/5-5: Asia Pacific Guidance for Establishment of a National Procedure for Recording and Reporting Wildlife Strikes to Aircraft

That, Asia Pacific Guidance for Establishment of a National Procedure for Recording and Reporting Wildlife Strikes to Aircraft provided in **Appendix G to the Report** be published on ICAO APAC Website.

Conclusion AOP/SG/5-6: Asia/Pacific Guidance for Evaluation of Aerodrome Wildlife Hazard Management Programme (AWHMP)

That, Asia/Pacific Guidance for Evaluation of Aerodrome Wildlife Hazard Management Programme (AWHMP) provided in **Appendix H to the Report** be published on ICAO APAC Website.

2.16 The above mentioned documents are available on the ICAO Asia/Pacific Regional Office eDocuments web-page: https://www.icao.int/APAC/Pages/eDocs.aspx under AGA heading.

TOR of AP-WHM/WG

2.17 The Terms of Reference (TOR) of AP-WHM/WG detailed the objective, scope of works, composition, working methods and time frame and had been first adopted by AOP/SG/2 (Bangkok, Thailand, 27 – 29 June 2018) and last amended by AOP/SG/3 (Bangkok, Thailand, 24 to 26 June 2019).

2.18 When the TOR was first developed, considering the scope of works, it was determined that the AP-WHM/WG should last for three years initially, i.e. until September 2021. While the main objective of AP-WHM/WG was 'To assist States to establish National Wildlife Hazard Management Committee (NWHMC) and Airport Wildlife Hazard Management Programme" – the survey conducted by ICAO APAC Office using the questionnaire developed by the Working Group had revealed that among 23 respondent States only 11 States had established NWHMC and many aerodromes in Asia/pacific Region had yet to establish effective WHMP. The survey analysis had also revealed that the States with limited resources (human and financial) required necessary support in developing their capacity in WHM through workshops and technical assistance. In addition, some tasks of the AP-WHM/WG were still outstanding as the COVID-19 pandemic had reorganized priorities among States and Administrations.

2.19 Noting supports for the proposed extension of AP-WHM/WG until September 2023 by Australia, India, Philippines, Nepal and WBA, and no objection received from other Members at AP-WHM/WG/3 Meeting, the AOP/SG/5 Meeting adopted the following Decision formulated by the AP-WHM/WG/3:

Decision AOP/SG/5-7: TOR of AP-WHM /WG

That, the Terms of Reference of the Asia/Pacific Wildlife Hazard Management Working Group be amended as in **Appendix I of the Report.**

Report of the Third Meeting of Asia/Pacific Aerodrome Assistance Working Group (AP-AA/WG/3) (WP/07)

Report on Survey Questionnaire for Aerodrome Assistance in APAC States

2.20 AOP/SG/5 noted the analysis of the survey questionnaire for aerodrome assistance, which was circulated among APAC States and Administrations subsequent to AOP/SG/4. Only 13 APAC States/Administrations had responded to the survey questionnaire.

2.21 Most of the respondent states had Air Navigation Deficiencies. Meanwhile, in some States no international aerodromes were certified and in a few others not all international aerodromes were certified. The numbers of other aerodromes (i.e. aerodromes not used for international operations) in the responding 13 states were 563. Among them 275 (49%) were certified and 288 (51%) were yet to be certified.

2.22 The AP-AA/WG/3 Meeting clarified that the survey questionnaire had been intended for all States and Administrations, whether or not they had certified all aerodromes used for international operations, with an AGA EI score below 75% or having Air Navigation Deficiency in AOP Field. Considering the low response rate, AP-AA/WG/3 had taken a Decision to re-circulate to States that had not responded *the survey questionnaire for aerodrome assistance in APAC States* to obtain more responses of the survey questionnaire so as to understand the need for aerodrome assistance among APAC States.

Generic Documents for Aerodrome Certification

2.23 AOP/SG/5 noted that the AP-AA/WG/3 had developed the following generic documents:

a) Generic Aerodrome Certification Specific Operating Regulations;

b) Generic Organization Structure of the Aerodrome Regulatory Unit;

c) Generic Aerodrome Inspector Handbook;

d) Generic Document for Training Program and Training Plan for Aerodrome Inspectors;

e) Generic Surveillance Programme at Aerodromes; and

f) Generic Aerodrome Manual.

2.24 AOP/SG/5 adopted the following Conclusion formulated by AP-AA/WG/3:

Conclusion AOP/SG/5-8: Generic Documents related to Aerodrome Certification

That, the generic documents in **Appendix K, L, M, N, O** and **P to the Report** be made available on the ICAO APAC Office Website for the reference by States in the APAC Regions.

2.25 The above mentioned documents are available on the ICAO Asia/Pacific Regional Office eDocuments web-page: https://www.icao.int/APAC/Pages/eDocs.aspx under AGA heading.

Terms of Reference of AP-AA/WG

2.26 The TOR of AP-AA/WG had been first adopted by AOP/SG/2 (Bangkok, Thailand, 27 – 29 June 2018) and last amended by AOP/SG/4 (video teleconference, 10 – 13 November 2020).

2.27 When the TOR was first developed, considering the scope of works, it was determined that the AP-AA/WG should last for three years initially, i.e. until September 2021. While the main objective of AP-AA/WG was 'to realize the commitment of the "Beijing Declaration" – to certify all aerodromes used for international operations by 2020', it had been identified that there were 38 such aerodromes yet to be certified, as of June 2021. In addition, some tasks of this Working Group were outstanding as the current COVID-19 pandemic had reorganized priorities among States and Administrations.

2.28 Noting supports for the proposed extension of AP-AA/WG until September 2023 by DPR Korea, India, Nepal and Philippines, and no objection had been received from other Members at the AP-AA/WG/3 Meeting, the AOP/SG/5 Meeting adopted the following Decision formulated by the AP-AA/WG/3:

Decision AOP/SG/5-9: TOR of AP-AA/WG

That, the Terms of Reference of the Asia/Pacific Aerodrome Assistance Working Group be amended as in **Appendix R of the Report.**

Report of the Second Meeting of the Asia/Pacific Aerodrome Design and Operations Task Force (AP-ADO/TF/2) (WP/08)

Asia/Pacific Seamless ANS Plan

2.29 AP-ADO/TF/2 had noted an expected implementation date of 7 November 2019 for the Preferred Aerodrome/Airspace and Route Specification (PARS) Phase II in Aerodrome Operations as per the *Asia/Pacific Seamless Air Navigation Service (ANS) Plan V3.0* (https://www.icao.int/APAC/Documents/edocs/Asia%20Pacific%20Seamless%20ANS%20Plan.pdf).

2.30 AP-ADO/TF/2 urged States / Administrations to consider the implementation of PARS Phase II in Aerodrome Operations as contained in paragraph 7.1-7.3 of the *Asia/Pacific Seamless ANS Plan.*

Proposed Amendments, Adoption and Approval of Amendments to Annex 14 and PANS-Aerodromes (Doc 9981)

2.31 AP-ADO/TF/2 had noted information on: (i) adoption of amendment 15 to Annex 14 — *Aerodromes*, Volume I — *Aerodrome Design and Operations*; (ii) proposal to amend Annex 6 Parts I, II, III, Annex 14, Volume I and PANS-OPS, Volume III, relating to offshore alternates, rescue and fire fighting for general aviation; (iii) approval of Amendment 3 to *Procedures for Air Navigation Services–Aerodromes* (PANS–Aerodromes, Doc 9981), which became applicable on 5 November 2020, except for amendments related to pavement rating which would become applicable on 28 November 2024; and (iv) adoption of Amendment 9 to Annex 14 – *Aerodromes*, Volume II – *Heliports*, which became applicable on 5 November 2020.

2.32 AP-ADO/TF/2 had also noted the following important dates related to Amendment 15:

	Provisions	Notify any disapproval by	Notify any difference and compliance by	Applicable on
a)	Provisions related to: (i) accommodation of aeroplanes with folding wing tips; and (ii) improvements to selected physical characteristics and visual aids.	20 July 2020	5 October 2020	5 November 2020
b)	Provisions related to airport master plan	20 July 2020	3 October 2022	3 November 2022
c)	Provisions related to pavement rating	20 July 2020	28 October 2024	28 November 2024

Draft Regional Guidance for the Design and Operations of Altiports

2.33 AOP/SG/5 noted that the AP-ADO/TF had started developing the preliminary draft on the *Regional Guidance for the Design and Operation of Altiports* including: (i) Table of Content; (ii) Determination of Runway Length for Altiports; (iii) Sample Runway Profile for Altiports; and (iv) Obstacles Limitation Surface (OLS) for Altiports.

2.34 A comparison table on the requirements for physical characteristics, OLS, visual aids among ICAO Annex 14, Volume I, *Instruction Technique sur les Aérodromes Civils* (ITAC) by DGAC France and practices by CAA Nepal had also been provided for the further development of the *Regional Guidance*.

2.35 AP-ADO/TF/2 had noted a number of potential references which could be used for the development of the *Regional Guidance* and had agreed to continue the drafting of the *Regional Guidance* using materials referred in above Paragraphs.

2.36 AP-ADO/TF/2 had noted that there were three aerodromes in Fiji with runway longitudinal slopes of 5 to 10%, similar to altiports in Nepal.

Terms of Reference of AP-ADO/TF

2.37 The TOR of AP-ADO/TF was first adopted by AOP/SG/2 (Bangkok, Thailand, 27 – 29 June 2018). When the TOR was first developed, considering the scope of works, it was determined that the AP- ADO/TF should last for three years initially, i.e. until September 2021. In the meantime, the current COVID-19 pandemic had reorganized priorities among States and Administrations, and the travel restrictions implemented by States and Administrations had rendered face-to-face meeting impossible.

2.38 AP-ADO/TF/2 recognised that there was a need to allow additional time to complete the tasks assigned to the Task Force, as well as to provide flexibility in the mode of meetings. Opportunity was also taken to amend the name of "Asia/Pacific Seamless ATM Plan", as it was renamed to "Asia/Pacific Seamless ANS Plan" with version 3.0 in November 2019, and to make some minor editorial changes.

2.39 AOP/SG/5 adopted the following Decision formulated by the AP-ADO/TF/2:

Decision AOP/SG/5-10: TOR of AP-ADO/TF

That, the Terms of Reference of the Asia/Pacific Aerodrome Design and Operations Task Force be amended as in **Appendix T of the Report.**

Implementation of Requirements for Certification of Aerodromes in the Asia/Pacific Region (WP/09)

Status on Certification of Aerodromes in Asia Pacific States

2.40 AOP/SG/5 reviewed the list of aerodromes used for international operations in Asia/Pacific Region that have yet to be certified, which was prepared based on information collected from APAC States through survey questionnaire, ICAO/COSCAPs missions including ICAO USOAP audit and ICVM, and video conferences and correspondences with States, and placed in **Appendix U to the Report**.

