



*International Civil Aviation Organization*

**TWELFTH MEETING OF THE PERFORMANCE BASED NAVIGATION  
IMPLEMENTATION COORDINATION GROUP (PBNICG/12)**

*(Beijing, China 16- 18 December 2025)*

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**Agenda Item 4: States' PBN Implementation Progress and the challenges faced by the States and lessons learnt.**

**UPDATE ON PBN IMPLEMENTATION IN LAO PDR**  
(Presented by Lao PDR)

**SUMMARY**

This paper presents the current PBN implementation status in Lao PDR, including updates on terminal and approach procedures, enroute and completion of the transition from RNAV to RNP chart identification.

**1. INTRODUCTION**

1.1 According to the Revision of Lao PDR PBN Roadmap in 2015 defines a phased plan for implementing PBN flight procedure at international and domestic airport. Lao PDR has faced challenges including a limited number of PBN-capable of ATCOs, Pilots and airlines fleet, low traffic density at domestic airports, budget constraints related to WGS-84 surveys and flight validation requirements.

1.2 This paper summarizes the current implementation status, ongoing development activities, and future plans for PBN implementation in Lao PDR.

**2. DISCUSSION**

**PBN Implementation Status**

**Terminal and Approach**

2.1 New RNP APCH and RNP 1 SID/STAR procedures for Bokeo International Airport (VLBK) became effective on **29 May 2025** through AIRAC AIP Supplement A02/25.

2.2 Additional RNP 1 SID and STAR procedures for Luangphabang International Airport (VLLB) were introduced via AIRAC AIP Supplement A03/25, effective 30 October 2025.

2.3 The RNP 1 STAR at Xiengkhuang Airport (VLXK) was withdrawn due to aerodrome construction activities for extension of the runway, construction of taxiways, new airport terminal and apron.

2.4 The table below summarizes the status of PBN implementation at terminal and approach airspaces.

Table 1 - PBN Terminal and Approach Implementation in Lao PDR

Aerodrome	Runway characteristic	RNP APCH (LNAV)	SID (RNAV1)	STAR (RNAV1)	SID (RNP1)	STAR (RNP1)	Remarks
<b>International Airport</b>							
Wattay/Vientiane (VLVT)	13	1	-	5	-	-	
	31	-	5	-	-	-	
Pakse/Champasack (VLPS)	15	1	3	3	-	-	
	33	-	3	-	-	-	
Luang Phabang (VLLB)	05	1	-	-	10	10	
	23	1	-	-	10	11	
Savannakhet (VLSK)	04	1	-	-	4	-	Planned
	22	-	-	-	-	4	
<b>Total of Implemented</b>		<b>4</b>	<b>11</b>	<b>8</b>	<b>20</b>	<b>21</b>	
<b>Total of Planned</b>		<b>1</b>	<b>-</b>	<b>-</b>	<b>4</b>	<b>4</b>	
<b>Domestic Airport</b>							
Sepon (VLSP)	05	1	-	-	3	3	
	23	-	-	-	-	-	
Xienkhuang/Thong Haihinh (VLXK)	07	-	-	-	-	1	Withdraw
	25	-	-	-	-	-	
Bokeo (VLBK)	03	-	-	-	4	-	
	21	1	-	-	-	4	
<b>Total of implemented</b>		<b>2</b>	<b>-</b>	<b>-</b>	<b>7</b>	<b>7</b>	

### En-route

2.5 Lao PDR currently published two ATS routes **M648 (NOHET-BOPNU)** and **N639 (VILAO-LEKOB)** implemented using the RNAV 2 navigation specification.

### Future Plan

2.6 In accordance with the PBN Roadmap, Lao PDR plans to implement RNP APCH and RNP 1 SID/STAR at Savannakhet International Airport. The design work has been completed and the procedures are scheduled for flight validation by 2026.

2.7 For new ATS routes connecting to Bokeo International Airport, we have considered implementing PBN RNAV2 concept to ensure seamless connectivity with our main international airports (Luangphabang and Wattay/Vientiane). Additional regional connections are also being considered, including routes between **Bokeo – AKSAG** and **Bokeo – SAGAG**.

