



ICAO

2023 - EIGHTH AFI Aviation Week

Session 3 : Air Navigation Capacity and Efficiency Seamless Sky initiatives in Africa (Presented by ASECNA)

SUMMARY

The Single Sky for Africa is an ambitious program, approved by the Committee of Ministers, through ASECNA's Air Navigation Services Master plan, which aims to build a seamless sky in order to make air navigation in Africa more efficient and safer and thus contribute sustainably to the operationalization of the Single Air Transport Market (SAATM) to stimulate the economic and social development of the African continent.

The purpose of this working paper is to provide an update on the progress of the program.

Action by the meeting is in paragraph 3.1

<i>Strategic Objectives</i>	Air Navigation Safety, Capacity and Efficiency.
<i>References</i>	<ul style="list-style-type: none"> ✓ Doc 4444 ✓ Several AFI region ANSP meetings reports.

(Nairobi, Kenya, 21 - 25 August 2023)

1 INTRODUCTION

- 1.1 The global air transport sector is undergoing major change and will have to face up to several important challenges. On the African continent: the forecasted growth in air traffic, the intrinsic context of this continent, the issue of economic performance (cost reduction or optimization), respect for the environment, and of course maintaining a very high level of air safety constitute the major challenges for air traffic management over the next 20 years.

- 1.2 Clearly, Africa must seek opportunities and solutions to these challenges, and equip itself with tools capable of providing a strategic, coordinated, and appropriate response.
- 1.3 The Global Air Navigation Plan (GANP), related ICAO documents and their variations in the AFI region (ASBU, Vision 2045, etc.) provide a framework for strategic air traffic management planning and encourage all ANSPs and States to move towards a Single Sky solution.
- 1.4 The main aim of the Single Sky for Africa concept is to meet these challenges and encourage the creation of seamless airspace across the continent.

2 DISCUSSION

- 2.1 Implementing the "Single Sky" is like putting together a huge jigsaw puzzle, made up of a multitude of pieces as numerous as they are diverse, notably in the technical, operational, regulatory, legal, institutional, information systems security, financial and human fields. Systems interoperability is essential if all the pieces of this puzzle are to be interchanged, that is current and future resources in all fields are to be connected, integrated, and made to communicate without difficulty.
- 2.2 The protection and integrity of all data is a priority, with the implementation of a Security and Governance Policy for Information Systems used in air traffic management. This requires compliance of all technical and operational resources, integration and pooling of new system resources, automation of certain functions and implementation of operational changes brought about by new technologies.
- 2.3 Several technological innovations are already underway at ASECNA to support the implementation of the Single Sky. These include :
 - ✓ The implementation of ADS-B by satellite since 2020, which offers a total visualization of the air situation in our airspace, with the introduction of enhanced separation (ASEPS) in remote continental and oceanic airspace ;
 - ✓ Experiments underway with AIREON to implement ATFM as a prelude to better optimization of capacity to meet demand in the event of traffic growth, peak hours and other capacity-limiting events ;
 - ✓ The ongoing implementation of FRA (Free Route Airspace), an airspace concept in which aircraft can fly directly from one point to another without following pre-established routes, giving greater flexibility in the choice of flight paths, flight path optimization and a reduction in flight time;
 - ✓ The ongoing deployment of ANGA (Augmented Navigation For Africa), an SBAS solution developed by Africa for Africa, which improves the accuracy of en-route navigation services and offers approach procedures equivalent to ILS Category I precision approaches within a very wide radius covering several airports at once;

- ✓ The ongoing implementation of SWIM (Wide Information Management System), which will improve situational awareness for collaborative decision-making by all stakeholders during all strategic and tactical phases of flight by ensuring the timely circulation of quality information.
- 2.4 As regards to progress on the CUPA (Single Sky For Africa) project, CUPA feasibility studies have been carried out and presented to ASECNA's statutory bodies (Board of Directors and Committee of Ministers). A communication plan for the project has been drawn up and is currently being implemented. Papers have already been presented at WACAF, the ANSP AFI meeting and the African Union workshop in Casablanca.
- 2.5 Experiments are underway on the pilot site, the Brazzaville FIR, with a concept of operations already developed. The change has been the subject of a generic safety study, which will be contextualized by the operational centers. The major CUPA axes are currently being aligned with the Agency's strategic orientations.
- 2.6 On the regulatory front, the financial and technical capacities of AAMAC (African and Malagasy Civil Aviation Authorities) have been strengthened to support States in harmonizing the texts governing air navigation service providers.

3 FOLLOW UP ACTION BY THE MEETING

- 3.1 The meeting is invited to:
 - a) Note the information in this paper ;
 - b) discuss any relevant matters as appropriately.

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