



INTERNATIONAL CIVIL AVIATION ORGANIZATION

Ninth Meeting of the AASPG Infrastructure and Information Management Sub-Group (IIM/SG9)

Dakar, Senegal, from 3 to 7 August 2026

Agenda Item : Achievements in Infrastructure and Information Management

3.4: Progress in the Implementation of the AASPG IIM Projects

WP3.4G: Achievements of AASPG AFI-CYRES - Enhancing Cyber Resilience in CNS/ATM systems in the AFI Region

(Presented by PTC of AFI-CYRES)

SUMMARY
This working paper provides an update on the implementation of the AFI-CYRES Project, including progress in the development of the AFI ANS Cyber Resilience Framework and regional cybersecurity capacity-building initiatives undertaken within the AFI Region. The paper highlights achievements to date and proposes actions to further strengthen cybersecurity and cyber resilience in CNS/ATM systems. Action by the meeting in paragraph 3
REFERENCE(S): ▪ Manual on Aviation Information Security Doc 10204 ▪ Mastering the Fundamentals using the NIST Cybersecurity Framework ▪ Global Cyber Risk Considerations Doc 10213 ▪ Global Aviation Security Plan Doc 10118
This working document relates to ICAO Strategic Goals: • <i>A: Every Flight is safe and secure</i> • <i>C: Aviation delivers seamless, accessible and reliable mobility for all.</i>

1. INTRODUCTION

- 1.1 The AFI-CYRES project was established to address the increasing cybersecurity threats and vulnerabilities affecting Communication, Navigation and Surveillance/Air Traffic Management (CNS/ATM) systems throughout the AFI Region.
- 1.2 The growing dependence on interconnected digital infrastructure, including air-ground and ground-ground communications, surveillance data exchange, navigation services, and information infrastructure, has significantly expanded the cyber threat landscape and associated operational risks.
- 1.3 Cyber incidents targeting the aviation sector continue to increase globally, with potential impacts on service availability, operational efficiency and most importantly, aviation safety. In response to these emerging challenges, there is a need for a coordinated and structured regional approach to enhance and strengthen the protection of critical aviation infrastructure.
- 1.4 The project aims to achieve the following key objectives:

- Strengthening cyber security governance and risk managements frameworks
- Improving protection, detection, response and recovery capabilities
- Enhancing regional coordination, awareness and capacity building
- Supporting compliance with ICAO cybersecurity guidance and best practices.

2. DISCUSSIONS

- 2.1 The AFI CYRES Project currently comprises experts from seven (7) AFI States contributing to the achievement of the project objectives.
- 2.2 One of the key ongoing project activities is the development of the AFI ANS Cyber Resilience Framework, which was inherited from the previous IIM Sub-Group work programme. The framework aims to provide guidance to AFI States Air Navigation Service Providers (ANSPs) on to the implementation of cybersecurity governance, risk management and operational resilience measures.
- 2.3 The framework aligns with the ICAO cyber security strategy and internationally recognized cybersecurity frameworks, including the NIST-Cyber Security Framework. The draft framework has been attached as appendix 1 to the working paper.
- 2.4 **Capacity building efforts in AFI Region**
- 2.4.1 CASSOA, in collaboration with the ICAO ESAF Regional Office, conducted a regional workshop entitled “Safeguarding the Digital Sky: Cybersecurity, GNSS Resilience and IT Protection of ATM, CNS and Aviation Security Systems” in Bujumbura, Burundi, from 15 to 17 April 2026. The workshop brought together participants from East African States and aviation service providers to enhance awareness of cybersecurity challenges, GNSS resilience, and cyber incident management.
- 2.4.2 The ICAO WACAF Regional Office organized a Regional Seminar on Aviation Cybersecurity in Dakar, Senegal, from 9 to 11 June 2026, with more than 90 participants from 13 States and various aviation, security, and cybersecurity organizations. The seminar promoted ICAO cybersecurity policies and guidance, regional cooperation, information sharing, and cyber incident response through a Table-Top Exercise (TTX).
- 2.4.3 Both events strengthened participants’ understanding of cyber threats, risk management, incident response and recovery, and reinforced the need for continued capacity-building, information sharing, and regional cooperation to enhance cyber resilience across the AFI Region.

3. ACTIONS BY THE MEETING

- 3.1 The meeting is invited to:
- a) Note the progress achieved by the project team;
 - b) Encourage States to develop and implement structured cybersecurity and cyber resilience strategies to support a comprehensive approach to cyber risk management within CNS/ATM systems;
 - c) Promote stakeholder engagement and collaboration throughout the cybersecurity implementation lifecycle; and
 - d) Provide guidance for the finalization of the draft Cyber Security framework provided in Appendix 1 to this working paper for submission to AASPG.

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