



INTERNATIONAL CIVIL AVIATION ORGANIZATION

First Meeting of the Africa - Indian Ocean Aviation System Planning and Implementation Group (AASPG/1)

Libreville, Gabon, 3 - 7 November 2025

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

Modernization of CNS/ATM Infrastructure, Technical Capacity Building, and Efforts Undertaken in the Resolution of Significant Safety Concerns (SSCs) in the Democratic Republic of the Congo

(Presented by Régie des Voies Aériennes (RVA), DRC)

SUMMARY

This working paper highlights the progress made by the Democratic Republic of the Congo (DRC), through the Régie des Voies Aériennes (RVA), in modernizing air navigation infrastructure and services (CNS/ATM).

These advancements are part of Phase 2 of the Priority Projects for Aviation Safety (PPSA), aimed at enhancing safety, operational performance, and regional alignment with the AFI Plan targets.

The RVA has also initiated a proactive approach to address the Significant Safety Concerns (SSCs) identified during the USOAP CMA audit, in the Air Navigation Services domain. This includes the flight calibration of navigation aids (NAVAIDs), the progressive validation of instrument flight procedures, and the implementation of corrective actions in close coordination with the Civil Aviation Authority (CAA/DRC).

Action by the Meeting provided in paragraph 3

REFERENCE(S)	1. Priority Projects for Aviation Safety (PPSA) – Phase 2. National CNS/ATM Plan
Strategic Objectives	A – Safety B – Capacity and Efficiency

1. INTRODUCTION

The Kinshasa Flight Information Region (FIR) occupies a strategic position at the heart of the African continent, connecting the major north–south and east–west air traffic corridors.

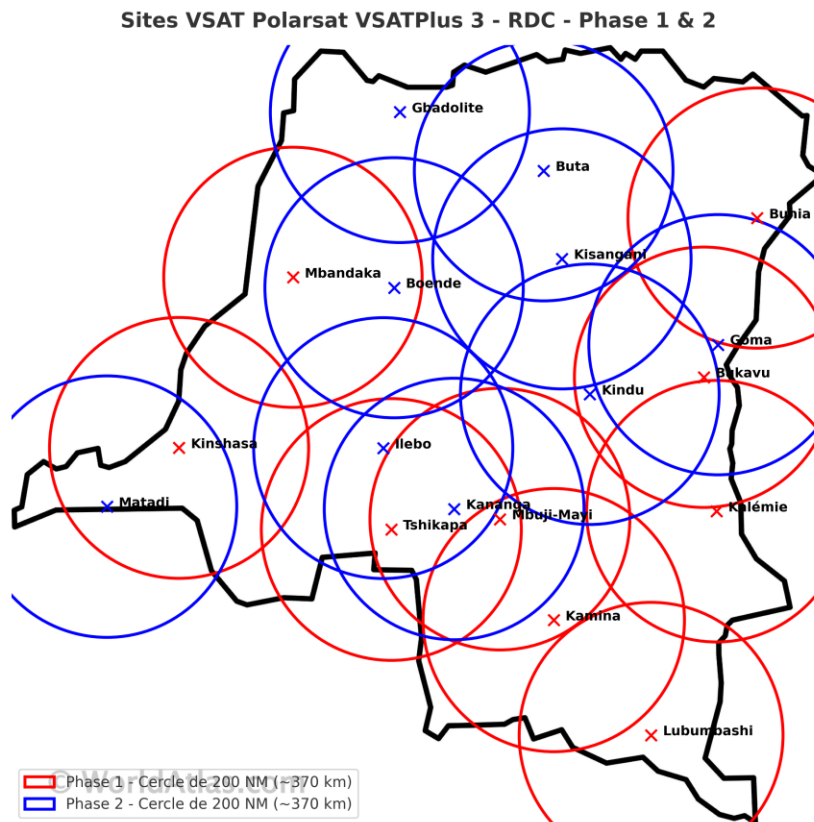
In recognition of this role, the Régie des Voies Aériennes (RVA) has launched a comprehensive modernization programme targeting air navigation infrastructure and services. This initiative contributes to the sustainable development of aviation in the AFI Region and supports the implementation of relevant modules of the ICAO Global Air Navigation Plan (GANP).

2. DISCUSSION

2.1 Communications – VSAT/ATS DS and Surveillance Data

The national VSAT network, which supports ATS voice communications, surveillance data transmission, and aeronautical messaging, is undergoing a full-scale upgrade.

