International Civil Aviation Organization

The Eighth Meeting of the Asia/Pacific
Aerodrome Assistance Working Group (AP-AA/WG/8)

Bangkok, Thailand, 21 to 24 April 2026

Agenda Item 2: Review Outcomes of Relevant Meetings

RELEVANT OUTCOMES OF AOP/SG/9

(Presented by the SECRETARIAT)

SUMMARY

This paper presents the outcomes of the AOP/SG/9 (Bangkok, Thailand, 30 June to 4 July 2025) relevant to aerodrome design and operations.

1. INTRODUCTION

1.1 The Ninth Meeting of the Aerodrome Operations and Planning Sub-group (AOP/SG/9) was held in Bangkok, Thailand from 30 June to 4 July 2025.

1.2 The Meeting was attended by 114 participants from 20 Member States, 1 Special Administrative Regions and 3 International Organizations.

1.3 The Meeting adopted 8 (Eight) Conclusions and formulated 2 (Two) Draft Conclusions to be adopted by APANPIRG/36 on 26 November 2025.

1.4 The final report of the AOP/SG/9 Meeting is available at:

https://www.icao.int/APAC/meetingdocs?fid=554

2. DISCUSSION

2.1 Some important outcomes of AOP/SG/9 are summarized in the ensuing paragraphs.

Report on the Sixth Meeting of the Asia/Pacific Aerodrome Design and Operations Task Force (AP-ADO/TF/6)

2.2 AOP/SG/9 reviewed the Report of the Sixth Meeting of the Asia/Pacific Aerodrome Design and Operations Task Force (AP-ADO/TF/6, 18 - 21 February 2025, Langkawi, Malaysia).

Outcomes of the Workshop on Transposition of Annex 14 SARPs into National Aerodrome Standards

2.3 The Workshop on Transposition of Annex 14 SARPs into National Aerodrome Standards was conducted on 17 February 2025 in Langkawi, Malaysia in conjunction with the AP-ADO/TF/6 Meeting.

2.4 AOP/SG/9 reviewed the key takeaways of the Workshop endorsed by AP-ADO/TF/6 and adopted the following Conclusion formulated by AP-ADO/TF/6:

Conclusion AOP/SG/9 - 1 (Draft Conclusion AP-ADO/TF/6 – 1): Workshop on Transposition of Annex 14 SARPs into National Aerodrome Standards

That, key takeaways of the Workshop on Transposition of Annex 14, Volume I, SARPs into National Aerodrome Standards be circulated to Asia/Pacific States/Administrations for information and published on the APAC Website at eDocuments Webpage.

2.5 ICAO APAC Office has circulated the State Letter Ref.: T 11/5.13.2 – AP118/25 (AGA) dated 16 September 2025 regarding the key takeaways of the Workshop, which is also available at APAC eDocuments Webpage under AGA Heading https://www.icao.int/APAC/apac-electronic-documents#tabs-2.

Clarification of Clause Interpretations in ICAO Annex 14 Volume I

2.6 AP-ADO/TF/6 discussed on ICAO Annex 14 Volume I Clause 5.2.2.6 regarding "Form and Proportions of Numbers and Letters for Runway Designation Marking".

2.7 AP-ADO/TF/6 noted that the "Form and Proportions of Numbers and Letters for Runway Designation Marking" (Clause 5.2.2.6), which lacks clear guidance on gap dimensions for combinations of the number "1" with other numbers wider than 3.0 meters, as well as for combinations where the numbers are 3.0 meters or wider. AP-ADO/TF/6 suggested ICAO provide visual guidance for both cases and standardise the gap dimension to 2.2 meters for the second case.

2.8 AOP/SG/9 adopted the following Conclusion formulated by AP-ADO/TF/6:

Conclusion AOP/SG/9 – 2 (Draft Conclusion AP-ADO/TF/6 – 2): Clarification of Clause Interpretations in ICAO Annex 14 Volume I

That, AP-ADO/TF/6 – WP/08 be forwarded to ICAO Air Navigation Bureau for its review of specification 5.2.2.6 (Figure 5 -3) and consideration of the recommendation as proposed in the WP/08.