2.41 AOP/SG/5 also noted that approximately 11% of aerodromes used for international operations (38 out of 342 International Aerodromes) in Asia and Pacific Regions have yet to be certified.

2.42 The status of certified aerodromes used for international operations ("int'l aerodromes") in different Sub Regions of Asia/Pacific Region was illustrated in the Table 1 below:

Aerodromes	**North Asia (5 States & 2 SARs)**	**South East Asia (11 States)**	**South Asia (8 States)**	**Pacific (15 States & 8 OTs)**
Total Number of Int'l Aerodromes **[342]**	134	98	52	58
Number of Certified Int'l Aerodromes **[~~304~~ 308]**	~~127~~ 131	84	43	50
Number of Int'l Aerodromes yet to be certified [~~38~~ 34]	**~~7~~ 3**	**14**	**9**	**8**

Aerodromes	**North Asia (5 States & 2 SARs)**	**South East Asia (11 States)**	**South Asia (8 States)**	**Pacific (15 States & 8 OTs)**
States with Int'l Aerodromes yet to be certified (number and percentage of aerodromes yet to be certified) **[~~15~~ 12 States, ~~38~~ 34 Aerodromes, 11%]**	1) China (3, 3%) ~~2) Japan (4, 12%)~~	1) Brunei Darussalam (1, **100%**), 2) Lao PDR (4, **100%**) 3) Malaysia (2, 11%) 4) Thailand (5, 45%), 5) Timor-Leste (2, **100%**)	1) Afghanistan (4, **100%**) 2) India (5, 19%)	1) Kiribati (2, **100%**) 2) Micronesia (Federal States of) (4, **100%**), 3) Nauru (1, **100%**), 4) Tuvalu (1, **100%**)

Table 1 - Status of certified aerodromes used for international operations in Sub Regions of Asia/Pacific Region

2.43 AOP/SG/5 noted that some States have certified their aerodromes without full compliance with ICAO requirements on aerodrome certification process. Those States were recommended to recertify their aerodromes in full compliance with those ICAO requirements.

Note1:- Post AOP/SG/5 Meeting, on 16 July 2021 Japan provided satisfactory evidences for the certification of all military aerodromes used for international operations and listed them in AIP AD 1.5.

*Note 2:- As of 14 November 2021, there are **266** international aerodromes listed in Asia/Pacific Region ANP Volume I. The total number of international aerodromes used for international operations in Asia/Pacific Region has increased and reached to **353** based on information gathered from Doc 7910 (Location Indicator), States' Aeronautical Information Publications (AIPs), CAA / Airport Websites, flight tracking data and ICAO Missions. **319** out of **353** aerodromes used for international operations are certified aerodromes.*

Status of Certification of Aerodromes in AIP

2.44 AOP/SG/5 further noted that a number of States / Administrations that have yet to publish the status of certification of aerodromes in AIP AD 1.5. The full list is available in **Appendix U**. A summary was provided in **Table 2** below:

States	**North Asia (5 States & 2 SARs)**	**South East Asia (11 States)**	**South Asia (8 States)**	**Pacific (15 States & 8 OTs)**
No aerodromes listed in AD 1.5/ AD 1.5 missing in AIP	--	1) Brunei Darussalam ~~2) Lao PDR~~ ~~3) Philippines~~ 4) Timor Leste	1) Afghanistan	1) American Samoa (US) 2) Cook Is. 3) Guam (US) 4) Kiribati 5) Nauru 6) Niue (NZ) 7) N. Mariana Is. (US) 8) Samoa 9) Tonga 10) Tuvalu 11) Vanuatu
Some but not all aerodromes listed in AD 1.5	1) China ~~2) Japan~~	1) Malaysia 2) Viet Nam	1) India ~~2) Pakistan~~	--
Status listed but not under AD 1.5	--	--	--	~~1) Fiji~~ 2) New Zealand
AIP cannot be located	--	--	--	1) Marshall Is. 2) Micronesia (Federated States of) 3) Palau 4) Solomon Is.
Total	**~~2~~ 1 States**	**~~7~~ 5 States**	**~~3~~ 2 States**	**~~17~~ 16 States / OTs**

Table 2 – Status of AIP AD 1.5 in Sub Regions of Asia/Pacific Region

2.45 In connection with **Conclusion APANPIRG/30/4** and subsequent review by APANPIRG/31, the States / Administrations / aerodromes identified in **Appendix U** and summarized in Table 1 and Table 2 were included in the APANPIRG AOP Deficiency List, with effect from 1 January 2021.

2.46 As Fiji, Lao PDR, Japan, Pakistan and Philippines provided satisfactory evidences on the promulgation of the information on the status of certification of aerodromes in their AIP, all five States should be deleted from the Table 2 above and from *APANPIRG Air Navigation Deficiency List in AOP Field* after approval from APANPIRG/32.

2.47 AOP/SG/5 urged States and their aerodrome operators that have yet to certify aerodromes used for international operations to take an effective action on the 55th DGCA Action Item 55/42. In addition, AOP/SG/5 urged States to provide periodic updates on the progress of the certification of aerodromes and AIP AD 1.5 to the ICAO APAC Office.

ICAO Universal Safety Oversight Audit Programme (USOAP) and AGA Findings (WP/10)

2.48 The Table 3 below illustrated the APAC Average AGA EI scores in all 8 Critical Elements derived from iSTARS 3.0 SPACE (using PQ Tester) for 2017 – 2021:

	APAC average EI in AGA (in %)	Critical Elements (CEs)							
		CE-1	CE-2	CE-3	CE-4	CE-5	CE-6	CE-7	CE-8
June 2021 (AOP/SG/5)	***61.43*** *[Global Average 62.72]*	75.00	71.33	62.56	41.40	68.04	64.51	58.16	46.96
Oct. 2020 (AOP/SG/4)	*61.41 [Global Average 62.65]*	75.00	68.64	64.44	42.73	58.61	63.26	58.11	38.42
June 2019 (AOP/SG/3)	*60.52 [Global Average 61.59]*	75.68	66.80	62.13	42.30	58.14	63.87	58.87	39.77
June 2018 (AOP/SG/2)	*57.87 [Global Average 59.5]*	68.57	65.78	55.71	38.18	49.60	60.45	53.01	~~51.13~~
May 2017 (AOP/SG/1)	***56.29*** *[Global Average 57.99]*	68.57	63.3	53.65	33.17	51.9	59.78	55.2	39.44

2.49 AOP/SG/5 noted that the States/ Administrations in the APAC Region required more efforts to meet the 75% EI target by 2022 as set forth in the ICAO *Global Aviation Safety Plan (GASP) 2020-2022* (Doc 10004).

2.50 AOP/SG/5 urged APAC States to arrange necessary resources to recruit, train and retain qualified and experienced technical staff to effectively perform safety oversight of aerodromes and approach respective COSCAPs, Pacific Aviation Safety Office (PASO) or ICAO APAC Office if State(s) require assistance in USOAP CMA.

USOAP CMA Protocol Questions – 2020 Edition and State Safety Programme Implementation Assessment (WP/11)

2.51 AOP/SG/5 noted ICAO Electronic Bulletin 2021/3 which promulgated the 2020 edition of USOAP CMA PQs. The PQs had been posted on the USOAP CMA Online Framework (OLF) (https://www.icao.int/usoap) under the heading "CMA Library" and became applicable to all USOAP CMA activities on 1st June 2021.

2.52 AOP/SG/5 also noted that ICAO had rolled out SSP implementation assessments (SSPIAs), a qualitative (non-quantitative) assessment of a State's progress in implementing an SSP, under the USOAP CMA using SSP-related PQs that have been updated to reflect Annex 19, ICAO Safety Management Manual (Doc 9859) as well as the lessons learned from the voluntary and confidential SSP implementation assessments conducted previously. The meeting further noted the criteria for the prioritization of SSPIAs.

2.53 SSPIA had a set of PQs which fell into various areas including AGA. However, it was noted that the SSPIA PQs were not linked to the critical elements. In addition, the SSPIA PQs would not be assessed as satisfactory, non-satisfactory or not applicable, but in terms of maturity levels. As such, the assessment results of the SSPIA PQs would not affect the USOAP CMA EI scores.

2.54 AOP/SG/5 urged States to review the 2020 edition of USOAP CMA PQs and update their responses in PQ Self-Assessment and note the criteria for the prioritization of SSPIAs.

Enhanced Global Reporting Format for Assessing and Reporting Runway Surface Conditions (GRF) (WP/12)

2.55 AOP/SG/5 noted the new applicability date of the SARPs and PANS related to GRF, i.e. 4 November 2021. To create awareness and support States actions on GRF implementation, a number of seminars, webinars and workshops had been conducted at the global, regional and sub-regional levels by ICAO HQ, ICAO ROs/COSCAPs, PASO and ACI. In addition, the meeting noted the GRF training courses jointly offered by ICAO and industry partners, which were tailored to meet the needs of various aviation professions. States and Administrations were urged to arrange attendance of such courses.

2.56 AOP/SG/5 also noted Conclusion APANPIRG/31/5 and urged States / Administrations to submit GRF Implementation Action Plan to ICAO APAC Office, if they had yet to do so, and provide periodic updates (at least monthly basis, at the end of each month) on actual implementation of GRF Action Items (Milestones) in accordance with GRF Implementation Action Plan developed by States until full implementation of the GRF.

2.57 Supporting global guidance materials in GRF, such as, Circular 355 *Assessment, Measurement and Reporting of Runway Surface Conditions* and the *Aeroplane Performance Manual* (Doc 10064) were available through the ICAO Publications under ICAO Secure Portal at https://portal.icao.int/ICAO-NET/Pages/default.aspx. Additional guidance addressing specific aspects of the GRF, developed by ICAO's EUR office for global use could be found at: EUR Doc.041_SNOWTAM Guidance_V1.1 December 2020_EN.pdf.

2.58 ATIS would be an important means of transmitting RCR-related information to flight crew. It was likely that ATIS messages would be longer and updated more frequently, however this required to be balanced against the importance of such data. A flyer providing additional information, clarification and 'best practice' was available at: ATIS Flyer_V1.0.pdf.

2.59 Secretariat demonstrated the GRF implementation monitoring tool and map developed based on GRF Implementation Action Plan and actual implementation status provided by States through the Regional Office.

