



*International Civil Aviation Organization*

**The First Meeting of ICAO Asia/Pacific Performance Based Navigation  
Implementation Coordination Group (PBNICG/1)**

Beijing, China, 10-12 March 2015

- 
- Agenda Item 3: Global and Regional PBN Updates and States' PBN Implementation Progress**  
**Agenda Item 5: Implementations of PBN in Terminal Area**  
**Agenda Item 7: Regional and Sub-regional Implementations of PBN in En-route Airspace**  
**Agenda Item 9: Working Arrangements for PBN Region-wide implementations**

**PBN IMPLEMENTATION IN PAKISTAN**

(Presented by Pakistan)

**SUMMARY**

This paper presents the current status and plans for PBN implementation in Pakistan.

**1. INTRODUCTION**

1.1 PBN is one of several enablers of an airspace concept. The introduction of PBN has led to significant benefits which met the emerging requirements of the entire aviation community. ICAO Assembly Resolution A37-11 therefore urged all States to implement air traffic services (ATS) routes and approach procedures in accordance with the ICAO PBN concept. PBN is still the highest priority of aviation industry and has been included in ICAO ASBU concept. Block Module on “Optimization of approach procedures including vertical guidance”(B0-APTA) , “Continuous Descent Operations” (B0-CDO) and “Continuous Climb Operations” (B0-CCO) are integral part of PBN implementation. Besides the terminal application, PBN has important role in Regional and International en-route operations by providing harmonized traffic flows across the globe.

**2. DISCUSSION**

**En-route Implementation**

2.1 Pakistan is at the boundary of the Asia/Pacific region interfacing with MID region. It has adjoining airspace of Oman and Iran towards west where RNAV 5 is being used. RNP 10 was implemented in APAC region earlier which is still being used to gain the benefits of 50NM Reduced Horizontal Separation.

2.2 Pakistan transformed 17 ATS Routes serving major traffic flows into PBN ATS routes with navigation specification of RNP 10 and RNAV 5 for en-route phase to support regional harmonization. To reap maximum benefits from PBN implementation domestic routes are under study for transformation. Pakistan is also looking forward towards APAC seamless ATM implementation plan and will review navigation specifications as per regional requirement.

### **Terminal Implementation**

2.3 Pakistan has obtained the real benefits in terms of access to the runway ends at two international airports i.e. JIAP Karachi and BBIAP Islamabad where no instrument approach procedures was available except visual circling due to airspace constraints. RNP APCH procedures were implemented on these runways to provide runway aligned approaches thus increasing safety and efficiency as well. Non-ILS equipped RWY18L/R of AIIAP Lahore was then given priority for PBN implementation and RNP APCH procedures were implemented last year.

2.4 Pakistan CAA is now working with high pace to complete the target for providing RNP APCH to all international runways by 2016. In this connection, draft procedures have been completed for RNP APCH for the following runways awaiting flight validation and are likely to be implemented during 2<sup>nd</sup> quarter of 2015:

- RWY07L Jinnah International Airport Karachi
- RWY35 Bacha Khan International Airport Peshawar
- RWY03/21 Faisalabad International Airport
- RWY08/26 Gwadar International Airport
- RWY08/26 Bahawalpur International Airport

2.5 In order to extend the PBN benefits to domestic operation, Pakistan CAA has implemented RNP APCH procedures RWY14/32 at Sukkur Airport whereas drafts for RWY08/26 of Moenjodaro Airport are ready for flight validation.

2.6 Pakistan CAA has also started work on PBN STARs and RNP APCH Procedures for runways equipped with ILS including RWY25L/R of JIAP Karachi and RWY36R/L of AIIAP Lahore which are likely to be implemented by end 2015.

### **Working Arrangements for PBN Region-wide implementations**

2.7 ICAO APAC FPP office was established with objective to assist States to develop sustainable capability in the instrument flight procedure (IFP) domain so as to meet their commitments for Performance Based Navigation (PBN) implementation. FPP has played a vital role in PBN implementation through training, assistance with quality assurance and assistance in Flight procedure design. Pakistan has not only been participating in FPP training programs but has also provided regular support to the project by providing qualified PANS-OPS instructor whenever required by FPP.

2.8 Besides other arrangements, the role of the aircraft operators is of vital importance. It will not be out of place to recognize efforts of M/s Emirates who supported / collaborated with Flight Procedure Design Branch, Pakistan by undertaking simulation and test flights of designed instrument approach procedures. Such arrangements if explored by other states could be very useful to accelerate PBN implementation within respective areas.

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

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) discuss any relevant matters as appropriate.

.....