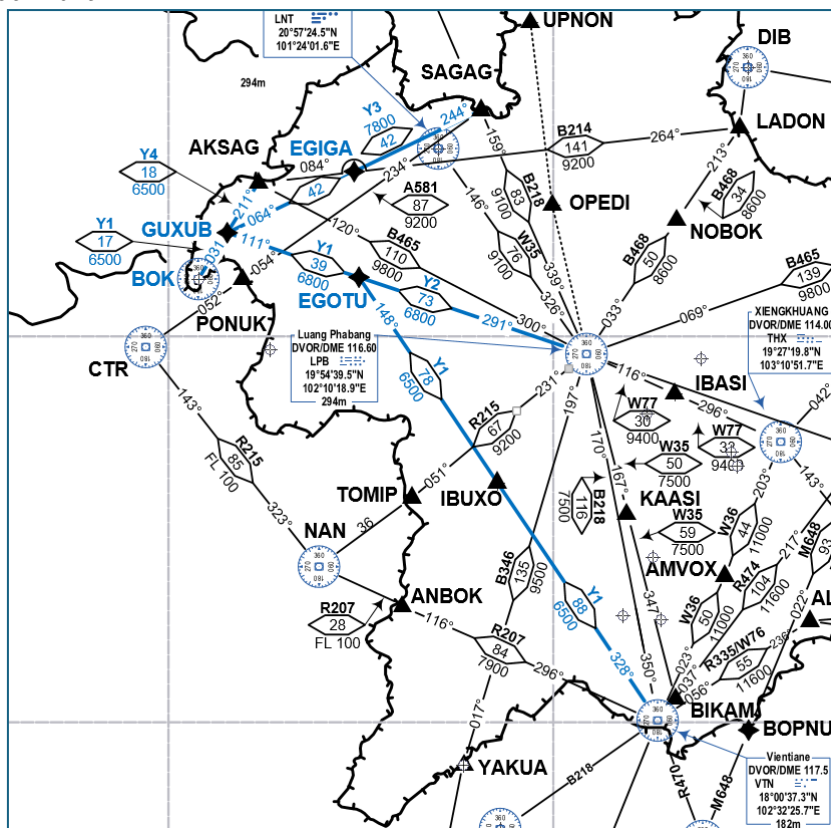


Figure 1 – Concept for new ATS routes connecting to Bokeo Int'l Airport

2.8 Regarding the Parallel ATS routes A1, at the SCSTFRG/13 meeting was held at ICAO Sub-regional office in Beijing China this year, whole state members who concerned on ATS route A1 are agreed to establish of a new parallel route of the existing ATS route A1. The new segment, connecting Vientiane FIR and Bangkok FIR are includes a new waypoint provided by Viet Nam (P01), which links to the PAK DVOR/DME and continues to a new waypoint within the Bangkok and Vientiane FIRs.