2.60 In order to reflect the actual progress towards the implementation of GRF, a periodic update on actual implementation of the GRF Action Plan/Milestones was required. As implementation of GRF by all concerned stakeholders envisaged an enhancement of runway safety, e.g., reduction in runway excursions in future, and considering the GRF implementation applicability date of 4 November 2021, the following Draft Conclusion proposed in the WP/12 was endorsed by the AOP/SG/5 Meeting for further consideration by APANPIRG/32:

<table>
<tr><td colspan="2">Draft Conclusion APANPIRG/32/xx (AOP/SG/5-11): GRF Implementation Monitoring and Status</td></tr>
<tr><td>That, Asia Pacific States/Administrations are urged to:

1) provide to ICAO APAC Office a periodic status update (at least monthly basis, at the end of each month) on actual implementation of GRF Action Items (Milestones) in accordance with GRF Implementation Action Plan developed by States until its full implementation; and

2) support ICAO portal on GRF implementation monitoring and status, including maps and charts, to be made available in ICAO Public Website.</td><td>Expected impact:
☒ Political / Global
☐ Economic
☐ Environmental
☐ Inter -Regional
☒ Ops/Technical</td></tr>
<tr><td>Why: For periodic update of GRF implementation status on ICAO portal and transparency.</td><td>Follow-up: ☒Required from States</td></tr>
<tr><td>When: 24 Nov. 2021</td><td>Status: Draft to be adopted by PIRG</td></tr>
<tr><td colspan="2">Who: ☒Sub groups ☒APAC States ☒ICAO APAC RO ☐ICAO HQ ☐Other</td></tr>
</table>

2.61 In this regards ICAO APAC Office has sent out the *State Letter Ref.: AN 3/3 – AP168/21 (AGA)* dated 20 October 2021 inviting States/Administrations to submit an update on actual implementation of the GRF Implementation Action Plan (Milestones) to the Regional Office by 4 November 2021 for updating data on ICAO GRF implementation monitoring tool and also review by APANPIRG/32.

2.62 28 States submitted their GRF Implementation Action Plan to APAC Office, 18 States/Administrations provided status update in response to ICAO APAC *State Letter Ref.: AN 3/3 – AP168/21 (AGA)* dated 20 October 2021 and 14 States implemented GRF on 4 November 2021. The status on the implementation of the GRF depicted on the map developed by ICAO and provided on ICAO Website at https://www.icao.int/safety/Pages/GRF.aspx.

2.63 Two webinar on GRF Implementation were conducted on 30 August 2021 and 24 September 2021, one with the support from ICAO FTF, IFALPA, IFAIMA and IFATCA and another one with the support from Japan Civil Aviation Bureau.

Runway Safety Team and Runway Safety Go-Team (WP/13)

Runway Safety Team

2.64 AOP/SG/5 noted that as of 18 June 2021, out of 342 aerodromes used for international operations in Asia Pacific Regions, only 95 aerodromes had participated in ICAO RST Survey. The details were provided in **Appendix V**.

2.65 AOP/SG/5 noted "Conclusion APANPIRG/31/6: Runway Safety Team" and urged States / Administrations to take actions on runway safety team (RST) establishment and participation in ICAO RST Survey at:
https://www.icao.int/safety/RunwaySafety/Pages/Runway%20Safety%20Team%20Register.aspx.

2.66 The 2020 edition of USOAP CMA Protocol Questions (PQs) had been made available through USOAP CMA online framework. It was noted that RST establishment had been included in a new AGA PQ.

Runway Safety (RS) Go-Team

2.67 ICAO RS Go-Team Methodology posted on ICAO Website at the following URL: https://www.icao.int/safety/RunwaySafety/Pages/Documents%20and%20Toolkits.aspx provided the detailed information on RS Go-Team.

2.68 AOP/SG/5 noted the proposed RS Go-Team LITE Version and its characteristics. The LITE version would be launched after coordination with RSP partner organisations and their effectiveness assessed through one or more test cases.

2.69 States and Administrations in need of assistance in the areas of runway safety were urged to request for Runway Safety Go-Team Missions through ICAO APAC Office and/or its corresponding COSCAPs and PASO Office.

2.70 IFALPA being one of the ICAO RSP Partners, expressed a willingness to contribute to future RS Go-Teams as IFALPA pilots had experience in providing assistance in the establishment of the RST. The proposal was welcomed by the Secretariat.

Airport Autonomous Transport System at Hong Kong International Airport (WP/17)

2.71 Presented by Hong Kong, China, WP/17 updated the development and plans to adopt driverless transportation in Hong Kong International Airport (HKIA). This paper shared HKIA's experience in putting driverless technology for baggage conveyance into live operations through a multi-phased and collaborative approach, as well as ongoing plans in expanding the technology's application to cargo conveyance and airside staff shuttle services.

2.72 It had also envisioned the applications of autonomous buses for passenger conveyance in the vicinity of HKIA subject to driverless technology advancement and local regulatory framework.

Application of Digital Tower and Surveillance Technology for Apron Efficiency at Hong Kong International Airport (WP/18)

2.73 Presented again by Hong Kong, China, WP/18 was the progress update from HKIA on the application of Digital Tower and Surveillance Technology as part of the Digital Transformation Roadmap.

2.74 Leveraging optical sensors installed at the airport and an Augmented Visual Presentation integrated with essential flight information and real-time operational data, the Digital Apron and Tower Management System being developed jointly by Hong Kong Civil Aviation Department and Airport Authority Hong Kong marked an aim to enhance safety and operational efficiency at airfield, apron and tower for supporting HKIA's Interim Two-Runway System operation in 2022 and Three-Runway System operation in 2024.

Draft Regional Guidelines for Design and Operation of Plateau Airports (WP/19)

2.75 Presented by China, WP/19 reviewed the distribution of the plateau airports throughout the world and shared China's experience in the design, construction and operation of plateau airports. The WP also discussed the typical instance of the plateau airports and put forward suggestions for further improvement of the design and operation of plateau restricted airports.

2.76 AOP/SG/5 considered 9 Information Papers and 1 Presentation as listed below:

i) ICAO HQ Update on AGA Matters (IP/03);
ii) A-SMGCS Onboard Guidance System Implementation in Korea (IP/04);

iii) Installation of Precision Approach CAT I Lighting System on High Towers in Steep Terrain at Pokhara International Airport (IP/05);
iv) Guidance Material on GRF Implementation for Aerodrome Operator not exposed to Ice or Snow Conditions (IP/06);
v) Introduction of the Four Characteristics Airport Development Guidelines (IP/07);
vi) Design and Evaluation Management of Aircraft Load Bridges in Civil Airports (IP/08);
vii) The Design Concepts to Improve the Construction and Operation of Water Aerodrome (IP/09);
viii) The Introduction of Chinese Developed Regional Aircraft (IP/10);
ix) ICAO Initiatives to Assist States in AGA Area (IP/11); and
x) Global Reporting Format (GRF) at HKIA (PPT/01).

2.77 The Secretariat reminded the meeting that the GRF was a human-centric methodology, with the runway assessment performed by trained aerodrome operations staff. It was not mandatory for airports to invest in dedicated tools or equipment. However, the GRF and its global deployment in November 2021 would provide a baseline for the development of systems that may in the future augment, even replace, human observations. Attachment to Chapter 2, Part II of PANS-Aerodromes would be helpful for guidance in this respect.

Status of Air Navigation Deficiencies in AOP Field (WP/14)

2.78 AOP/SG/5 reviewed the list of Air Navigation Deficiencies in the AOP field endorsed by APANPIRG/31. Fiji, Japan, Lao PDR, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Thailand, Timor-Leste and Viet Nam provided updates on their air navigation deficiencies in the AOP field.

2.79 The Secretariat reminded States / Administrations to provide written correspondences to ICAO APAC Office with evidences on corrective action taken before APANPIRG/32. After receiving the satisfactory evidences, the *List of Air Navigation Deficiencies in AOP Field* would be updated to present at APANPIRG/32.

2.80 Post AOP/SG/5 Meeting, on 16 July 2021 Japan provided satisfactory evidences for the certification of all military aerodromes used for international operations and listed them in AIP AD 1.5.

2.81 Lao PDR and Fiji provided satisfactory evidences on publication of status of certification in AIP AD 1.5 on 1 September 2021 and 10 November 2021, respectively.

2.82 The *List of Air Navigation Deficiencies in AOP Field* placed at **Appendix W to the Report** will be updated for approval by APANPIRG/32.

2.83 The updated *List of AOP Focal Points* placed at **Appendix X to the Report.**

ICAO Committee on Aviation Environmental Protection (CAEP), Working Group 2 (WG2) – Current work on Airports and Operations (PPT/02)

2.84 The Secretariat presented an overview of the current environmental work of ICAO on airports and operations, focusing on Green Airports, including the work of the Committee on Aviation and Environmental Protection (CAEP) Working Group 2.

2.85 The presentation concluded with reflections regarding ICAO's work on feasibility of a long-term aspirational goal for international aviation, which focused on in-sector CO2 reductions from

all innovations in technology, operations and fuel. Airports would play a lead role in clean energy production, transport and storage, therefore development of suitable infrastructure at airports was essential for the integration of new innovative emission reduction solutions. A key part of the organization's current work was the ICAO stocktaking, which would be held on 31 August to 3 September 2021, and the associated Pre-Stocktaking events, which had started in March 2021, covering topics such as electrification, hydrogen and urban air mobility. The next event would be on 27 July 2021 on clean energy and infrastructure. All were invited to attend the Stocktaking events and more information could be found on the ICAO website: https://www.icao.int/Meetings/Stocktaking2021/Pages/default.aspx.

2.86 ACI had recently launched a complimentary publication on Green Airports Recognition 2021 – Air quality management downloadable from ACI Asia-Pacific website, which contained case studies in innovative practices from air quality management monitoring, vehicle and equipment power replacement, green plantation and prevention of open fire. Some of these case studies had been submitted to the ICAO Eco-Airport Tool kit mentioned by ICAO in the presentation.