- A total of 19 full-IP VSAT-3 stations are planned to replace the legacy VSAT-2 systems. To date, ten stations have been already delivered and are being installed at the following locations: Kinshasa, Lubumbashi, Bukavu, Bunia, Kalemie, Kamina, Kikwit, Mbandaka, Mbuji-Mayi, and Tshikapa. The second phase will cover Kisangani, Boende, Buta, Gbadolite, Goma, Ilebo, Kananga, Kindu, and Matadi.
- Components recovered from decommissioned stations are being temporarily reused pending the delivery of the remaining units. Each station will be equipped with hybrid power systems (solar + generator) to address recurring energy supply shortages.
- The VSAT-3 system also supports AFTN/AMHS and ATS Direct Speech (ATS DS) services, thereby strengthening the reliability and resilience of the regional aeronautical communication network.



2.2 Navigation – NAVAIDs and PPSA Phase 2

Under the Priority Programme for Aviation Safety (PPSA – Phase 2):

- Six (6) new DVOR/DME systems have been installed at Kinshasa/N'djili, Lubumbashi/Luano, Goma, Mbuji-Mayi, Kindu, and Mbandaka;
- Two (2) existing CVOR/DME units have been maintained at Kisangani and Bunia, bringing the total to eight operational stations.
- Five (5) ILS/DME systems are operational at N'djili, Luano, Kisangani, and Kindu, with a fifth one being installed at Mbuji-Mayi, thereby enhancing the safety of precision approaches.

The Democratic Republic of the Congo is currently under a Significant Safety Concern (SSC) raised during the USOAP CMA ANS audit, due to the incomplete calibration of NAVAIDs and the non-validation of certain instrument approach procedures.

In response, the RVA has taken immediate corrective actions, including the planning and execution of a calibration campaign in collaboration with ATNS (South Africa), whose report was submitted last September. This has been complemented by the progressive validation of flight procedures at N'djili, Luano, and Bangoka, along with a firm commitment to comply with ICAO's corrective action deadlines in close coordination with the Civil Aviation Authority (CAA/DRC).

Flight inspections have been successfully conducted at N'djili, Luano, Kisangani, and Mbandaka. A renewed calibration at Mbandaka is planned under the AERONAV contract, which will also include Mbuji-Mayi.

Consequently, the RVA will request, through the appropriate mechanisms, the formal resolution of the SSCs related to these areas, in recognition of the significant progress achieved and the ongoing implementation of the corrective action plan. The flight inspection report will be transmitted through official channels.

2.3 Radio Communications and Surveillance

- Eight new VHF air-ground channels have been installed at Ndolo, Mbandaka, Gemena, Matadi, Ilebo, Gbadolite, and Kananga, with a ninth planned for Isiro.
- A new integrated ATC system has been commissioned at the Mbuji-Mayi technical block, with a similar deployment at Muanda Airport.
- Surveillance capability has been significantly enhanced through the integration of a satellite-based ADS-B system, which complements the existing terrestrial infrastructure and extends the FIR coverage up to 50 NM beyond its conventional boundaries. Two Satellite Data Processing (SDP) service delivery points have been established in Kinshasa and Lubumbashi, operating in a live-live redundancy configuration to ensure continuous data availability.
- The ADS-C/CPDLC system has also been successfully implemented, ensuring nationwide coverage and serving as a key enabler for efficient overflight traffic management.

2.4 Conclusion

The progress achieved by the RVA reflects the national commitment to ensuring the safety, reliability, and continuity of air navigation services within the Kinshasa FIR. These efforts contribute directly to the achievement of regional performance objectives on aviation safety and air navigation (Abuja Targets), and to support the implementation of the AFI Regional Air Navigation Plan.

3. ACTION BY THE MEETING

The meeting is invited to:

1. Take note of the progress achieved by the Democratic Republic of the Congo in the modernization of CNS/ATM infrastructure.
2. Encourage the continued deployment of the full-IP VSAT-3 network and the ongoing PPSA programs;
3. Acknowledge the efforts undertaken by the RVA to address the deficiencies identified during the USOAP CMA audit (Air Navigation Services domain), particularly regarding the calibration and validation of NAVAIDs and the validation of instrument approach procedures.
4. Support the national initiative led by the DRC to resolve the Significant Safety Concerns (SSCs) with the active involvement of all relevant stakeholders; and
5. Encourage the continued coordination between the RVA, the Civil Aviation Authority of DRC (CAA/DRC), and the ICAO Secretariat for the technical and administrative monitoring of compliance.

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