INTERNATIONAL CIVIL AVIATION ORGANIZATION

Second Meeting of the Africa - Indian Ocean Aviation System Planning and implementation Group (AASPG/2)

Livingstone, Zambia, from 2 to 6 November 2026

Agenda Item 4: Implementation of air navigation goals, targets and indicators, including the priorities set in the regional air navigation plan

4.2. Outcome of the Ninth meeting of the AASPG Infrastructure and Information Management Sub-Group (IIM/SG9)

(Presented by the Secretariat)

SUMMARY
This paper presents the outcomes of the Ninth Meeting of the AASPG Infrastructure and Information Management Sub-group (IIM/SG9), held in Dakar, Senegal, from 3 to 7 August 2026. The Sub-Group reviewed the status of implementation of the Conclusions and Decisions of the AASPG/1 Meeting relevant to the IIM/SG and discussed the status of implementation of regional projects adopted by AASPG. The meeting also discussed the status of the Basic Building Blocks (BBBs), the implementation status of ASBU elements, the developments related to System Wide Information Management (SWIM) and digital information exchange, the air navigation deficiencies, as well as the preparation of the AFI ANS Summit. Action by the Meeting is provided **in paragraph 3**
REFERENCES ▪ AASPG Procedural Handbook ▪ The Global Air Navigation Plan ▪ AASPG/1 Report ▪ IIM/SG8 Report

Strategic Goals	*A. Every Flight is Safe and Secure* *B. Aviation is Environmentally Sustainable* *C. Aviation Delivers Seamless, Accessible, and Reliable Mobility for All* *D. No Country is Left Behind* *F. The Economic Development of Air Transport Assures the Delivery of Economic Prosperity and Societal Well-Being for All*

1 INTRODUCTION

1.1. The Ninth meeting of the AASPG Infrastructure and Information Management Sub-Group (IIM/SG9) was held in Dakar, Senegal, from 3 to 7 August 2026.

1.2. It was attended by ninety (90) participants from 22 States, and Organizations (ASECNA, IATA, WAFC London, WMO) and the ICAO ESAF and WACAF Regional Offices.

2 DISCUSSIONS

2.1. Eleven (11) agenda items were discussed as reflected in the Report of the Meeting presented in the **Appendix 1** to this Working Paper and available at https://www.icao.int/WACAF/meetingdocs?fid=93792#block-icao-page-title

2.2. The meeting deliberated on eight (8) Conclusions/Decisions. This paper presents those Conclusions/Decisions considered relevant to the PRCC and AASPG.

Review of the Conclusions and Decisions of AASPG/1 Meeting applicable to the Sub-group)

2.3. The meeting reviewed the implementation status of the 33 Conclusions and Decisions from the AASPG/1 Meeting. Fourteen (14) of these were relevant to the Infrastructure and Information Management Sub-Group in CNS, AIM, and MET, with 67% completed, 33% in progress. Appendix 2 provides detailed status updates. Ongoing actions included:

- Ongoing implementation of the IWXXM format by RODB Dakar and Pretoria (AASPG/1 Conclusion 1/14).
- Ongoing process of including AIM, MET and SAR in the SAT Mandate (AASPG/1 Conclusion 1/19 and Conclusion 1/28).
- Preparation of the ANS SUMMIT (AASPG/1 Decision 1/26).
- Development of a template of national air navigation plan (AASPG /1 Conclusion 1/30).

2.4. States and relevant stakeholders were urged to resolve outstanding actions.

Update on the Development of a Template of National Air Navigation Plan (NANP)

2.5. The meeting received an update on the progress of developing a National Air Navigation Plan (NANP) template, as requested by AASPG Decision 1/30, starting with information gathering from States. It reviewed and endorsed a Concept Note outlining the template structure, which encompasses strategic vision, governance, regional alignment, traffic forecasts, current and future systems, implementation roadmap, and performance monitoring.

2.6. To accelerate the development of the template, the meeting agreed establishing a Team of Experts, with the Secretariat and AAO/SG to coordinate its setup.

Update on ASBU elements applicable in the AFI region

2.7. The meeting was briefed on the progress in updating the ASBU elements for the AFI Region and the ongoing development of the GANP's ninth edition by the GANP Study Group (GSG).