Tolerance in Aerodrome Physical Characteristics and Addressing Inconsistencies in ICAO Annex 14 Volume I

2.9 AP-ADO/TF/6 discussed Malaysia's proposal to address the acceptable tolerances in the visual aids of aerodromes (Markings, Runway and Taxiway Edge Lights and Wind Direction Indicator's Circular Band), with the goal of enhancing operational efficiency without compromising safety or performance standards, taking references from *ICAO Annex 14, Volume I SARPs*, FAA and UK CAA Standards. Key discussions and recommendations included:

(1) Markings: AP-ADO/TF/6 supported adopting a ±5% tolerance for runway and taxiway markings, referencing both the ICAO Aerodrome Design Manual Part 4 in comparison with FAA guidelines.

(2) Aeronautical Ground Lights:

- Runway Edge Lights: Proposal for reviewing the permissible tolerance for runway edge light spacing to enhance operational safety taking into consideration of ICAO SARPs, with additional analysis based on the requirements outlined in CAA UK CAP168 Licensing of Aerodromes and FAA 150/5340-30J on Design and Installation Details for Airport Visual Aids. This analysis provided a comparative perspective on spacing and

installation criteria for runway edge lights, for improving safety, particularly under low-visibility conditions.

- Taxiway Edge Lights: Similar to runway edge lights, it was recommended to conduct the further study on taxiway edge light spacing. FAA Advisory Circular 150/5340-30J specified the spacing for taxiway edge lights, which is determined based on the taxiway configuration to ensure better compliance with international standards.

(3) Wind Direction Indicator's Circular Band: Malaysia suggested a ±5% tolerance for the circular band of wind direction indicators to maintain consistency and minimize disruptions caused by construction or maintenance activities.

2.10 AOP/SG/9 adopted the following Conclusion formulated by AP-ADO/TF/6:

Conclusion AOP/SG/9 – 3 (Draft Conclusion AP-ADO/TF/6 – 3): Tolerance on marking of wind direction indicator's circular band, and runway and taxiway edge lights

That, AP-ADO/TF/6 – WP/09 be forwarded to ICAO Air Navigation Bureau for its review and consideration of the tolerance in the design and implementation of the marking of wind direction indicator's circular band, and runway and taxiway edge lights.

Potential Misinterpretation on the Terms "Defined Runway and Taxiway Pavement Edges to the Near Side of Sign"

2.11 AP-ADO/TF/6 discussed the potential misinterpretation of the term "from the defined runway and taxiway pavement edges to the near side of sign" in ICAO Annex 14 Volume I, Table 5-5. The ambiguity in defining the reference point for sign placement has led to inconsistencies among airport designers, aerodrome operators, and regulatory bodies, potentially affecting safety and compliance.

2.12 To address this, AP-ADO/TF/6 proposed ICAO to provide clearer guidance, including graphical illustrations, to ensure uniform understanding and compliance across airports. AOP/SG/9 adopted the following Conclusion formulated by AP-ADO/TF/6:

Conclusion AOP/SG/9 – 4 (Draft Conclusion AP-ADO/TF/6 – 4): Provision of Graphical Illustrations for the Placement of Signs in ICAO Design Manual (Doc 9157), Part 4 Visual Aids

That, AP-ADO/TF/6 – WP/10 be forwarded to ICAO Air Navigation Bureau for inclusion of the Graphical illustrations of the placement of the signs in ICAO Design Manual (Doc 9157), Part 4 Visual Aids.

Review Options of Standardizing the Approach Lighting Circuit Design against the Switch Over Time Requirements to Ensure the Operational Requirements are met with respect to Precision Approach CAT II/III Operations

2.13 AP-ADO/TF/6 discussed the existing switch over time requirements for the approach lighting system for precision approach CAT II/III as per *Annex 14, Volume I, Table 8-1*. The present concern of dividing the approach lighting system into two parts, as inner approach (first 300 m) and outer approach (from 300 – 900 m), while the interleaving circuits for the inner/outer approach areas combined control the entire section. Hence, separate switchover times for the inner and outer approach was not practically possible was fundamentally agreed by the Task Force Meeting.

