



International Civil Aviation Organization

**THE THIRD MEETING OF PERFORMANCE BASED NAVIGATION
IMPLEMENTATION COORDINATION GROUP (PBNICG/3)**

Bangkok, Thailand, 08 – 10 March 2016

Agenda Item 5: States' PBN Implementation Progress

b) review and adoption of PBN Implementation Progress Report results

UPDATE ON LAO PDR PBN IMPLEMENTATION

(Presented by Lao PDR)

SUMMARY

This paper provides information on the latest progress of PBN implementation in Lao PDR.

1. INTRODUCTION

1.1 ICAO Assembly resolution A37-11 urged all States to implement RNAV and RNP air traffic services (ATS) routes and approach procedures in accordance with the ICAO PBN concept laid down in the Performance-based Navigation (PBN) Manual (Doc 9613).

1.2 Lao PDR cooperated with Japan International Cooperation Agency "JICA" to run the Project for the New CNS/ATM implementation in Lao PDR and PBN is a key element of the Project. Recognizing the benefits of PBN, Lao PDR has established a national PBN Task Force to study of PBN technology, requirements for implementation and foster a cooperative approach among country aviation stakeholders in the implementation of PBN. The national PBN Task Force is responsible for developing policy, implementation plans, and implementation standards for the deployment of PBN procedures and operations in Lao PDR.

1.3 April 2011, Lao PDR PBN implementation roadmap version 1.0 was adopted which was in line with the ICAO Asia-Pacific Regional PBN Implementation Plan. The roadmap allows both ANSP and aircraft operators to progress in tandem taking into consideration the avionics capabilities and air navigation infrastructures in the Lao PDR.

2. IMPLEMENTATION STATUS

In response to the Recommendation by the JICA Mid-term Review Team, regarding to the Lao PDR PBN roadmap version 1.0 that the introducing PBN flight procedure at 4 international airports and 3 domestic airports by the end of 2015 and other 4 domestic airports in 2016. However, many of the domestic airports have no PBN capable flights and low traffic density. Taking into account the

government decision of budget for WGS-84 survey and flight validation as well as future airport development plan, in particular, of Savannakhet Airport, also give due consideration to the ICAO Assembly Resolution 37-11. On dated 20 January 2015, Lao PDR PBN roadmap is reviewed by Air Navigation Division as following:

2.1 Implementation of PBN in En-Route Airspace

2.1.1 City-pair RNAV5 route between Vientiane-Luang Phabang was set up on dated 10 December 2015; as the same implementation date of VLLB SIDs/STARs and IAPs. However it was delayed due flight validation. The new implementation dated will be 23 June 2016 while flight validation is planned to be in late March 2016.

2.1.2 In additional to the domestic PBN implementation, RNAV 5 parallel route to R474 to space the aircrafts arriving and departing to and from Vientiane and Hanoi has been planned with route spacing of 18 NM and its ending points on both sides have been distinguished.

2.1.3 Lao PDR, Cambodia and Vietnam agreed to establish the RNAV 5 Route to overlay the current ATS Route B329 from PhnomPenh-Pakse-Hanoi. Regarding the implementation date of this RNAV 5 route, Cambodia on behalf of Lao PDR and Vietnam had kept contact with ICAO Regional Office on this matter.

2.2 Implementation of PBN in TMA and Approach Airspace

There will be 35 PBN flight procedures in terminal and approach airspace as below (in accordance with Lao PDR PBN Roadmap), design of which is completed:

2.2.1 Vientiane international airport: 5 RNAV1 SIDs, 5 RNAV1 STARs and 1RNP APCH have been implemented since 12 December 2013.

2.2.2 Pakse international airport: 6 RNAV1 SIDs, 3 RNAV1 STARs and 1RNP APCH have been implemented since 11 December 2014.

2.2.3 Luangphabang international airport: 6 RNP1 SIDs, 6 RNP1 STARs and 2 RNP APCH planned to implement on 10 December 2015. However it was delayed due flight validation.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

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