2.8. To maintain global alignment, the Secretariat was requested to coordinate with the GSG and key stakeholders on updating the ASBU elements applicable to the AFI Region.

Update on BBB Implementation in CNS, AIM and MET and the Monitoring and Reporting Tool

2.9. Regarding safety oversight of the BBBs, the meeting recalled concerns raised at AASPG/1 (Libreville, Gabon) about the region's low performance, currently between 57% and 67%. States were urged to actively engage in regional initiatives to resolve these implementation challenges.

2.10. On BBB monitoring and reporting, the meeting acknowledged the Secretariat's progress in developing an add-on tool for the AFI Air Navigation Deficiencies Database (AANDD) platform to assist States with BBB monitoring and reporting. The meeting called for its timely deployment, followed by awareness workshops for States.

Status of ASBU elements in CNS, AIM and MET fields in AFI Region areas

2.11. The meeting reviewed the status of ASBU implementation in AIM, CNS, and MET (Appendix 3). Although national and regional initiatives have driven progress, implementation remains uneven, and reporting gaps continue to hinder accurate regional assessments. Critical implementation gaps persist in AIDC, ATN/IPS, ADS-B, and AIXM.

2.12. The meeting stressed the need for greater ANSP and operational stakeholder engagement, enhanced coordination, and sustained efforts to build technical capacity and planning frameworks. States and stakeholders were urged to accelerate implementation and submit timely tracking data through existing reporting platforms.

Progress in the implementation of the AASPG IIM Projects

2.13. The Meeting received an update on the progress of the IIM Projects as restructured by AASPG/1 through Decision 1/11. Although these projects were launched in May 2026, the meeting noted encouraging progress and provided guidance to support States in implementing ICAO SARPs and ASBU elements in CNS, AIM, and MET.

For Communication, Navigation and Surveillance (CNS) related Projects

2.13.1. The meeting reviewed progress of the CNS projects and noted progress in the governance, coordination and implementation planning. Key achievements included establishing project teams, developing regional surveys and baseline assessment tools, and initiating activities to modernize aeronautical communications, navigation, surveillance and spectrum management.

2.13.2. Priority areas included accelerating AFTN-to-AMHS migration, AIDC and CPDLC implementation, strengthening GNSS interference and spectrum management, enhancing surveillance data sharing, and developing regional strategies and roadmaps.

2.13.3. Progress was also noted in cybersecurity, including the AFI ANS Cyber Resilience Framework. States, ANSPs, Organizations and network operators were encouraged to actively participate, provide required data and support the timely delivery of project outputs.

For Aeronautical Information Management related Projects

2.13.4. The meeting reviewed progress on AIM projects, noting significant progress in the identification and validation of project implementation documents, including generic documentation and digital tools. A common challenge was the limited availability of nominated experts due to competing priorities. The meeting encouraged the project teams to expedite validation and implementation activities.

For Aeronautical Meteorology related Projects

2.13.5. The meeting reviewed the implementation progress of aeronautical meteorology projects and noted encouraging progress, including the establishment of project teams, development of implementation roadmaps and action plans, launch of regional surveys and assessments, and preparation of competency implementation frameworks.

2.13.6. Significant progress was made towards developing guidance materials and regional tools for maintaining and calibrating MET sensors. Project Teams were urged to accelerate implementation and progress towards the agreed deliverables and intended outcomes.

2.13.7. The meeting noted that the MET Project on Improving OPMET Delivery reported no tangible results since its launch. The Secretariat was therefore tasked to coordinate with the Project Team to identify the constraints affecting implementation and take actions as appropriate.

Digital tool for supporting the evaluation of flight inspection reports for Radio Navigation Aids

2.14. The Meeting received an update on Togo's initiative led by ANAC Togo to develop a digital tool supporting the evaluation of flight inspection reports for radio navigation aids (VOR, DME, and ILS).

2.15. The web-based tool automatically imports, extracts, and analyses data from flight inspection reports, comparing it against applicable ICAO criteria (Annex 10, Volume I, and Doc 8071) to generate traceable results that support technical oversight. Preliminary tests on a limited sample of reports demonstrated significant time savings, reducing average processing time from approximately 32 hours for a full manual assessment to just 11 minutes.