2.87 In anticipating the work progress of ICAO long term global aspirational goal for international aviation to be presented in ICAO Assembly 2022, ACI had recently made a pledge on Long Term Carbon Goal, which was: *"ACI member airports at a global level commit to reach Net Zero Carbon emissions by 2050 and urge governments to provide the necessary support in this endeavour."*

3. ACTION BY THE MEETING

3.1 The Meeting is invited to:

a) discuss and adopt the Draft Decision and Draft Conclusion formulated by AOP/SG/5:

(i) **Draft Decision AOP/SG/5-4:** Dissolution of the APA-CDM/TF;

(ii) **Draft Conclusion AOP/SG/5-11:** GRF Implementation Monitoring and Status;

b) note the Conclusions and Decisions adopted by AOP/SG/4:

(i) **Conclusion AOP/SG/5-1:** A-CDM Frequently Asked Questions (FAQs);

(ii) **Conclusion AOP/SG/5-2:** Framework for Monitoring the Implementation of A-CDM;

(iii) **Conclusion AOP/SG/5-3:** Amendment to APAC A-CDM Implementation Plan;

(iv) **Conclusion AOP/SG/5-5:** Asia Pacific Guidance for Establishment of a National Procedure for Recording and Reporting Wildlife Strikes to Aircraft;

(v) **Conclusion AOP/SG/5-6:** Asia/Pacific Guidance for Evaluation of Aerodrome Wildlife Hazard Management Programme (AWHMP);

(vi) **Decision AOP/SG/5-7:** TOR of AP-WHM /WG;

(vii) **Conclusion AOP/SG/5-8:** Generic Documents related to Aerodrome Certification;

(viii) **Decision AOP/SG/5-9:** TOR of AP-AA/WG; and

(ix) **Decision AOP/SG/5-10:** TOR of AP-ADO/TF;

c) urge concerned States to provide information related to international aerodromes to update *Table AOP I -1: International Aerodromes required in the Asia/Pacific Regions* and *Table AOP II – 1: Requirements and Capacity Assessment in International Aerodromes in the Asia and Pacific Regions* of Asia Pacific Air Navigation Plans Volume I and Volume II;

d) discuss any other relevant matters as appropriate.

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Attachment A to APANPIRG/32 WP/09

Summary Report of the Fifth Meeting of the APANPIRG Aerodrome Operations and Planning Sub Group (AOP/SG/5)

Video Teleconference, 29 June – 2 July 2021

1. Introduction

1.1. The Fifth Meeting of the Aerodrome Operations and Planning Sub Group (AOP/SG/5) was held as a video teleconference on 29 June – 2 July 2021.

1.2. The Meeting was attended by 184 participants from 25 Member States, 2 Special Administrative Regions and 6 International Organizations.

1.3. There were 19 Working Papers, 12 Information Papers and 2 Presentations considered by the Meeting.

Agenda Item 1: Adoption of Provisional Agenda

1.4. All 9 agenda items were adopted by the Meeting without amendment.

2. Agenda Item 2: Review Outcome of Relevant Meetings

Relevant Outcomes of APANPIRG/31 and APAC Action Plan (WP/02)

2.1 AOP/SG/5 reviewed and noted the follow up actions taken by ICAO APAC Office on the Decisions/Conclusions adopted by the Thirty-first Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/31, video teleconference, 14 to 16 December 2020) related to AOP/SG.

Actions on AOP/SG/4 Conclusions and Decisions (WP/03)

2.2 AOP/SG/5 reviewed and noted the follow up actions taken by ICAO APAC Office on the Decisions/Conclusions adopted by the AOP/SG/4 Meeting, video teleconference from 10 to 13 November 2020.

2.3 AOP/SG/5 considered 2 Information Papers Under Agenda Item 2 as listed below:

i) RASG-APAC/10 Meeting Outcomes (IP/02); and
ii) ICAO Asia Pacific COVID-19 Contingency and Recovery Planning Group (ACCRPG) – Annual Report to Asia Pacific Director Generals of Civil Aviation (APAC DGCAs) (IP/12).

3. Agenda Item 3: Regional Reporting

Asia/Pacific Air Navigation Plans (WP/04)

3.1 AOP/SG/5 noted the structure of the Asia/Pacific Air Navigation Plans and procedures for their amendments. There were three Volumes of Asia/Pacific ANP which could be accessed at https://www.icao.int/APAC/Pages/APAC-eANP.aspx.

Amendment of ANP Volume I, Table AOP I-1 and ANP Volume II, Table AOP II-1

3.2 A template of the Proposal for the Amendment of the APAC ANP Volume I and II could be accessed at https://www.icao.int/APAC/Pages/APAC-eANP.aspx.

3.3 States and Administrations were reminded of the following items when preparing the Proposal for Amendment of **Table AOP II-1** of APAC ANP Volume II:

a) The required level of protection expressed by means of an aerodrome rescue and firefighting (RFF) category number, determined in accordance with Annex 14, Volume I, 9.2, would be provided under column 2.

b) Changes in the level of protection normally available at an aerodrome for RFF would not be detailed in this Table, but shall be notified to the appropriate air traffic services unit and aeronautical information services units, in accordance with Annex 14, Volume I, 2.11.3 and 2.11.4. Further guidance was available in ICAO Doc 9137 Airport Services Manual, Part 1 – Rescue and Firefighting, Chapter 16.

c) The aerodrome reference code (RC) selected for aerodrome planning purposes in accordance with Annex 14, Volume I, 1.6 would be provided under column 3.

d) The critical design aircraft selected for determining RC, RFF category and pavement strength would be provided under column 6. Only one critical aircraft type would be shown if it was used to determine all three elements. Otherwise, different critical aircraft types would need to be shown for different elements.

3.4 AOP/SG/5 noted that there were 255 international aerodromes listed in Asia/Pacific Region ANP Volume I. However, the number of international aerodromes used for international operations in Asia/Pacific Region had reached to 342 based on information gather from Doc 7910 (Location Indicator), States Aeronautical Information Publication (AIP), CAA Websites and ICAO Missions.

3.5 AOP/SG/5 also noted that the ICAO APAC Office completed processing of proposals for amendments of APAC ANP Volumes I and II from Mongolia. In addition, proposals from Australia and New Zealand were processed and proposal from Samoa was assessed.

3.6 AOP/SG/5 urged States to take note of **Conclusion AOP/SG/3-1**, and initiate and send proposals for amendment of APAC ANP Volume I, Table AOP I-1 and ANP Volume II, Table AOP II-1, as necessary.

4. Agenda Item 4: Provision of AOP in the Asia/Pacific Region

Report of the Sixth Meeting of the Asia Pacific Airport Collaborative Decision Making Task Force (APA-CDM/TF/6) (WP/05)

4.1 AOP/SG/5 reviewed the Report of the Sixth Meeting of the Asia Pacific Airport Collaborative Decision Making Task Force (APA-CDM/TF/6) held as a video teleconference from 28 to 30 April 2021.

Development of Joint Operational Procedure Guidance for the Integration of ATFM and A-CDM Operations

4.2 The APA-CDM/TF/6 Meeting had noted that pioneering ANSPs and Aerodrome Operators (AOs) in the Asia Pacific Region generally had individual local/national models for integrating the operations of A-CDM and ATFM at various levels, including node-to-node, state-wide network, etc. However, there was not much detail on how these local/national models could be further enhanced into a regional "cross-border" integration model even though, all reckoned interoperable systems/operations across Flight Information Regions (FIRs) as a means to reap the expected benefits of system-wide collaborative decision making.

4.3 The APA-CDM/TF/6 Meeting had discussed on approach that had to be taken to further carry out this task by another appropriate body of APANPIRG. The Secretariat had noted that ATFM/SG, which was anticipated to assume responsibility for A-CDM matters under APANPIRG, had a current task assigned to ATFM Information Requirement Small Working Group (ATFM/IR/SWG) to develop operational requirements for the exchange of ATFM data. The proposed activity aligned with that work.

4.4 The APA-CDM/TF/6 Meeting had agreed that this activity would be included in the task list of APA-CDM/TF (**Appendix A to the Report**).

A-CDM Frequently Asked Questions (FAQs)

4.5 To facilitate the capture of Frequently Asked Questions (FAQs) on A-CDM and to provide uniform answers, the Task Force had developed FAQ on A-CDM as a live document and AOP/SG/5 adopted the following Conclusion formulated by the APA-CDM/TF/6:

Conclusion AOP/SG/5-1: A-CDM Frequently Asked Questions (FAQs)

That:

1. the Frequently Asked Questions (FAQs) on A-CDM at **Appendix B to the Report** be uploaded to the ICAO Asia/Pacific Regional Office Website for reference; and

2. the document be updated when and as required to include new FAQs and answers.

Questionnaire Based on ICAO Asia Pacific A-CDM Implementation Plan

4.6 Recognising the need to measure the progress of States/Administrations in achieving the performance expectation of the Asia/Pacific A-CDM Implementation Plan and report to ICAO APAC Office, the AOP/SG/5 adopted the following Conclusion formulated by APA-CDM/TF/6:

Conclusion AOP/SG/5-2: Framework for Monitoring the Implementation of A-CDM

That, the survey questionnaire at **Appendix C and Appendix D to the Report** be uploaded to the ICAO Asia/Pacific Regional Office website for use by States for self-assessment of their A-CDM implementation projects and to report the progress of A-CDM implementation to APAC Office in the format provided in **Appendix D**.

Amendments to APAC A-CDM Implementation Plan

4.7 AOP/SG/5 noted that the APA-CDM/TF/6 had reviewed the proposal for amendment to Asia Pacific A-CDM Implementation Plan for clarity, inclusion of some editorial modifications and changes to align with the provisions of APAC Seamless ANS Plan, Version 3.0 & 6th Edition of Global Air Navigation Plan (GANP) and adopted the following Conclusion formulated by the APA-CDM/TF/6:

Conclusion AOP/SG/5-3: Amendment to APAC A-CDM Implementation Plan

That, the Asia Pacific A-CDM Implementation Plan, Second Edition, 2021, at **Appendix E to the Report** be made available on the ICAO Asia/Pacific Regional Office Website for reference by States/Administrations.

APA-CDM/TF Terms of Reference and Task List

4.8 Noting that the Task Force had achieved its objectives and accomplished the work assigned in its initial TOR and the residual tasks were on the integration of A-CDM with ATFM systems, the APA-CDM/TF/6 Meeting had recommended that the APA-CDM/TF be merged with the Air Traffic Flow Management Steering Group (ATFM/SG), and encouraged A-CDM Experts nominated by States and International Organisations to participate in future ATFM/SG Meetings.

4.9 AOP/SG/5 endorsed the following Draft Decision formulated by the APA-CDM/TF/6 for adoption by APANPIRG/32. The Draft Decision would be submitted to ATM/SG as well for its endorsement.