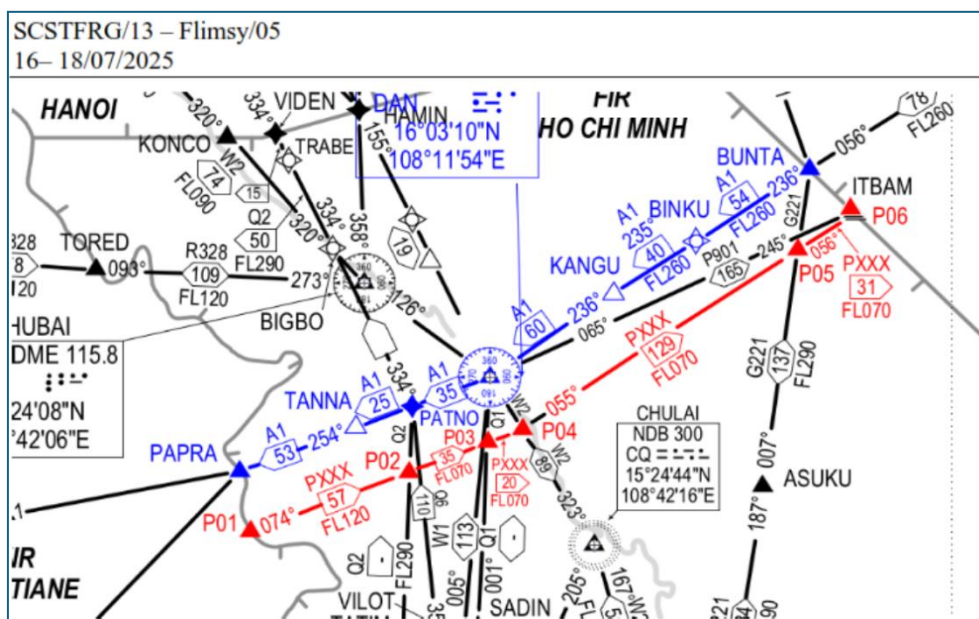


Figure 2 – Establishment of a parallel route ATS route A1 in Viet Nam

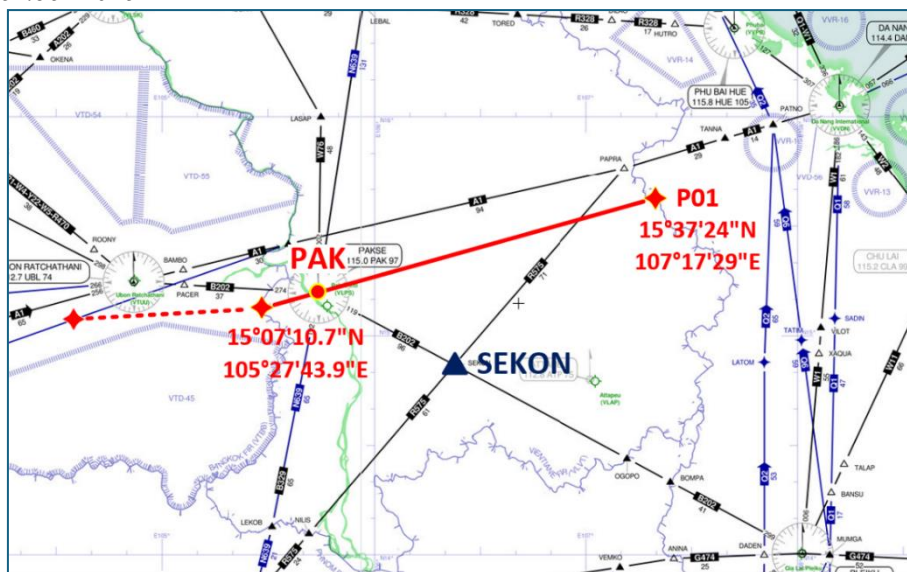


Figure 3 – Concept for the new parallel ATS route A1 within Vientiane FIR

2.9 Implementation of parallel city-pair routes between Vientiane and Luangphabang has been postponed pending further stakeholder consultation because establishing these routes requires both TMA corridors to be extended by 8 NM from their current positions.

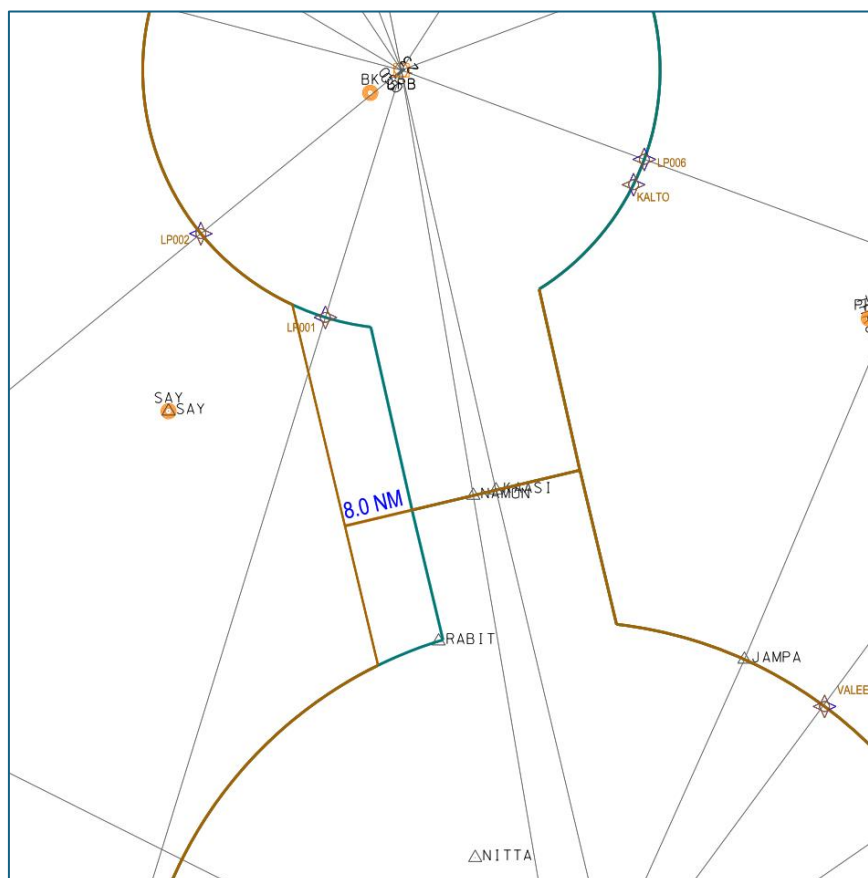


Figure 4 – TMA corridor extension concept

*Note: TMA corridors need to be extended from 20 NM width to 28 NM to provide protection area of the new ATS route*