2.16. While these initial results will be validated through further testing across different operational environments, the Meeting commended Togo for this innovative initiative and encouraged the State to complete the development of the tool for the benefit of the region.

Progress Report of RBIS and CODEVMET Projects

Progress Report of RBIS Project

2.17. The meeting was updated on the progress of the AIM Result-Based Implementation Support (RBIS) project, which supports States in implementing QMS for AIM, AIXM, eAIP and Terrain and Obstacle Data (TOD).

2.18. Between 2023 and 2025, 12 assistance missions were conducted in 11 States, with additional assistance activities for Ghana and Chad planned for October 2026. Most assisted States have developed and submitted action plans covering regulatory, implementation and oversight aspects.

2.19. The meeting particularly commended Roberts Flight Information Region (RFIR) for achieving ISO 9001:2015 certification in December 2025 for its QMS covering aeronautical information and meteorological operations, as well as completing the Factory Acceptance Test (FAT) of its AIXM and eAIP systems.

2.20. The meeting commended the RBIS project team for the progress achieved and encouraged assisted States to pursue implementation of their action plans and seek follow-up support from the ICAO Regional Offices where necessary.

Update on the progress of the CODEVMET-AFI Project

2.21. The meeting reviewed the CODEVMET-AFI Project, a core initiative targeting aeronautical meteorology deficiencies in the AFI Region. Since its 2022 reframing, key achievements include:

- Aligning 9 States MET regulations with ICAO SARPs.
- Building capacity across 15 States, AAMAC, and ASECNA on Annex 3 (Amendment 82) and PANS-MET.
- Advancing QMS implementation in 8 States and 2 ANSPs, training 25 Internal Quality Auditors.
- Facilitating SADIS API migration for 12 States and ASECNA.

- Developing a roadmap for implementing requirements for the supply of Space Weather information for 18 ASECNA Member States.
- Developing capacity building materials for Internal Quality Auditors, Aeronautical Meteorological Personnel Competency Assessors, QMS Assessment and Monitoring, Control and calibration of MET sensors.

2.22. The meeting commended the Project's progress and encouraged States and stakeholders to further leverage CODEVMET-AFI to strengthen aeronautical meteorology capabilities and address ANS deficiencies.

Outcomes of the Third Volcanic Ash Exercise and the Fifth Meeting of the AFI Volcanic Ash Exercise Steering Group

2.23. The Meeting was briefed on the outcomes of the third AFI Volcanic Ash Exercise (VOLCEX 25/01), conducted under Kenya's leadership on 26 February 2026. Consequently, the Meeting:

- commended Kenya for its effective leadership in coordinating the exercise;
- endorsed the final exercise report (**Appendix 4**), including identified gaps, lessons learned, and proposed remedial measures; and
- urged States and relevant operational stakeholders to implement the recommendations.

2.24. The Meeting reviewed the outcomes of the Fifth Meeting of the AFI Volcanic Ash Exercise Steering Group (VOLCEX/SG/5), held virtually on 9 June 2026. In doing so, the Meeting:

- endorsed the election of Cameroon and Comoros as Chairperson and Vice-Chairperson, respectively;
- agreed on the objectives for the next exercise;
- revised the Steering Group Terms of Reference (Appendix 5);
- updated the AFI Volcanic Ash Exercise Operational Instructions (Appendix 6); and
- endorsed the future work programme (Appendix 7).

2.25. The Meeting further endorsed Cameroon's offer to lead the fourth AFI Volcanic Ash Exercise (VOLCEX) in 2027.

The Meeting formulated the following draft conclusion and decision.

<table>
<tr><td colspan="6">Draft AASPG/2 Conclusion 2/xx: Enhancing preparedness for the provision of information on volcanic activities in the AFI region</td></tr>
<tr><td>Why:</td><td colspan="5">That, to practice and develop inter-agency response to volcanic activity,</td></tr>
<tr><td>What:</td><td colspan="5">a) The report of the third volcanic ash exercise, the proposal of Cameroon to lead the fourth exercise, and the future work programme for 2026/2027 of the AFI Steering Group of Volcanic Ash Exercise are endorsed.
b) States and Stakeholders are urged to implement the recommendations contained in the report of the third volcanic ash exercise by 30 November 2027.
c) Cameroon, with the support of the Secretariat, to coordinate and lead the fourth volcanic ash exercise in the AFI region by 30 November 2027.</td></tr>
<tr><td>Who:</td><td colspan="5">a) AASPG
b) States
c) Cameroon</td></tr>
<tr><td>When:</td><td colspan="5">a) 6 November 2026
b), c). by 30 November 2027</td></tr>
<tr><td colspan="6">Implementation follow-up</td></tr>
<tr><td>Follow-up required</td><td>Yes ☒
No ☐</td><td>Metrics</td><td>1. Recommendations as contained in</td><td>Means to collect</td><td>Report on the implementation of recommendations</td></tr>
</table>

