INTERNATIONAL CIVIL AVIATION ORGANIZATION

Eighth Meeting of the AASPG Airspace and Aerodrome Operations Sub-Group (AAO/SG8)

Dakar, Senegal, 14-18 July 2025

Agenda Item 3: Achievements in AOP and ATM/SAR

UPDATES ON ATS PROVISIONS WITHIN ASECNA AIRSPACE

(Presented by ASECNA)

SUMMARY
This information paper aims to raise awareness on the recent developments regarding the provisions of Air traffic services (ATS) within ASECNA airspace. The updates focused on the procedural changes, technical advancements and operational enhancements.
REFRENCE(S): 1. Doc 4444 – PANS-ATM **2.** APIRG/24 Report 3. APIRG/25 report
Related ICAO Strategic Objective(s): A-Aviation Safety B- Air Navigation Capacity and Efficiency

1 INTRODUCTION

1.1 ASECNA is responsible for the provision of Air navigation services over an extensive area of the AFI region covering the aerodromes and airspace under the jurisdiction of 18 member States.

1.2 Over the past years, ASECNA has undertaken major initiatives in line with Global Air Navigation Plan (GANP) and ASBU Framework with the aim at improving safety, efficiency and the interoperability of air traffic services (ATS) reflecting the proactive strategy of the agency to meet growing air traffic demands and achieve global performance targets.

1.3 This working paper focusses on:

a) Expansion and densification of surveillance coverage;

b) Upgrading of TMA and CTR from Class D to Class C;

c) Implementation of AIDC; and

d) Free Route Airspace implementation.

2 DISCUSSION

2.1 Expansion and densification of surveillance coverage

2.1.1 During the 24th and 25th meetings of AFI Planning and Implementation Regional Group (APIRG), ASECNA emphasized the efforts undertaken in deploying ADS-B space based within the area under its jurisdiction covering over 16 million km² of continental and oceanic airspaces.

2.1.2 This deployment seeks to enhance air traffic surveillance, particularly in the remote and areas where continental radar coverage is limited and to support operational improvements such as reduced separation minima (ASEP) and more efficient route structure.

2.1.3 The agency also pointed out the maturity of the ADS-B surveillance environment and the readiness of regional operators to comply with ADS-B mandate, based on a fleet readiness assessment that revealed equipage rates exceeding 90% across all FIRs, with peaks of 99% in Dakar Oceanic FIR.

2.1.4 Apart from sufficient accuracy and update rates of ADS-B, the separation minima may be reduced under other conditions including RCP240 requirements.

2.1.5 ASECNA continuously monitor PBCS to meet RCP 240 and RSP 180 requirements. If needed Dakar, Tana, Nouakchott, Brazzaville, Abidjan, N'Djamena and Niamey ATM systems will be upgraded to facilitate the detection of aircraft not meeting PBCS specifications.

2.1.6 With the increase occurrence of GNSS interference worldwide, concerns have grown over its impact on ADS-B, which use GNSS for position determination. In response of these disruptions, the Agency has order Independent Position Validation (IPV) and Independent Position Check (IPC) as mitigations tools to enhance the robustness of ADS-B services. These functionalities, which meet applicable safety requirements, enable the independent verification of aircraft positions in the event of avionics failures, spoofing attacks, or intentional GNSS jamming.

2.2 Upgrading of TMA and CTR from Class D to Class C

2.2.1 As part of the continuous improvement of Air Navigation Services, the Agency has gradually transitioned from procedural control to surveillance-based control using ATS surveillance systems, following more than a decade of operational deployment of radar and ADS-B surveillance capabilities.

2.2.2 In the terminal area (TMA) and Control region (CTR), the radar vectoring brought a new challenge in managing mixed mode operations involving IFR, under vectoring, and VFR within Class D airspace which increase operational complexity. Instances of VFR traffic interfering with IFR flight paths have highlighted limitations in maintaining adequate separation and situational awareness under current airspace classification.

2.2.3 In response to this new challenge and in order to harmonize air traffic services provisions with the adjacent airspaces in the region, ASECNA has decided to upgrade TMAs and CTRs from class D to class C. The implementation of this transition has been conducted in compliance with change management process and the appropriate publication has been made.

2.3 Implementation of AIDC

2.3.1 The ATS Inter-Facility Data-Communication (AIDC) is a key enabler for improving operational efficiency trough the automation of flight data exchange. It also enhances safety by minimizing ATC manual intervention and reducing the risk of coordination errors between adjacent Air Traffic Services Units (ATSU). This ASBU element (FICE-B0/1) serves as an initial milestone in the progressive implementation of more complex information exchanges, particularly those supporting Trajectory-based operations.

2.3.2 ASECNA drafted an internal handbook procedure on the implementation of AIDC including safety assessment process and revision of Letter of agreement (LOA) between ATS centers. This procedure is used by all ASECNA Centers to deploy AIDC links and can be shared with others states on request.

2.3.3 ASECNA has reviewed and assessed the prerequisites considerations for implementation of AIDC and the outcomes show that all ATM systems in ASECNA centers meet technical and operational requirements.

2.3.4 Thus, the following AIDC links have been implemented: Dakar/Abidjan, Dakar/Atlantico, Abidjan/Accra, Brazzaville/Douala, Brazzaville/Libreville, Lome/Accra, Ouaga/Abidjan. Others are still under process.

2.4 Free route Airspace

2.4.1 ASECNA has adopted a phased approach for the implementation of Free Route Airspace (FRA) in alignment with AFI FRA implementation Roadmap. This initiative is built upon the operational experience and efficiency gains achieved using direct routing (DRO) operations during the COVID-19 pandemic.

2.4.2 Close coordination was observed with adjacent Air Traffic Service Unit during all phase of the implementation ensuring smooth connectivity with the surrounding airspace and the underlying fixed ATS route network.

2.4.3 Since January 2024, ASECNA has implemented FRA which allows pilots to file in section 15 of FPL the direct routing they want to use in our FIR.

2.4.4 Following the successful implementation of the concept, the agency plans to conduct a structured user satisfaction survey to assess the operational impact and gather feedback from airspace users with the aim to evaluate perceived benefits in terms of flight efficiency, fuel saving and trajectory flexibility.

3 ACTION BY THE MEETING

3.1 The meeting is invited to:

- Take not of the information in this working paper;
- reopen the debate on the ADS-B Out mandate, considering the missed implementation deadline initially established for RVSM airspace; and
- call on States and ANSPs in charge of airspaces adjacent ASECNA FIRs to timely implement AIDC link with ASECNA ATS Units.