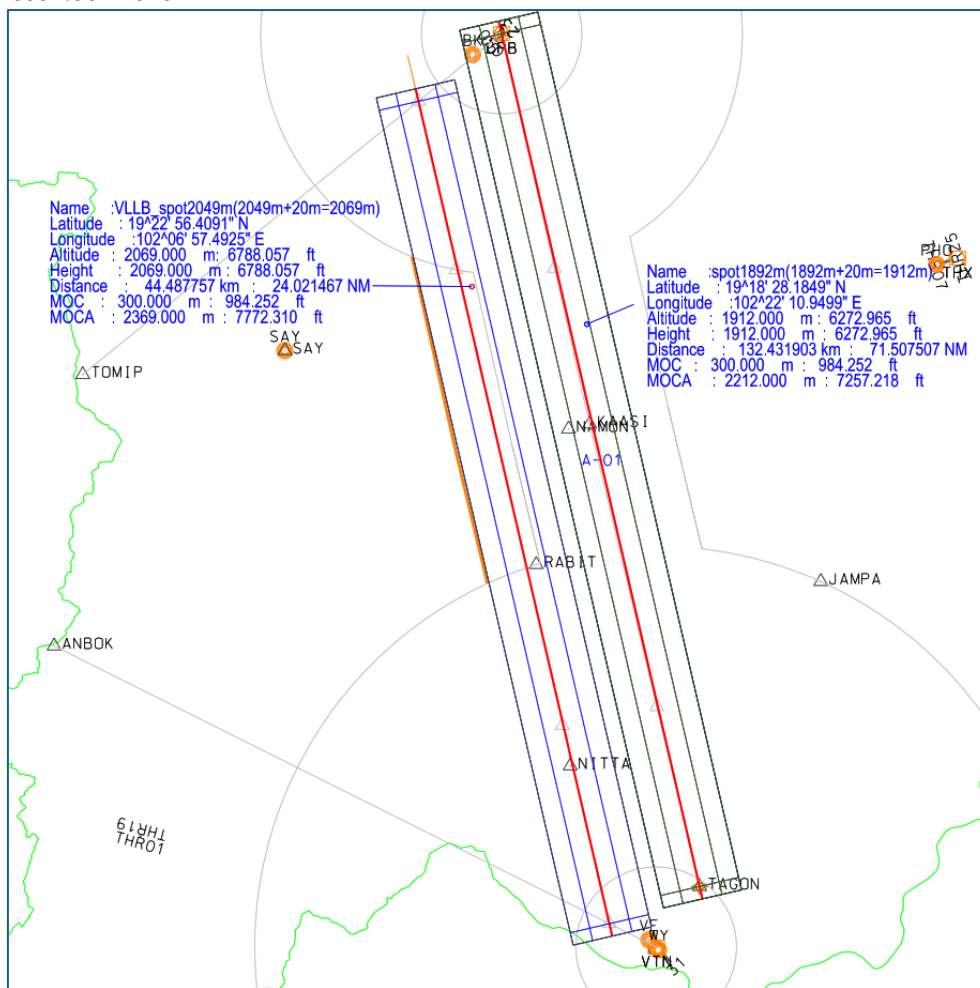


Figure 5 – Protection area of RNAV2

*Note: Lateral separation between center lines is 12 NM.*

**Regional Transition Plan for RNP APCH Chart Identification from RNAV to RNP**

2.10 The transition from RNAV to RNP for the five RNP Approach charts currently published in our AIP was completed with the publication of AIRAC AIP Supplement A05/24, effective 08 August 2024, and has been incorporated into AIP Amendment 1/25, effective 30 October 2025. All new RNP approach charts published in the AIP of Lao PDR will be titled ‘RNP RWY XX’.

**3. ACTION REQUIRED 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.

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**Executive Summary for consideration for inclusion in the Meeting Report**

**UPDATE ON PBN IMPLEMENTATION IN LAO PDR**

Lao PDR presented its progress in PBN implementation, including new RNP APCH and RNP 1 SID/STAR procedures, updates to RNAV 2 ATS routes, and completion of the RNAV to RNP chart transition. Future plans include further PBN expansion at Savannakhet International Airport and exploration of new ATS route connectivity.