			the third volcanic ash exercise report implemented *2. Fourth volcanic ash exercise conducted*		*Report on the fourth volcanic ash exercise*

Draft AASPG/2 Decision 2/xx: Volcanic ash coordination framework					
Why:	*That, to improve the effectiveness of the volcanic ash coordination framework,*				
What:	*The revised Terms of Reference of the AFI Steering Group on Volcanic Ash Exercise and the Updated AFI Volcanic Ash Exercise Operating Instructions are endorsed.*				
Who:	*AASPG*				
When:	*6 November 2026*				
Implementation follow-up					
Follow-up required	Yes ☐ No ☒	Metrics	Not applicable	Means to collect	*Not applicable*

OPMET Information Delivery and Continuous Monitoring and Management of OPMET Data Exchange in the AFI region

2.26. The Meeting recalled AASPG/1 concerns on the 2014 AFI AMBEX procedures which are no longer aligned with recent ICAO SARPs and OPMET developments, affecting the timely and reliable delivery of quality meteorological data. Consequently, States Subject Matter Experts developed an updated AMBEX Procedures Handbook incorporating State review comments.

2.27. In reviewing the updated Handbook (Appendix 8), the Meeting:

- noted the renaming of the document as the AFI OPMET Data Exchange Scheme and Procedures Handbook (AODEX-HB) to reflect a data-centric approach;
- acknowledged the AODEX Implementation Roadmap (**Appendix 9**); and
- endorsed the Terms of Reference (**Appendix 10**) establishing the AFI Regional OPMET Data Management Technical Team (AROMT) to coordinate, monitor, and harmonize regional and inter-regional OPMET data exchanges.

The Meeting formulated the following draft Conclusion accordingly:

Draft AASPG/2 Conclusion 2/xx: Enhancing OPMET data Information Delivery	
Why:	*That, to strengthen the effectiveness of operational meteorological (OPMET) information delivery to end-users,*
What:	*a) the updated OPMET Data Exchange Scheme and Procedures (AODEX) Handbook, and the Terms of Reference of the AFI Regional OPMET Data Management Technical Team (AROMT) are endorsed.* *b) the Secretariat to establish the Regional OPMET Data Management Technical Team based on States nominations by 30 June 2027.* *c) States to implement the provisions of the AODEX Handbook by 31 December 2027 as per the AODEX Implementation Roadmap.*
Who:	*a) AASPG* *b) Secretariat* *c) States*

When:	*a) 6 November 2026* *b) 30 June 2027* *c) 31 December 2027*				
Implementation follow-up					
Follow-up required	Yes ☒ No ☐	Metrics	1 AROMT established 2 Provisions of the AODEX implemented	Means to collect	*Evidence of the establishment of the AROMT.* *States feedback on the implementation of AODEX provisions*

Update on the preparation of the AFI ANS SUMMIT

2.28. The Meeting was briefed on the preparations for the AFI Air Navigation Services (ANS) Summit, aimed at promoting harmonized, interoperable and seamless air navigation systems across the region. Preparations include establishing project teams, developing project templates, conducting a survey on priority ANS projects, and consolidating a costed AFI ATM Master Plan aligned with States' needs and the continental vision for seamless air navigation.

2.29. The Meeting reviewed and finalized the Master Plan as provided in Appendix 11 and adopted the following draft Conclusion.

