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International Civil Aviation Organization  
African Flight Procedure Programme

**11<sup>th</sup> Meeting of the African Flight Procedure Programme Steering Committee**  
Lusaka, Zambia, 21 - 23 May 2025

**Agenda Item 4: Review of the performance of the Programme**

**Working Paper 4.4: PBN implementation status in the AFI Region**

(Presented by the Secretariat)

**EXECUTIVE SUMMARY**

This paper reports on the performance-based (PBN) flight procedures' implementation status in Africa. PBN flight procedures hereby relate to PBN arrival, approach and departure procedures. PBN route network is excluded since it is not part of the initial assignment of the Programme.

**Action by the meeting is indicated in section 3.**

**REFERENCES**

- Phase III project document
- Project quarterly reports

**1. INTRODUCTION**

- 1.1 In 2008 ICAO developed the Performance-based navigation (PBN) concept and urged Member States to complete National PBN Implementation Plan (NPIP) by 2009 to achieve implementation of PBN flight procedures for all phases of flight by 2016.
- 1.2 To this end, the AFI Region provided a PBN implementation roadmap to serve as model for the development of their own plan.
- 1.3 PBN implementation starts with prerequisites followed by a national PBN implementation plan and then, design of routes and flight procedures.
- 1.4 PBN flight procedures here refer to PBN arrival, approach and departure procedures. PBN route network is excluded since it is not part of the initial assignment of the Programme.
- 1.5 The working paper presents the PBN implementation status in Africa as of 21 May 2025.



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## 2. DISCUSSION

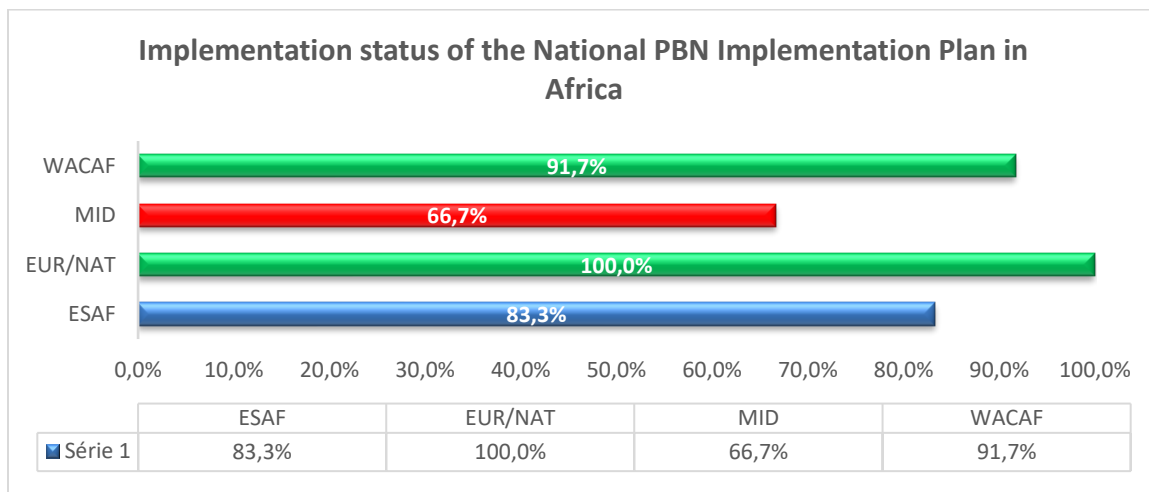
3. Given its benefits, PBN implementation is part of ICAO priorities in the global Air Navigation Plan (GANP). For the same reason, the Assembly took resolution A37-11 superseding Assembly Resolution A36-23 and urging States to implement PBN as a matter of urgency.
4. PBN implementation starts with the completion of a national PBN followed by the conduct of a WGS-84 survey at the concerned aerodromes and then, the development of the flight procedures.
5. However, the continent faces many challenges for the PBN implementation:
  - a) insufficient WGS-84 survey or non-periodic survey: the qualified survey companies are very few and the cost are found prohibitive;
  - b) Lack of instrument flight procedure designers;
  - c) Lack of IFPD and charting automation solutions;
  - d) Navais calibration (including GNSS); as stipulated in Doc. 8071 (Navaid calibration), Navaid must be calibrated on a periodic basis;
  - e) Flight evaluation: there are very few flight validation and flight inspection companies in the Continent and the cost are deemed expensive.
  - f) Revision of Instrument Flight Procedures (IFPs); IFPs shall be revised maximum every five years.
6. These issues impact the PBN implementation and more generally the maintenance of the instrument flight procedures. When safety of the flight procedures is affected, it can result in issuance of a Safety Significant Concern (SSC). Unfortunately, with 50 per cent in the SSCs in the world, Africa holds a sad record that we must reverse.
- 6.1 As shown below, the implementation Status of the national PBN implementation plan is satisfactory. However, eight (8) States have not yet completed it despite our efforts:
  - a) Burundi,
  - b) Central African Republic
  - c) Djibouti;
  - d) Eritrea;
  - e) Guinea Bissau;
  - f) Lesotho
  - g) Libya; and
  - h) South Sudan.



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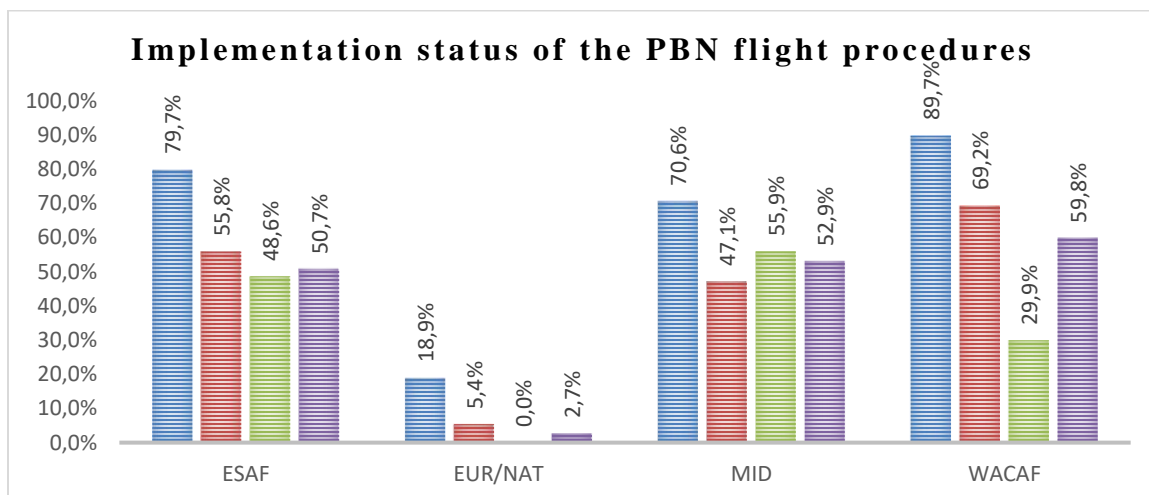
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6.2 The implementation rate of the PBN flight procedure is also significant. However, due note should be taken for the following States that have not yet implemented any PBN flight procedures:

- Burundi;
- Eswatini
- Libya;
- Sao Tome and Principe
- Tunisia;
- Zimbabwe.





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7. **ACTION BY THE MEETING**

7.1 The Steering Committee is invited to:

- a) take note of the information provided in this paper; and
- b) encourage States and ANSPs to follow the ICAO quality assurance and the annex 4 provisions to enhance the flight safety and avoid SSCs.

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