2.14 AOP/SG/9 adopted the following Conclusion formulated by AP-ADO/TF/6:

Conclusion AOP/SG/9 – 5 (Draft Conclusion AP-ADO/TF/6 – 5): Review of Switch-over Time Requirements for Outer Part (from 300 – 900 m) of the CAT II/III Approach Lighting System

That, AP-ADO/TF/6 – WP/13 be forwarded to ICAO Air Navigation Bureau for review of switch-over time requirements for outer part (from 300 – 900 m) of the CAT II/III Approach Lighting System by Visual Aids Working Group.

2.15 ICAO APAC has sent an IOM Ref.: T 11/5.13.2 – AP-AGA0050/25 dated 15 September 2025, along with the AP-ADO/TF/6 – **WP/08, WP/09, WP/10** & **WP/13** to the Air Navigation Bureau for further deliberation at the ADOP Visual Aids Working Group.

Guidance Material on the Transposition of Annex 14 SARPs

2.16 AOP/SG/9 reviewed the 'Draft Guidance on Transposition of ICAO Annex 14 SARPs into National Standards' developed by AP-ADO/TF. The guidance document was structured into 7 Chapters and 1 Appendix covering general information, proposals for new SARPs, industry engagement, adoption of SARPs, regulatory development, and notification procedures. It was developed for reference to APAC States, and they could adapt it with proper customization if they have yet to develop one for them.

2.17 AOP/SG/9 adopted the following Conclusion formulated by AP-ADO/TF/6:

Conclusion AOP/SG/9 – 6 (Draft Conclusion AP-ADO/TF/6 – 6): Guidance on Transposition of Annex 14 SARPs into National Standards

That,

*a) the Guidance Material on Transposition of Annex 14 SARPs into National Standards (**Appendix A2** to the Report of AOP/SG/9) be adopted and published on the ICAO APAC website; and*

b) APAC States and industry be invited to provide feedback after its publication on ICAO APAC Website.

2.18 ICAO APAC Office has circulated the State Letter Ref.: T 11/5.13.2 – AP119/25 (AGA) dated 16 September 2025 regarding the 'Guidance on Transposition of Annex 14 SARPs into National Standards' which is also available at APAC eDocuments Webpage under AGA Heading https://www.icao.int/APAC/apac-electronic-documents#tabs-2.

2.19 AOP/SG/9 noted that the AP-ADO/TF/6 had agreed to develop the regional guidance documents on the following areas:

a) Measurable conspicuity standards for runway and taxiway markings to provide aerodrome operators and regulators with clear, objective criteria for evaluating marking effectiveness (Malaysia to lead the task with the support from India, Thailand, Vietnam and ACI);
b) Assessment and mitigation of glare and glint from solar panels installed at or in the vicinity of the aerodrome (Malaysia to lead the task with the support from India, Philippines and Sri Lanka);
c) Interrelationship between *ICAO Annex 10 Volume I, ICAO Annex 14 Volume I and Aerodrome Design Manual (DOC. 9157) Part 6* for visual and non-visual

aids installation on runway and taxiway strips and RESA (Nepal to lead the task with the support from Fiji, India and China); and

d) Circumstances/situations where the phrase "as far as practicable and/or wherever practicable" would be needed for flexibility of the implementation of SARPs based on experiences and best practices of APAC States from different geographical regions (Nepal to lead the task with the support from Australia, Malaysia, Wellington International Airport (New Zealand) and Pakistan).

Report on the Seventh Meeting of Asia/Pacific Aerodrome Assistance Working Group (AP-AA/WG/7)

2.20 AOP/SG/9 reviewed the Report of the Seventh Meeting of the Asia/Pacific Aerodrome Assistance Working Group (AP-AA/WG/7, Bangkok, Thailand, from 27 to 30 May 2025). The full report of the Meeting has been posted on the ICAO APAC Office website and can be accessed at https://www.icao.int/APAC/meetingdocs?fid=573.