<table>
<tr><td colspan="3">Draft Decision AOP/SG/5-4: Dissolution of the APA-CDM/TF</td></tr>
<tr><td colspan="2">What: that:
a) the Airport Collaborative Decision Making Task Force (APA-CDM/TF), having completed most of the tasks assigned under its Terms of Reference, be dissolved, and any further Asia/Pacific Regional work in the A-CDM field (including Task List in Appendix A to the Report) be undertaken by the Air Traffic Flow Management Steering Group (ATFM/SG) or other appropriate body determined by APANPIRG; and

b) A-CDM Experts nominated by States and International Organisations are encouraged to attend the ATFM/SG Meetings.</td><td>Expected impact:
☐ Political / Global
☐ Inter-regional
☐ Economic
☐ Environmental
☒ Ops/Technical</td></tr>
<tr><td>Why: To dissolve the APA-CDM/TF and merge with the ATFM/SG, subject to APANPIRG agreement, so that further coordination on matters related to A-CDM implementation and the integration and interoperability of A-CDM with ATFM and with other systems be undertaken by ATFM/SG.</td><td colspan="2">Follow-up: ☒Required from States</td></tr>
<tr><td>When: 24-Nov-21</td><td colspan="2">Status: Draft to be adopted by PIRG</td></tr>
<tr><td colspan="3">Who: ☒Sub groups ☐APAC States ☒ICAO APAC RO ☐ICAO HQ ☐Other:</td></tr>
</table>

4.10 AOP/SG/5 Meeting noted that the ATFM/SG/11 meeting, scheduled for 12 - 16 July 2021, would consider an amendment to its TOR to incorporate A-CDM-related activities. ATFM/SG/9 meeting in 2019 had agreed to a draft amendment to the ATFM/SG TOR (**Appendix F to the Report**), in the event that APANPIRG decided to dissolve APA-CDM/TF. When agreed by ATFM/SG/11, its revised TOR would be forwarded under a Draft Decision to ATM/SG/9 and APANPIRG/32 for consideration.

Report of the Third Meeting of the Asia/Pacific Wildlife Hazard Management Working Group (AP–WHM WG/3) (WP/06)

4.11 The Chairperson of the Asia/Pacific Wildlife Hazard Management Working Group (AP–WHM/WG) presented the Report of the Third Meeting of the Asia/Pacific Wildlife Hazard Management Working Group (AP–WHM WG/3), which was held as a video teleconference on 19 - 21 May 2021. The full report of AP-WHM/WG/3 provided on ICAO APAC Office website at https://www.icao.int/APAC/Meetings/Pages/2021-AP-WHM-WG3.aspx.

ICAO/AAWHG WHM Webinar

4.12 AOP/SG/5 noted the appreciation of the AP-WHM/WG/3 to Australian Aviation Wildlife Hazard Group (AAWHG) for their generous support in conducting Webinar on Wildlife Hazard Management on 23 September 2020 and 18 May 2021. Webinars on "Reporting and Recording Data on Wildlife Strikes" and "Wildlife Safety Risk Assessment" would be delivered in July and September 2021, respectively.

Report of States/Aerodrome Operators Problems/Issues on Wildlife Hazards Management based on Completed Survey Questionnaire

4.13 AOP/SG/5 noted that the AP-WHM/WG had prepared a "draft Report of State's/Aerodrome Operators problem/issues on wildlife hazards management" based on completed survey questionnaire received from 23 States/Administrations and greed that the detailed report of the survey analysis would be used to carry out AP-WHM/WG's Task 2/5 (b) by group of States.

Draft Asia Pacific Guidance for Establishment of National Procedure for Recording and Reporting Wildlife Strikes to Aircraft

4.14 AOP/SG/5 adopted the following Conclusion formulated by the AP-WHM/WG/3 regarding the "Draft Asia Pacific Guidance for Establishment of a National Procedure for Recording and Reporting Wildlife Strikes to Aircraft" developed by AP-WHM/WG:

Conclusion AOP/SG/5-5: Asia Pacific Guidance for Establishment of a National Procedure for Recording and Reporting Wildlife Strikes to Aircraft

That, Asia Pacific Guidance for Establishment of a National Procedure for Recording and Reporting Wildlife Strikes to Aircraft provided in **Appendix G to the Report** be published on ICAO APAC Website.

Draft Asia/Pacific Guidance for Evaluation of Aerodrome Wildlife Hazard Management Programme

4.15 AOP/SG/5 adopted the following Conclusion formulated by the AP-WHM/WG/3 regarding the "Draft Asia/Pacific Guidance for Evaluation of Aerodrome Wildlife Hazard Management Programme (AWHMP)" developed by the AP-WHM/WG:

Conclusion AOP/SG/5-6: Asia/Pacific Guidance for Evaluation of Aerodrome Wildlife Hazard Management Programme (AWHMP)

That, Asia/Pacific Guidance for Evaluation of Aerodrome Wildlife Hazard Management Programme (AWHMP) provided in **Appendix H to the Report** be published on ICAO APAC Website.

Draft Asia/Pacific Guidance on Development and Implementation of Aerodrome Wildlife Hazard Management Program

4.16 AOP/SG/5 noted that the "Draft Asia/Pacific Regional Guidance for development and implementation of Aerodrome Wildlife Hazard Management Programme" developed by the AP-WHM/WG contained detailed guidelines required for development and implementation of AWHMP; however, the draft document required further improvement in terms of its structure to align with the guidelines provided in PANS-Aerodromes (Doc 9981) and Airport Services Manual (Doc 9137), Part 3 – WHM for endorsement by the next meeting of the AP-WHM/WG.

TOR of AP-WHM/WG

4.17 The Terms of Reference (TOR) of AP-WHM/WG detailed the objective, scope of works, composition, working methods and time frame and had been first adopted by AOP/SG/2 (Bangkok, Thailand, 27 – 29 June 2018) and last amended by AOP/SG/3 (Bangkok, Thailand, 24 to 26 June 2019).

4.18 When the TOR was first developed, considering the scope of works, it was determined that the AP-WHM/WG should last for three years initially, i.e. until September 2021. While the main objective of AP-WHM/WG was '*To assist States to establish National Wildlife Hazard Management Committee (NWHMC) and Airport Wildlife Hazard Management Programme*" – the survey conducted by ICAO APAC Office using the questionnaire developed by the Working Group had revealed that among 23 respondent States only 11 States had established NWHMC and many aerodromes in Asia/pacific Region had yet to establish effective WHMP. The survey analysis had also revealed that the States with limited resources (human and financial) required necessary support in developing their capacity in WHM through workshops and technical assistance. In addition, some tasks of the AP-WHM/WG were still outstanding as the COVID-19 pandemic had reorganized priorities among States and Administrations.

4.19 Noting supports for the proposed extension of AP-WHM/WG until September 2023 by Australia, India, Philippines, Nepal and WBA, and no objection received from other Members at AP-WHM/WG/3 Meeting, the AOP/SG/5 Meeting adopted the following Decision formulated by the AP-WHM/WG/3:

Decision AOP/SG/5-7: TOR of AP-WHM /WG

That, the Terms of Reference of the Asia/Pacific Wildlife Hazard Management Working Group be amended as in **Appendix I of the Report**

Task List of AP-WHM/WG

4.20 The Task List reviewed and updated by the AP-WHM/WG/3 Meeting provided in **Appendix J.**

Report of the Third Meeting of Asia/Pacific Aerodrome Assistance Working Group (AP-AA/WG/3) (WP/07)

4.21 The Chairperson of the Asia/Pacific Aerodrome Assistance Working Group (AP–AA/WG) presented the Report of the Third Meeting of Asia/Pacific Aerodrome Assistance Working

Group (AP-AA/WG/3) conducted via video teleconference on 23 – 26 March 2021. The full report of the meeting posted on the ICAO APAC Office website and could be accessed at https://www.icao.int/APAC/Meetings/Pages/2021-AP-AA-WG3.aspx.

Report on Survey Questionnaire for Aerodrome Assistance in APAC States

4.22 AOP/SG/5 noted the analysis of the survey questionnaire for aerodrome assistance, which was circulated among APAC States and Administrations subsequent to AOP/SG/4. Only 13 APAC States/Administrations had responded to the survey questionnaire.

4.23 Most of the respondent states had Air Navigation Deficiencies. Meanwhile, in some States no international aerodromes were certified and in a few others not all international aerodromes were certified. The numbers of other aerodromes (i.e. aerodromes not used for international operations) in the responding 13 states were 563. Among them 275 (49%) were certified and 288 (51%) were yet to be certified.

4.24 The AP-AA/WG/3 Meeting clarified that the survey questionnaire had been intended for all States and Administrations, whether or not they had certified all aerodromes used for international operations, with an AGA EI score below 75% or having Air Navigation Deficiency in AOP Field. Considering the low response rate, AP-AA/WG/3 had taken a Decision to re-circulate to States that had not responded *the survey questionnaire for aerodrome assistance in APAC States* to obtain more responses of the survey questionnaire so as to understand the need for aerodrome assistance among APAC States.

Generic Documents for Aerodrome Certification

4.25 AOP/SG/5 noted that the AP-AA/WG/3 had developed the following generic documents:

a) Generic Aerodrome Certification Specific Operating Regulations;

b) Generic Organization Structure of the Aerodrome Regulatory Unit;

c) Generic Aerodrome Inspector Handbook;

d) Generic Document for Training Program and Training Plan for Aerodrome Inspectors;

e) Generic Surveillance Programme at Aerodromes; and

f) Generic Aerodrome Manual.

4.26 AOP/SG/5 adopted the following Conclusion formulated by AP-AA/WG/3:

Conclusion AOP/SG/5-8: Generic Documents related to Aerodrome Certification

That, the generic documents in **Appendix K, L, M, N, O** and **P to the Report** be made available on the ICAO APAC Office Website for the reference by States in the APAC Regions.

AP-AA/WG Task List

4.27 The Task List reviewed and updated by the AP-AA/WG/3 Meeting was provided in **Appendix Q.**

Terms of Reference of AP-AA/WG

4.28 The TOR of AP-AA/WG had been first adopted by AOP/SG/2 (Bangkok, Thailand, 27 – 29 June 2018) and last amended by AOP/SG/4 (video teleconference, 10 – 13 November 2020).

4.29 When the TOR was first developed, considering the scope of works, it was determined that the AP-AA/WG should last for three years initially, i.e. until September 2021. While the main objective of AP-AA/WG was 'to realize the commitment of the "Beijing Declaration" – to certify all aerodromes used for international operations by 2020', it had been identified that there were 38 such aerodromes yet to be certified, as of June 2021. In addition, some tasks of this Working Group were outstanding as the current COVID-19 pandemic had reorganized priorities among States and Administrations.