Draft AASPG/2 Conclusion 2/xx: AFI ATM Master Plan					
Why:	*That, to facilitate the AFI seamless ATM operations through ATM solutions capable of ensuring safety and efficiency of air transport throughout the AFI region,*				
What:	*the AFI ATM Master Plan is endorsed.*				
Who:	*AASPG*				
When:	*6 November 2026*				
Implementation follow-up					
Follow-up required	Yes ☐ No ☒	Metrics	Not applicable	Means to collect	Not applicable

AASPG Annual report release

2.30. The meeting reviewed the status of the AASPG Annual Safety and Air Navigation Report (AAR) and noted that the AASPG Annual Reporting Team (AART) has not yet been established. The Meeting was informed of secretariat's ongoing analysis of possible options for the AART which may include the Secretariat assuming a leading role in the development of initial draft report and supported by contributions from States and the industry.

2.31. The Meeting discussed the reporting timeframe and acknowledged the need to address the two-year delay observed between the reporting period and the publication date. It was proposed that the next reporting cycle cover 2026–2027, with a publication deadline of 31 December 2027.

Update on AFI SWIM Project

2.32. The meeting noted progress in establishing the AFI SWIM Project, including expert nominations and selection, and identified initial priorities, including defining SWIM requirements, conducting a regional gap analysis, and developing a transition roadmap. States

and Organizations were encouraged to support the project through expert nominations and active participation.

Outcomes of the Regional Workshop on Spectrum

2.33. The meeting noted that the WRC-27 Preparatory and AFI Regional Workshops on Aviation Spectrum Management, held in Dakar from 2 to 5 March 2026, enhanced States' awareness of the ICAO Position for WRC-27 and strengthened regional capacity in spectrum management. It emphasized the need for dedicated Frequency Finder workshops and urged States of the AFI region to actively use and regularly update Frequency Finder data to support accurate and harmonized regional frequency coordination.

Meteorology in SWIM

2.34. The Meeting was briefed on MET-SWIM, which applies System Wide Information Management (SWIM) principles to aeronautical meteorology and supports the transition from legacy AFS-based exchanges to IWXXM-enabled information services. The Meeting highlighted core benefits, including real-time information sharing, enhanced hazard awareness, optimized flight planning, and ATM integration; and

2.35. States and industry are encouraged to strengthen SWIM/IWXXM readiness, follow established implementation plans, and actively contribute to regional and global planning for future MET services.

Status of Air Navigation Deficiencies in CNS, AIM and MET fields

2.36. The meeting was briefed on the status of air navigation deficiencies in the CNS, AIM and MET fields recorded in the AFI Air Navigation Deficiencies Database (AANDD).

2.37. Following assessment of notifications of potential air navigation deficiencies, 9 were confirmed as preliminary deficiencies, for which the concerned States were requested to develop corrective action plans.

2.38. States were encouraged to address outstanding preliminary deficiencies in a timely manner and regularly provide updates on the implementation of their corrective action plans.

Implementation challenges of the Sub-group: Overview of the Reframed IIM/SG Projects launch and dedication to achieving success

2.39. The meeting noted that since the kick-off meetings in May 2026, Project Teams have commenced their activities, including reviewing project documents, developing implementation plans and roadmaps, and achieving initial results.

2.40. The meeting emphasized the importance of sustained engagement by Project Teams, stressing that their outputs will provide key inputs to the ANS Projects Catalogue, as per AASPG/1 Decision 1/18. The meeting therefore encouraged teams to maintain active participation and support the effective implementation of the restructured IIM projects as approved by AASPG.

SADIS Matters and SADIS Focal Points

2.41. The meeting was briefed on the status of SADIS implementation (Appendix 12), including the planned retirement of SADIS FTP in November 2028, and urged States to accelerate migration to SADIS API or WIFS API. It also noted gaps in the production and international exchange of IWXXM OPMET data, particularly in the AFI region, and encouraged States and stakeholders to accelerate IWXXM production and dissemination.

2.42. The meeting further noted that SADIS Focal Point information in Appendix 13 is outdated and invited SADIS user States to review and update their contact details by 31 March 2027. The following draft Conclusion was formulated accordingly.

