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 safety and air navigation goals, targets and indicators, including priorities set in the Regional Aviation Safety and Air Navigation Plans

4.4. AFI Airspace Monitoring

Implementation of Continuous Climb and Descent Operations (CCO/CDO) at Douala International Airport

(Presented by Cameroon)

SUMMARY	
This paper presents the progress made by Cameroon in the process of implementing continuous climb and descent operations (CCO/CDO) at Douala International Airport. The meeting is invited to take note of the progress made by Cameroon in implementing CCO/CDO.	
REFERENCE(S)	- APIRG/22 Conclusion 22/08 - APIRG/23 Conclusion 23/05
Strategic goals	Every flight is safe and secure

1. INTRODUCTION

1.1. With the aim of providing optimised, safe and up-to-date flight paths to aircraft in the terminal area of the Douala International Airport, Cameroon through the Agency for Air Navigation Safety in Africa and Madagascar (ASECNA), has reviewed Douala's instrument flight procedures to take into account continuous climb and descent operations (CCO/CDO) concepts.

1.2. This revision, which was included in ASECNA's 2023 action plan, was part of the implementation of APIRG/22 Conclusion 22/08 and APIRG/23 Conclusion 23/05, relating to the implementation of PBN CCO/CDO procedures.

2. DISCUSSION

2.1. Taking into account all considerations arising from the data collection carried out upstream, including statistical studies related to air traffic in the Douala TMA, the new Conceptual Design for departure and arrival trajectories on each of the QFUs at Douala International Airport integrates the new traffic entry and exit points. This was designed to minimise the number of crossings between departure and arrival trajectories in order to reduce potential conflicts between these two types of traffic. In addition, altitude restrictions were set at the selected crossing points, allowing traffic around these points to be strategically separated.

2.2. The project-related safety study (EDS) carried out in November 2023 covered all the main points relating to the introduction of CCO/CDO into the existing ATM system. At the end of this study, a total of seven (07) feared events were identified, including non-compliance with a flight level restriction during a CCO/CDO, loss of communication with an aircraft in CCO/CDO, and interference between the flight paths of two aircraft, one of which was in CCO/CDO, to name a few.

2.3. The risk mitigation measures implemented mainly addressed aspects related to training and awareness-raising for air traffic controllers, as well as updating existing operational procedures. As a result, awareness-raising sessions were conducted for controllers. These sessions enabled them to learn about CCO/CDO and get acquainted with the changes introduced by the new flight procedures. In addition, new scenarios were integrated into the simulation exercises to take into account CCO/CDO, cases of loss of communication during CCO/CDO, and the simultaneous use of CCO/CDO procedures and conventional procedures, among others.

2.4. The revision of instrument flight procedures in Douala has led to the introduction of five (05) new 5LNC points to take into account the new traffic entry and exit points in the Douala TMA.

2.5. The new flight procedures for Douala came into effect on the AIRAC date of 10 July 2025.

2.6. The implementation of CCO/CDO flight paths at the Douala International Airport was welcomed by the various stakeholders due to the expected benefits of these new flight paths, namely:

- noise reduction around the airport;
- reduced fuel consumption for companies;
- the reduction of CO2 emissions from aircraft;
- reducing the number of ATC-Pilot communications;
- improved airspace capacity; and
- maintained general aircraft safety in the Douala TMA.

2.7. The introduction of CCO/CDO flight paths at the Douala International Airport enabled Cameroon to make significant progress in implementing international and regional guidelines on air traffic optimisation. Still in the same vein, building on the experience gained through this project, a plan will be set out to take into account this type of trajectory during the next review of instrument flight procedures at other international airports, such as Yaounde-Nsimalen and Garoua.

3. ACTION BY THE MEETING

3.1 The meeting is invited to take note of the progress made by Cameroon in implementing CCO/CDO procedures at its international aerodromes.