4.30 Noting supports for the proposed extension of AP-AA/WG until September 2023 by DPR Korea, India, Nepal and Philippines, and no objection had been received from other Members at the AP-AA/WG/3 Meeting, the AOP/SG/5 Meeting adopted the following Decision formulated by the AP-AA/WG/3:

Decision AOP/SG/5-9: TOR of AP-AA/WG

That, the Terms of Reference of the Asia/Pacific Aerodrome Assistance Working Group be amended as in **Appendix R of the Report.**

Report of the Second Meeting of the Asia/Pacific Aerodrome Design and Operations Task Force (AP-ADO/TF/2) (WP/08)

4.31 The Chairperson of the the Asia/Pacific Aerodrome Design and Operations Task Force (AP-ADO/TF) presented the Report of the Meeting of the Asia/Pacific Aerodrome Design and Operations Task Force (AP-ADO/TF/2). The full report of the meeting was posted on the ICAO APAC Office website and could be accessed at https://www.icao.int/APAC/Meetings/Pages/2021-AP-ADO-TF2.aspx.

Asia/Pacific Seamless ANS Plan

4.32 AP-ADO/TF/2 had noted an expected implementation date of 7 November 2019 for the Preferred Aerodrome/Airspace and Route Specification (PARS) Phase II in Aerodrome Operations as per the *Asia/Pacific Seamless Air Navigation Service (ANS) Plan V3.0* (https://www.icao.int/APAC/Documents/edocs/Asia%20Pacific%20Seamless%20ANS%20Plan.pdf). It had been developed for aerodrome operations in the areas of (1) aerodrome management and coordination services; (2) facilities to optimize runway capacity; and (3) Airport Collaborative Decision Making (A-CDM) system. Full details were contained in paragraph 7.1-7.3 of the *Plan.*

4.33 Prior to implementation, each State should verify the applicability of PARS by analysis of safety, ATM capacity requirements to meet current and forecast traffic demand, efficiency, predictability, cost effectiveness and environment to meet the expectations of stakeholders. The PARS elements would be either: a) not applicable; or b) already implemented; or c) not implemented.

4.34 AP-ADO/TF/2 urged States / Administrations to consider the implementation of PARS Phase II in Aerodrome Operations as contained in paragraph 7.1-7.3 of the *Asia/Pacific Seamless ANS Plan.*

Proposed Amendments, Adoption and Approval of Amendments to Annex 14 and PANS-Aerodromes (Doc 9981)

4.35 AP-ADO/TF/2 had noted information on: (i) adoption of amendment 15 to Annex 14 — *Aerodromes*, Volume I — *Aerodrome Design and Operations*; (ii) proposal to amend Annex 6 Parts I, II, III, Annex 14, Volume I and PANS-OPS, Volume III, relating to offshore alternates, rescue and fire fighting for general aviation; (iii) approval of Amendment 3 to *Procedures for Air Navigation Services–Aerodromes* (PANS–Aerodromes, Doc 9981), which became applicable on 5 November 2020, except for amendments related to pavement rating which would become applicable on 28 November 2024; and (iv) adoption of Amendment 9 to Annex 14 – *Aerodromes*, Volume II – *Heliports*, which became applicable on 5 November 2020.

4.36 AP-ADO/TF/2 had also noted the following important dates related to Amendment 15:

	Provisions	Notify any disapproval by	Notify any difference and compliance by	Applicable on
a)	Provisions related to: (i) accommodation of aeroplanes with folding wing tips; and (ii) improvements to selected physical characteristics and visual aids.	20 July 2020	5 October 2020	5 November 2020
b)	Provisions related to airport master plan	20 July 2020	3 October 2022	3 November 2022
c)	Provisions related to pavement rating	20 July 2020	28 October 2024	28 November 2024

Pavement Construction in Altiports in Nepal

4.37 AP-ADO/TF/2 noted the pavement designs of the altiports in Nepal that had used the FAA publication on *Structural Design of Pavements for Light Aircraft*. With the designs, the pavement conditions had been found satisfactory in general, although some pavement distresses due to construction defects or weathering effect had been identified.

4.38 AP-ADO/TF/2 had agreed to carry out further study on recommended minimum pavement thickness for altiports for inclusion as example in the *Draft Regional Guidance for the Design and Operations of Altiports*.

Draft Regional Guidance for the Design and Operations of Altiports

4.39 AOP/SG/5 noted that the AP-ADO/TF had started developing the preliminary draft on the *Regional Guidance for the Design and Operation of Altiports* including: (i) Table of Content; (ii) Determination of Runway Length for Altiports; (iii) Sample Runway Profile for Altiports; and (iv) Obstacles Limitation Surface (OLS) for Altiports.

4.40 A comparison table on the requirements for physical characteristics, OLS, visual aids among ICAO Annex 14, Volume I, *Instruction Technique sur les Aérodromes Civils* (ITAC) by DGAC France and practices by CAA Nepal had also been provided for the further development of the *Regional Guidance*.

4.41 AP-ADO/TF/2 had noted a number of potential references which could be used for the development of the *Regional Guidance* and had agreed to continue the drafting of the *Regional Guidance* using materials referred in above Paragraphs.

4.42 AP-ADO/TF/2 had noted that there were three aerodromes in Fiji with runway longitudinal slopes of 5 to 10%, similar to altiports in Nepal.

Task List of AP-ADO/TF

4.43 The Task List reviewed and updated by the AP-ADO/TF/2 Meeting was provided in **Appendix S.**

Terms of Reference of AP-ADO/TF

4.44 The TOR of AP-ADO/TF was first adopted by AOP/SG/2 (Bangkok, Thailand, 27 – 29 June 2018). When the TOR was first developed, considering the scope of works, it was determined that the AP- ADO/TF should last for three years initially, i.e. until September 2021. In the meantime, the current COVID-19 pandemic had reorganized priorities among States and Administrations, and the travel restrictions implemented by States and Administrations had rendered face-to-face meeting impossible.

4.45 AP-ADO/TF/2 recognised that there was a need to allow additional time to complete the tasks assigned to the Task Force, as well as to provide flexibility in the mode of meetings. Opportunity was also taken to amend the name of "Asia/Pacific Seamless ATM Plan", as it was renamed to "Asia/Pacific Seamless ANS Plan" with version 3.0 in November 2019, and to make some minor editorial changes.

4.46 AOP/SG/5 adopted the following Decision formulated by the AP-ADO/TF/2:

Decision AOP/SG/5-10: TOR of AP-ADO/TF

That, the Terms of Reference of the Asia/Pacific Aerodrome Design and Operations Task Force be amended as in **Appendix T of the Report.**

Implementation of Requirements for Certification of Aerodromes in the Asia/Pacific Region (WP/09)

Status on Certification of Aerodromes in Asia Pacific States

4.47 AOP/SG/5 noted that there were **255** international aerodromes listed in Asia/Pacific Region ANP Volume I as of June 2021. However, the number of international aerodromes used for international operations in Asia/Pacific Region has increased and reached to **342** based on information gathered from Doc 7910 (Location Indicator), States' Aeronautical Information Publications (AIPs), CAA / Airport Websites, flight tracking data and ICAO Missions.

4.48 AOP/SG/5 reviewed the list of aerodromes used for international operations in Asia/Pacific Region that have yet to be certified, which was prepared based on information collected from APAC States through survey questionnaire, ICAO/COSCAPs missions including ICAO USOAP audit and ICVM, and video conferences and correspondences with States, and placed in **Appendix U to the Report**.

4.49 AOP/SG/5 also noted that approximately 11% of aerodromes used for international operations (**38** out of 342 International Aerodromes) in Asia and Pacific Regions have yet to be certified.

4.50 The status of certified aerodromes used for international operations ("int'l aerodromes") in different Sub Regions of Asia/Pacific Region was illustrated in the **Table 1** below:

Aerodromes	**North Asia (5 States & 2 SARs)**	**South East Asia (11 States)**	**South Asia (8 States)**	**Pacific (15 States & 8 OTs)**
Total Number of Int'l Aerodromes **[342]**	134	98	52	58
Number of Certified Int'l Aerodromes **[~~304~~ 308]**	~~127~~ 131	84	43	50
Number of Int'l Aerodromes yet to be certified [~~38~~ 34]	**~~7~~ 3**	**14**	**9**	**8**
States with Int'l Aerodromes yet to be certified (number and percentage of aerodromes yet to be certified) **[~~15~~ 12 States, ~~38~~ 34 Aerodromes, 11%]**	1) China (3, 3%) ~~2) Japan (4, 12%)~~	1) Brunei Darussalam (1, **100%**), 2) Lao PDR (4, **100%**) 3) Malaysia (2, 11%) 4) Thailand (5, 45%), 5) Timor-Leste (2, **100%**)	1) Afghanistan (4, **100%**) 2) India (5, 19%)	1) Kiribati (2, **100%**) 2) Micronesia (Federal States of) (4, **100%**), 3) Nauru (1, **100%**), 4) Tuvalu (1, **100%**)

Table 1 - Status of certified aerodromes used for international operations in Sub Regions of Asia/Pacific Region

4.51 AOP/SG/5 noted that some States have certified their aerodromes without full compliance with ICAO requirements on aerodrome certification process. Those States were recommended to recertify their aerodromes in full compliance with those ICAO requirements.

Note:- Post AOP/SG/5 Meeting, on 16 July 2021 Japan provided satisfactory evidences for the certification of all military aerodromes used for international operations and listed them in AIP AD 1.5.

Status of Certification of Aerodromes in AIP

4.52 AOP/SG/5 further noted that a number of States / Administrations that have yet to publish the status of certification of aerodromes in AIP AD 1.5. The full list is available in **Appendix U**. A summary was provided in **Table 2** below:

States	North Asia (5 States & 2 SARs)	South East Asia (11 States)	South Asia (8 States)	Pacific (15 States & 8 OTs)
No aerodromes listed in AD 1.5/ AD 1.5 missing in AIP	--	1) Brunei Darussalam 2) Lao PDR ~~3) Philippines~~ 4) Timor Leste	1) Afghanistan	1) American Samoa (US) 2) Cook Is. 3) Guam (US) 4) Kiribati 5) Nauru 6) Niue (NZ) 7) N. Mariana Is. (US) 8) Samoa 9) Tonga 10) Tuvalu 11) Vanuatu
Some but not all aerodromes listed in AD 1.5	1) China ~~2) Japan~~	1) Malaysia 2) Viet Nam	1) India ~~2) Pakistan~~	--
Status listed but not under AD 1.5	--	--	--	1) Fiji 2) New Zealand
AIP cannot be located	--	--	--	1) Marshall Is. 2) Micronesia (Federated States of) 3) Palau 4) Solomon Is.
Total	**~~2~~ 1 States**	**~~7~~ 6 States**	**~~3~~ 2 States**	**17 States / OTs**

Table 2 – Status of AIP AD 1.5 in Sub Regions of Asia/Pacific Region

4.53 In connection with **Conclusion APANPIRG/30/4** and subsequent review by APANPIRG/31, the States / Administrations / aerodromes identified in **Appendix U** and summarized in Table 1 and Table 2 were included in the APANPIRG AOP Deficiency List, with effect from 1 January 2021.