Draft AASPG/2 Conclusion 2/xx Update of the SADIS Focal Point Information					
Why:	*That, to ensure effective coordination with States on SADIS matters,*				
What:	*States that have not yet done so are urged to update their State SADIS Focal Point information by 31 March 2027.*				
Who:	*States*				
When:	*31 March 2027*				
Implementation follow-up					
Follow-up required	Yes ☒ No ☐	Metrics	*SADIS focal point information updated for all States*	Means to collect	*Report on the updated SADIS focal point information.*

Common AAO, IIM and SMO Sub-Groups activities

2.43. The meeting discussed activities requiring coordination among the AAO, IIM and SMO Sub-Groups, including the update of ASBU applicable elements, reporting on BBB implementation, development of the NANP Template, resolution of SSCs, and coordination of the volcanic ash exercise. The meeting formulated the following draft Decision accordingly.

Draft AASPG/2 Decision 2/xx: Common activities across the Sub-Groups					
Why:	*That, to ensure harmonized planning, efficient implementation, monitoring and reporting of activities that involve the three Sub-Groups,*				
What:	*the following activities shall be coordinated by AAO, IIM and SMO Sub-Groups.* *a) Workshop on the operationalisation of the BBBs monitoring and reporting tool, to be coordinated with AAO Sub-Group by 30 June 2027;* *b) Update of the ASBU applicable elements to be coordinated with AAO Sub-Group by 30 June 2027;* *c) Development of the NANP Template to be coordinated with AAO Sub-Group by 30 April 2027;* *d) Workshop on SSCs prevention to be held 31 December 2027 in coordination with AAO and SMO Sub-Groups;* *e) Development of AASPG Projects Portfolio Dashboard in coordination with AAO and SMO Sub-Groups by 30 June 2027.* *f) Conduct of the fourth volcanic ash exercise of the AFI region by 30 November 2027 to be coordinated with AAO and SMO Sub-Groups.*				
Who:	*a), b), c) IIM and AAO SG* *d), e), f) IIM, AAO and SMO SG*				
When:	*a), b), e) 30 June 2027* *c) 30 April 2027* *d) 31 December 2027* *f) 30 November 2027.*				
Implementation follow-up					
Follow-up required	Yes ☒ No ☐	Metrics	*1 Workshop on the operationalisatio*	Means to collect	*Reports on the workshops conducted.*

			n of the BBBs monitoring and reporting conducted. *2 ASBU applicable elements updated.* *3 NANP Template developed.* *4 Workshop on SSC prevention conducted.* *5 AASPG Projects Portfolio Dashboard developed.* *6 Fourth volcanic ash exercise conducted.*		*Tables of updated ASBU elements.* *Draft NANP Template.* *AASPG Projects Portfolio Dashboard Tool* *Report on the fourth volcanic ash exercise.*

Proposed recommendations/actions to be taken by ICAO HQ

2.44. The meeting discussed potential actions by ICAO Headquarters and recognized the continued need for support in: (i) implementing System-Wide Information Management (SWIM) and performance-based air navigation; (ii) aligning National Air Navigation Plans (NANPs) with the African Air Navigation Plan; and (iii) strengthening capacity and providing technical assistance for aviation modernization and digital transformation. The meeting encouraged the Secretariat to maintain close coordination with ICAO Headquarters to facilitate appropriate support, as required.

Review of the Terms of Reference and the Work Programme of the Sub-Group

2.45. The Meeting reviewed the Terms of Reference (ToR) and the Work Programme of the IIM/SG for 2026–2027. It was agreed that the existing ToR remains valid and adequate (Appendix 14).

2.46. The Meeting then updated the Work Programme to reflect ongoing and planned activities and agreed to include two coordination meetings per year involving the AAO, IIM and SMO Sub-Groups. The revised Work Programme for 2026–2027 is presented in Appendix 15. The meeting subsequently agreed on the following draft Decision:

Draft AASPG/2 Decision 2/xx: Work Programme for 2026-2027 of the IIM Sub-Group					
Why:	*That, to guide the implementation of the Sub-Group activities*				
What:	*The work programme for 2026-2027 is endorsed*				
Who:	*AASPG*				
When:	*6 November 2026*				
Implementation follow-up					
Follow-up required	Yes ☐ No ☒	Metrics	Not applicable	Means to collect	Not applicable

3. ACTION BY THE MEETING

3.1. The meeting is invited to:

a) Consider the information presented in this working paper, highlighting the work achieved by the IIM/SG;

b) review and adopt, as appropriate, the draft Conclusions and Decisions presented in this working paper; and

c) Provide further guidance as appropriate.

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