

**INTERNATIONAL CIVIL AVIATION ORGANIZATION**
**Sixth Meeting of the APIRG Airspace and Aerodrome Operations Sub-Group  
(AAO/SG 6)**
**4 - 8 September 2023**
**Agenda Item 3: Achievements in Airspace and Aerodrome Operations**
**REPORT OF THE AFI PBN ROUTE LABORATORY**
*Presented by the Secretariat*

<b>SUMMARY</b>
<p>The purpose of the AFI PBN Route Laboratory was to ascertain the status of implementation of the AFI Air Navigation Plan approved routes along with activities to develop new AFI PBN routes as per requested requirements of participants in line with the PBN concept, Provide guidance to improve participant understanding of the PBN Concept as described in ICAO Doc 9613 and assist in the implementation of stakeholder routing requests as per PBN Concept</p>
<p><b>REFERENCE(S):</b></p> <ul style="list-style-type: none"> <li>- APIRG/24 Conclusion 24/12: Optimization of the ATS Route Structure in the AFI En-Route Airspace</li> <li>- ICAO Doc 9613</li> <li>- AFI eANP</li> <li>- UN SDGs &amp; 9</li> </ul>
<p><b>Related ICAO Strategic Objective(s):</b></p> <p><b>A</b> – Aviation Safety, <b>B</b>- Air Navigation Capacity and Efficiency, <b>D</b>- Economic Development, <b>E</b> – Environmental Protection.</p>

**1. INTRODUCTION**

1.1 The AFI Performance Based Navigation (PBN) Route Laboratory was hosted by the ICAO Eastern and Southern Regional Office (ESAF) in Nairobi, Kenya. Fifty-nine participants representing 18 States and Air Navigation Services Providers in the Africa - Indian Ocean Region and 3 International Organizations attended the workshop.

The workshop covered various aspects which included the Performance Based Navigation (PBN) Concept and the Free Route Airspace (FRA) concept

**2. DISCUSSION**

2.1 The African Flight Procedure Programme (AFPP) presented on the PBN Concept and application thereof while the Free Route Airspace (FRA) project lead provided an outline of the progress made concerning the implementation of FRA in each of the four implementation clusters established in the AFI region.

2.2 The workshop also addressed how a robust and well developed PBN route structure acts

as a precursor to FRA.

2.3 A recap of the 2019 Route Laboratory was given with special emphasis being placed on the need to implement CCO/CDOs.

2.4 GANP identification of PBN as being the global aviation community's highest air navigation priority was discussed and noted.

2.5 The implementation issues noted by states at the 2019 route laboratory were once again discussed and noted by participants.

2.6 The PBN Concept in its entirety was presented by APCC to once again emphasize the importance of the PBN fundamental requirements to allow more advanced PBN aspects to be built on and implemented.

2.7 Changes to ICAO Doc 9613 were presented and discussed by participants. Emphasis on the new navigational specification requirements were noted.

2.8 The AFI Air Navigation Plan route catalogue was presented and implementation status by participating States was reported on and noted.

2.9 A review of the Free routing airspace (FRA) implementation as per each cluster was made by the project management team lead. PBN route structure as precursor to FRA was presented and noted.

2.10 A review of the requested new stakeholder routings was presented. The outline of the information required to see and understand the requirement was presented and listed on the ESAF website and noted by participants.

2.11 Combined with the requested routings were the decision of using RNAV 5 Navspec and the request for new 5LNC's were noted.

2.12 Letter of agreement between States was discussed and noted along with evaluation of existing route requirements.

2.13 Lessons learned from previous PBN routing implementation and challenges were discussed and noted. The need for operational approval as well as safety /Regulatory approval were discussed and noted.

2.14 The effect of new routings on existing TMA SID/STARs was discussed and noted.

2.15 The project review was undertaken, implementation plans, and implementation dates agreed upon.

### **3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) Take note of the actions undertaken at the laboratory.
- b) Urge the States to support the implementation of new PBN routes in the AFI region.
- c) Review and reconstitute the PBN project management membership as contained in Appendix A to the WP.

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