4.54 As Pakistan, Philippines and Japan provided satisfactory evidences on the promulgation of the information on the status of certification of aerodromes in their AIP, all three States will be removed from the Table 2 above and *APANPIRG Air Navigation Deficiency List in AOP Field* and report to APANPIRG/32 for approval.

4.55 AOP/SG/5 urged States and their aerodrome operators that have yet to certify aerodromes used for international operations to take an effective action on the 55th DGCA Action Item 55/42. In addition, AOP/SG/5 urged States to provide periodic updates on the progress of the certification of aerodromes and AIP AD 1.5 to the ICAO APAC Office.

4.56 PASO AGA advisor, Mr. Mike Haines informed the meeting that PASO was actively working with Nauru, Tuvalu and Kiribati in the area of aerodromes and expected to complete the certification of aerodromes for these States in 2022. Regarding publication of the status of certification

in AIP, AD1.5 PASO would coordinate with Aeropath New Zealand, the AIS Service Providers for PASO Member States. He also thanked Australia for their support for the technical assistance and capacity development of the PASO Member States and New Zealand for the direct assistance to PASO to support the Audit programmes.

4.57 In support of 55th Asia/Pacific DGCA Action Item 55/42 in relation to Beijing Declaration, ACI encouraged States and aerodrome operators to make use of ACI guidance materials, training, onsite safety reviews which could be helpful to overcome deficiency in certification of aerodromes.

ICAO Universal Safety Oversight Audit Programme (USOAP) and AGA Findings (WP/10)

4.58 AOP/SG/5 noted ICAO USOAP CMA activities conducted in APAC States in 2020 and USOAP CMA activities planned for 2021.

4.59 AOP/SG/5 also noted Effective Implementation (EI) results taken from the USOAP CMA online framework and the common AGA findings identified by the USOAP in the APAC Region. APAC average EI in AGA area was 61.43% compared to the global average of 62.72% as of 19 June 2021.

4.60 The Table 3 below illustrated the APAC Average AGA EI scores in all 8 Critical Elements derived from iSTARS 3.0 SPACE (using PQ Tester) for 2017 – 2021:

	APAC average EI in AGA (in %)	Critical Elements (CEs)							
		CE-1	CE-2	CE-3	CE-4	CE-5	CE-6	CE-7	CE-8
June 2021 (AOP/SG/5)	***61.43*** *[Global Average 62.72]*	75.00	71.33	62.56	41.40	68.04	64.51	58.16	46.96
Oct. 2020 (AOP/SG/4)	*61.41* *[Global Average 62.65]*	75.00	68.64	64.44	42.73	58.61	63.26	58.11	38.42
June 2019 (AOP/SG/3)	*60.52* *[Global Average 61.59]*	75.68	66.80	62.13	42.30	58.14	63.87	58.87	39.77
June 2018 (AOP/SG/2)	*57.87* *[Global Average 59.5]*	68.57	65.78	55.71	38.18	49.60	60.45	53.01	~~51.13~~
May 2017 (AOP/SG/1)	***56.29*** *[Global Average 57.99]*	68.57	63.3	53.65	33.17	51.9	59.78	55.2	39.44

Table 3: APAC Average AGA EI scores in all 8 Critical Elements

4.61 AOP/SG/5 noted that the States/ Administrations in the APAC Region required more efforts to meet the 75% EI target by 2022 as set forth in the ICAO *Global Aviation Safety Plan (GASP) 2020-2022* (Doc 10004).

4.62 AOP/SG/5 urged APAC States to:

a) arrange necessary resources to recruit, train and retain qualified and experienced technical staff to effectively perform safety oversight of aerodromes;

b) complete and continuously update the compliance checklist/EFOD and SAAQ;

c) submit/update the Corrective Action Plans (CAPs) on the OLF, informing the ICAO Regional Office when complete and ready for review;

d) implement the CAPs and complete the self-assessment of the PQs on the OLF, including uploading the evidence documents, to report the progress on the OLF, informing the ICAO Regional Office when complete and ready for validation; and

e) approach respective COSCAPs, Pacific Aviation Safety Office (PASO) or ICAO APAC Office if State(s) require assistance in USOAP CMA.

USOAP CMA Protocol Questions – 2020 Edition and State Safety Programme Implementation Assessment (WP/11)

4.63 AOP/SG/5 noted ICAO Electronic Bulletin 2021/3 which promulgated the 2020 edition of USOAP CMA PQs. The PQs had been posted on the USOAP CMA Online Framework (OLF) (https://www.icao.int/usoap) under the heading "CMA Library" and became applicable to all USOAP CMA activities on 1st June 2021.

4.64 AOP/SG/5 also noted that ICAO had rolled out SSP implementation assessments (SSPIAs), a qualitative (non-quantitative) assessment of a State's progress in implementing an SSP, under the USOAP CMA using SSP-related PQs that have been updated to reflect Annex 19, ICAO Safety Management Manual (Doc 9859) as well as the lessons learned from the voluntary and confidential SSP implementation assessments conducted previously.

4.65 SSPIA had a set of PQs which fell into various areas including AGA. However, it was noted that the SSPIA PQs were not linked to the critical elements. In addition, the SSPIA PQs would not be assessed as satisfactory, non-satisfactory or not applicable, but in terms of maturity levels. As such, the assessment results of the SSPIA PQs would not affect the USOAP CMA EI scores.

4.66 The meeting noted the criteria for the prioritization of SSPIAs, which were:

a) A good level of implementation of SSP Foundation PQs and evidence of:
(i) a robust and sustainable safety oversight system and aircraft accident / serious incident investigation system; and

(ii) an effective mandatory safety reporting system, State aircraft accident and incident database and safety analyses; and

b) Effective completion and updates of self-assessment of all PQs, including those related to SSP, by the State

4.67 AOP/SG/5 urged States to review the 2020 edition of USOAP CMA PQs and update their responses in PQ Self-Assessment and note the criteria for the prioritization of SSPIAs.

Enhanced Global Reporting Format for Assessing and Reporting Runway Surface Conditions (GRF) (WP/12)

4.68 AOP/SG/5 noted the new applicability date of the SARPs and PANS related to GRF, i.e. 4 November 2021. To create awareness and support States actions on GRF implementation, a number of seminars, webinars and workshops had been conducted at the global, regional and sub-regional levels by ICAO HQ, ICAO ROs/COSCAPs, PASO and ACI. In addition, the meeting noted the GRF training courses jointly offered by ICAO and industry partners, which were tailored to meet

the needs of various aviation professions. States and Administrations were urged to arrange attendance of such courses.

4.69 AOP/SG/5 also noted Conclusion APANPIRG/31/5 and urged States / Administrations to submit GRF Implementation Action Plan to ICAO APAC Office, if they had yet to do so, and provide periodic updates (at least monthly basis, at the end of each month) on actual implementation of GRF Action Items (Milestones) in accordance with GRF Implementation Action Plan developed by States until full implementation of the GRF.

4.70 Supporting global guidance materials in GRF, such as, Circular 355 *Assessment, Measurement and Reporting of Runway Surface Conditions* and the *Aeroplane Performance Manual* (Doc 10064) were available through the ICAO Publications under ICAO Secure Portal at https://portal.icao.int/ICAO-NET/Pages/default.aspx. Additional guidance addressing specific aspects of the GRF, developed by ICAO's EUR office for global use could be found at: EUR Doc.041_SNOWTAM Guidance_V1.1 December 2020_EN.pdf.

4.71 ATIS would be an important means of transmitting RCR-related information to flight crew. It was likely that ATIS messages would be longer and updated more frequently, however this required to be balanced against the importance of such data. A flyer providing additional information, clarification and 'best practice' was available at: ATIS Flyer_V1.0.pdf.

4.72 Secretariat demonstrated the GRF implementation monitoring tool and map developed based on GRF Implementation Action Plan and actual implementation status provided by States through the Regional Office, currently available for internal trial in ICAO GRF Portal.

4.73 In order to reflect the actual progress towards the implementation of GRF through the above portal, a periodic update on actual implementation of the GRF Action Plan/Milestones was required. As implementation of GRF by all concerned stakeholders envisaged an enhancement of runway safety, e.g., reduction in runway excursions in future, and considering the GRF implementation applicability date of 4 November 2021, the following Draft Conclusion proposed in the WP/12 was endorsed by the AOP/SG/5 Meeting for further consideration by APANPIRG/32:

<table>
<tr><td colspan="2">Draft Conclusion AOP/SG/5-11: GRF Implementation Monitoring and Status</td></tr>
<tr><td>That, Asia Pacific States/Administrations are urged to:

1) provide to ICAO APAC Office a periodic status update (at least monthly basis, at the end of each month) on actual implementation of GRF Action Items (Milestones) in accordance with GRF Implementation Action Plan developed by States until its full implementation; and

2) support ICAO portal (under development) on GRF implementation monitoring and status, including maps and charts, to be made available in ICAO Public Website.</td><td>Expected impact:
☒ Political / Global
☐ Economic
☐ Environmental
☐ Inter -Regional
☒ Ops/Technical</td></tr>
<tr><td>Why: For periodic update of GRF implementation status on ICAO portal and transparency.</td><td>Follow-up: ☒Required from States</td></tr>
<tr><td>When: 24 Nov. 2021</td><td>Status: Draft to be adopted by PIRG</td></tr>
<tr><td colspan="2">Who: ☒Sub groups ☒APAC States ☒ICAO APAC RO ☐ICAO HQ ☐Other</td></tr>
</table>

4.74 In the mean time, ICAO Secretariat would follow up with the States/Administrations or AOP Focal Points, as appropriate, for monthly update on the actual implementation of the States GRF Implementation Action Plan (Milestones).

Runway Safety Team and Runway Safety Go-Team (WP/13)

Runway Safety Team

4.75 AOP/SG/5 noted that as of 18 June 2021, out of 342 aerodromes used for international operations in Asia Pacific Regions, only 95 aerodromes had participated in ICAO RST Survey. The details were provided in **Appendix V**.

4.76 AOP/SG/5 noted "*Conclusion APANPIRG/31/6: Runway Safety Team"* and urged States / Administrations to take actions on runway safety team (RST) establishment and participation in ICAO RST Survey at:
https://www.icao.int/safety/RunwaySafety/Pages/Runway%20Safety%20Team%20Register.aspx.

4.77 The 2020 edition of USOAP CMA Protocol Questions (PQs) had been made available through USOAP CMA online framework. It was noted that RST establishment had been included in a new AGA PQ.