Guideline for Runway Classification

2.21 AOP/SG/9 reviewed the guidelines developed by AP-AA/WG for the classification of runways using *Annex 14, Volume I*, other relevant Annexes and manuals. While *Annex 14, Volume I* defined non-instrument and instrument runways, the definitions being vague and interpreted differently by States — some classifying runways based on installed equipment, others on actual operational use. This inconsistency might lead to varied applications of aerodrome standards, affecting runway design elements such as runway strip dimensions, Obstacle Limitation Surfaces (OLS), and visual aids. It might impact other Annexes, including *Annex 4 (Charts), Annex 6 (Aircraft Operations), Annex 10 (Aeronautical Telecommunications) and Annex 19 (Safety Management).*

2.22 The standardised guidelines would promote global harmonisation, enhance safety, and ensure consistent application of *Annex 14 Volume I* provisions. AOP/SG/9 adopted the following Conclusion formulated by AP-AA/WG/7:

Conclusion AOP/SG/9 – 8 (Draft Conclusion AP-AA/WG/7 – 2): Guideline for Runway Classification

That, the Guideline for Runway Classification provided in ***Appendix B*** *to the AOP/SG/9 Report be circulated to States/Administrations and published on the ICAO APAC eDocuments Webpage under AGA Heading.*

2.23 ICAO APAC Office has circulated the State Letter Ref.: T 11/5.13.2 – AP120/25 (AGA) dated 16 September 2025 regarding the 'Guideline for Runway Classification', which is also available at APAC eDocuments Webpage under AGA Heading https://www.icao.int/APAC/apac-electronic-documents#tabs-2.

2.24 AOP/SG/9 noted that the AP-AA/WG/7 had agreed to develop the regional guidance on the following areas, which are also included in the AP-AA/WG Task List:

a) Rescue & Fire Fighting Requirements for Small Airports (Aerodrome Category 1 and 2 for RFF) (Fiji to lead the task with the support from US, New Zealand (Wellington Airport), Solomon Islands and Philippines)

Report on the Seventh Meeting of the Asia/Pacific Wildlife Hazard Management Working Group (AP-WHM/WG/7)

2.25 AOP/SG/9 reviewed the Report of the Seventh Meeting of the Asia/Pacific Wildlife Hazard Management Working Group (AP-WHM/WG/7) held in Pokhara, Nepal from 7 to 9 May 2025. The full report of AP-WHM/WG/7 provided on ICAO APAC Office website at: https://www.icao.int/APAC/meetingdocs?fid=592.

Outcomes of the ICAO Asia/Pacific Wildlife Hazard Management Workshop

2.26 ICAO Asia/Pacific Wildlife Hazard Management (WHM) Workshop was conducted on 5 – 6 May 2025 in Pokaha, Nepal. AOP/SG/9 reviewed the key takeaways of the workshop endorsed by AP-WHM/WG/7 and adopted the following Conclusion formulated by AP-WHM/WG/7:

Conclusion AOP/SG/9 – 9 (Draft Conclusion AP-WHM/WG/7 – 1): ICAO Asia/Pacific Wildlife Hazard Management Workshop

That, key takeaways of the ICAO Asia/Pacific Wildlife Hazard Management Workshop be circulated to Asia/Pacific States/Administrations for information and consideration and published on the ICAO APAC Website eDocuments Webpage.

2.27 ICAO APAC Office has circulated the State Letter Ref.: T 11/5.13.2 – AP121/25 (AGA) dated 16 September 2025 regarding the key takeaways of the Workshop, which is also available at APAC eDocuments Webpage under AGA Heading https://www.icao.int/APAC/apac-electronic-documents#tabs-2.

APANPIRG AOP Sub-Group TOR & Task List

2.28 The AOP/SG/9 reviewed and updated the AOP/SG Work Programme and Task List presented by the Secretariat and placed at **Appendix I** to the Report of AOP/SG/9.

3. ACTION BY THE MEETING

3.1 The Meeting is invited to:

a) note the information contained in this paper;

b) note Conclusion AOP/SG/9 – 1, 2, 3, 4, 5, 6, 8 & 9 (para 2.4, 2.8, 2.10, 2.12, 2.14, 2.17, 2.22 & 2.26 refers); and

c) discuss any other relevant matters as appropriate.

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