Runway Safety (RS) Go-Team

4.78 *ICAO RS Go-Team Methodology* posted on ICAO Website at the following URL: https://www.icao.int/safety/RunwaySafety/Pages/Documents%20and%20Toolkits.aspx provided the detailed information on RS Go-Team.

4.79 AOP/SG/5 noted the proposed *RS Go-Team LITE Version* and its characteristics. The LITE version would be launched after coordination with RSP partner organisations and their effectiveness assessed through one or more test cases.

4.80 States and Administrations in need of assistance in the areas of runway safety were urged to request for Runway Safety Go-Team Missions through ICAO APAC Office and/or its corresponding COSCAPs and PASO Office.

4.81 IFALPA being one of the ICAO RSP Partners, expressed a willingness to contribute to future RS Go-Teams as IFALPA pilots had experience in providing assistance in the establishment of the RST. The proposal was welcomed by the Secretariat.

Airport Autonomous Transport System at Hong Kong International Airport (WP/17)

4.82 Presented by Hong Kong, China, WP/17 updated the development and plans to adopt driverless transportation in Hong Kong International Airport (HKIA). This paper shared HKIA's experience in putting driverless technology for baggage conveyance into live operations through a multi-phased and collaborative approach, as well as ongoing plans in expanding the technology's application to cargo conveyance and airside staff shuttle services.

4.83 It had also envisioned the applications of autonomous buses for passenger conveyance in the vicinity of HKIA subject to driverless technology advancement and local regulatory framework.

Application of Digital Tower and Surveillance Technology for Apron Efficiency at Hong Kong International Airport (WP/18)

4.84 Presented again by Hong Kong, China, WP/18 was the progress update from HKIA on the application of Digital Tower and Surveillance Technology as part of the Digital Transformation Roadmap.

4.85 Leveraging optical sensors installed at the airport and an Augmented Visual Presentation integrated with essential flight information and real-time operational data, the Digital Apron and Tower Management System being developed jointly by Hong Kong Civil Aviation Department and Airport Authority Hong Kong marked an aim to enhance safety and operational efficiency at airfield, apron and tower for supporting HKIA's Interim Two-Runway System operation in 2022 and Three-Runway System operation in 2024.

Draft Regional Guidelines for Design and Operation of Plateau Airports (WP/19)

4.86 Presented by China, WP/19 reviewed the distribution of the plateau airports throughout the world and shared China's experience in the design, construction and operation of plateau airports. The WP also discussed the typical instance of the plateau airports and put forward suggestions for further improvement of the design and operation of plateau restricted airports.

4.87 Nepal requested to provide detailed guidelines for design and operations of plateau airports.

4.88 AOP/SG/5 considered 9 Information Papers and 1 Presentation as listed below:

i) ICAO HQ Update on AGA Matters (IP/03);
ii) A-SMGCS Onboard Guidance System Implementation in Korea (IP/04);
iii) Installation of Precision Approach CAT I Lighting System on High Towers in Steep Terrain at Pokhara International Airport (IP/05);
iv) Guidance Material on GRF Implementation for Aerodrome Operator not exposed to Ice or Snow Conditions (IP/06);
v) Introduction of the Four Characteristics Airport Development Guidelines (IP/07);
vi) Design and Evaluation Management of Aircraft Load Bridges in Civil Airports (IP/08);
vii) The Design Concepts to Improve the Construction and Operation of Water Aerodrome (IP/09);
viii) The Introduction of Chinese Developed Regional Aircraft (IP/10);
ix) ICAO Initiatives to Assist States in AGA Area (IP/11); and
x) Global Reporting Format (GRF) at HKIA (PPT/01).

4.89 The Secretariat reminded the meeting that the GRF was a human-centric methodology, with the runway assessment performed by trained aerodrome operations staff. It was not mandatory for airports to invest in dedicated tools or equipment. However, the GRF and its global deployment in November 2021 would provide a baseline for the development of systems that may in the future augment, even replace, human observations. Attachment to Chapter 2, Part II of PANS-Aerodromes would be helpful for guidance in this respect.

5. Agenda Item 5: Air Navigation Deficiencies in AOP Area

Status of Air Navigation Deficiencies in AOP Field (WP/14)

5.1 AOP/SG/5 reviewed the list of Air Navigation Deficiencies in the AOP field endorsed by APANPIRG/31.

5.2 AOP/SG/5 noted that 11 States including Fiji, Japan, Lao PDR, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Thailand, Timor-Leste and Viet Nam provided updates on their air navigation deficiencies in the AOP field.

5.3 If States provided satisfactory evidences on corrective action taken for any particular deficiency then that deficiency would be closed/removed from the list in accordance with the methodology prescribed in the APANPIRG Procedural Handbook.

5.4 The Secretariat reminded States / Administrations to provide written correspondences to ICAO APAC Office with evidences on corrective action taken before APANPIRG/32. After receiving the satisfactory evidences, the *List of Air Navigation Deficiencies in AOP Field* would be updated to present at APANPIRG/32 (22 to 24 November 2021).

5.5 Post AOP/SG/5 Meeting, on 16 July 2021 Japan provided satisfactory evidences for the certification of all military aerodromes used for international operations and listed them in AIP AD 1.5.

5.6 The updated *List of Air Navigation Deficiencies in AOP Field* placed at **Appendix W to the Report**.

5.7 The updated *List of AOP Focal Points* placed at **Appendix X to the Report.**

6. Agenda Item 6: Airport Environmental Issues

ICAO Committee on Aviation Environmental Protection (CAEP), Working Group 2 (WG2) – Current work on Airports and Operations (PPT/02)

6.1 The Secretariat presented an overview of the current environmental work of ICAO on airports and operations, focusing on Green Airports, including the work of the Committee on Aviation and Environmental Protection (CAEP) Working Group 2. The presentation provided the full breadth of impacts on the environment due to airport operations, including the emissions from aircraft engines, airport buildings, waste management and ground support equipment, while highlighting the ongoing work on land use and environmental management.

6.2 AOP/SG/5 noted that ICAO had developed a full set of guidance material such as the *Airport Planning Manual*, Part 2, *Airport Air Quality Manuel and Operational Opportunities to Reduce Fuel Burn and Emissions*. Some of the most recent work was the publication of the *Eco-Airport toolkit e-collection* freely available on the ICAO website. New toolkit documents on *Air Quality Management and Green Airport Surface Access* were under development, and work was continuing to develop guidance on *Operational Opportunities to Reduce Aircraft Noise*.

6.3 AOP/SG/5 further noted ICAO work on climate change risk assessment, adaptation, and resilience, involving a report on identified steps to develop risk assessments and measures for aviation stakeholders to consider in air and ground planning. The presentation provided information on ICAO assistance and capacity building, such as, ICAO State Action Plan initiative, and projects implemented by the Secretariat to support ICAO Member States in understanding and implementing

CO2 reduction projects. Over recent years, this had resulted in the development of tools, guidance documents, and the installation of solar–at–gate pilot projects at airports in Kenya and Jamaica.

6.4 The presentation concluded with reflections regarding ICAO's work on feasibility of a long-term aspirational goal for international aviation, which focused on in-sector CO2 reductions from all innovations in technology, operations and fuel. Airports would play a lead role in clean energy production, transport and storage, therefore development of suitable infrastructure at airports was essential for the integration of new innovative emission reduction solutions. A key part of the organization's current work was the ICAO stocktaking, which would be held on 31 August to 3 September 2021, and the associated Pre-Stocktaking events, which had started in March 2021, covering topics such as electrification, hydrogen and urban air mobility. The next event would be on 27 July 2021 on clean energy and infrastructure. All were invited to attend the Stocktaking events and more information could be found on the ICAO website:
https://www.icao.int/Meetings/Stocktaking2021/Pages/default.aspx

6.5 ACI had recently launched a complimentary publication on Green Airports Recognition 2021 – Air quality management downloadable from ACI Asia-Pacific website, which contained case studies in innovative practices from air quality management monitoring, vehicle and equipment power replacement, green plantation and prevention of open fire. Some of these case studies had been submitted to the ICAO Eco-Airport Tool kit mentioned by ICAO in the presentation.

6.6 In anticipating the work progress of ICAO long term global aspirational goal for international aviation to be presented in ICAO Assembly 2022, ACI had recently made a pledge on Long Term Carbon Goal, which was: *"ACI member airports at a global level commit to reach Net Zero Carbon emissions by 2050 and urge governments to provide the necessary support in this endeavour."*

7. Agenda Item 7: AOP/SG Task List

APANPIRG AOP Sub Group Task List (WP/15)

7.1 The meeting reviewed the updated AOP/SG task list presented by the Secretariat and further updated by the meeting, and placed at **Appendix Y**.

7.1 The Secretariat would present a Working Paper at AOP/SG/6 regarding a format of 'Aerodromes Seminar' to be organised in December 2022 as per task list AOP/SG/5/1.

8. Agenda Item 8: Any Other Business

Nil.

9. Agenda Item 9: Provisional Agenda, Date and Venue of Next Meeting

Provisional Agenda, Date and Venue of Next Meeting (WP/16)

9.1 AOP/SG/5 reviewed the draft agenda proposed by the Secretariat and agreed on the following Provisional Agenda for AOP/SG/6:

DRAFT PROVISIONAL AGENDA

Agenda Item 1:	Adoption of Provisional Agenda
Agenda Item 2:	Review Outcome of Relevant Meetings
Agenda Item 3:	Regional Reporting

– Asia Pacific Air Navigation Plan

– Asia Pacific Seamless ANS Plan

Agenda Item 4: Provision of AOP in the Asia/Pacific Region

– Reports of Working Group/Task Force Meetings

– Planning & Design of Aerodromes

– Certification and Operations of Aerodromes

– Capacity Development and Trainings

Agenda Item 5: Air Navigation Deficiencies in AOP

Agenda Item 6: Airport Environmental Initiatives

Agenda Item 7: AOP/SG Task List

Agenda Item 8: Any other business

Agenda Item 9: Date and Venue for the Next Meeting

9.2 The Sixth Meeting of the AOP/SG would be held in the 4th week of June 2022 with a duration of 4-5 days. China graciously offered to host the 6th Meeting of the AOP/SG in China. If travel restrictions would continue due to ongoing COVID-19 situation, the meeting would be held via video teleconference for 4 days.

9.3 Ms. Lyu Qing, Chairperson of AOP/SG, thanked the members for their contribution and cooperation to AOP/SG/5. She also expressed her appreciation to the Chairpersons of AP-ADO/TF, AP-AA/WG and AP-WHM/WG, as well as the Chairperson of APA-CDM/TF, for their excellent work delivered to AOP/SG/5.

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