



TWELFTH AIR NAVIGATION CONFERENCE

Montréal, 19 to 30 November 2012

Agenda Item 2: Aerodrome operations – improving airport performance

2.2: Performance-based navigation (PBN) – a practical way to improve airport performance with safety and efficiency

REPORT ON IMPLEMENTATION OF PBN

(Presented by Indonesia)

1. INTRODUCTION

1.1 Indonesia is committed to implementation of performance-based navigation (PBN). This paper informs the Conference about recent activities in Indonesia to implement PBN. The Indonesian plan for implementation of PBN is shown in the Appendix – Roadmap for PBN Implementation in Indonesia.

2. COSCAP

2.1 During the period 24-28 September 2012 DGCA Indonesia hosted a visit to Jakarta by a consultant engaged by COSCAP to promote implementation of PBN. During his time in Jakarta the consultant provided briefs and information sessions on the COSCAP PBN implementation strategy to staff of the Directorate of Operations and Airworthiness and the Directorate of Air Navigation.

2.2 The consultant also presented the COSCAP PBN Model Regulation to staff in DGCA. This document is being used as the basis for Safety Regulations to support implementation of PBN in Indonesia.

3. RNAV SID AND STAR

3.1 Standard instrument departures (SID) and standard terminal arrivals (STAR) using RNAV procedures have been implemented for Soekarno Hatta International Airport (Jakarta).

3.2 On 18 October 2012 RNAV SID and STAR for Sam Ratulangi (Manado) and Pattimura (Ambon) airports were published by AIP Supplement.

4. RNP-AR

4.1 Required navigation performance-approval required (RNP-AR) instrument approach procedures for Sam Ratulangi (Manado) and Pattimura (Ambon) airports were published by AIP Supplement on 18 October 2012. These procedures serve both ends of the runways at those airports. The availability of these procedures is expected to significantly improve access to the airports for those aircraft with approval to use them.

5. **CONCLUSION**

- 5.1 The Twelfth Air Navigation Conference is invited to note the contents of this information paper.

APPENDIX

ROADMAP PBN IMPLEMENTATION IN INDONESIA

• EN-ROUTE

	Short Term (2010-2013)	Medium Term (2013-2016)	Long Term (2016+)
En-Route	- Application of RNAV5 on selected existing route(s). - Feasibility Study of RNAV2 Implementation.	- Implements RNAV5 airspace by 2015. - Implementation of RNAV 2 on selected Route(s).	Consider mandate better navigation specification in accordance with the ICAO regional roadmap.

• TERMINAL

Terminal	RNAV 1 STAR/SID on selected international airport(s)	-Expands RNAV1 STAR/SID on international airports -Introduce RNAV1 on domestic airport(s)	Completes the implementation for both international and domestic airport
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• APPROACH

Approach	-RNP APCH (baro-VNAV) at certain instrument runways -Trial base operation for RNP AR at certain airport(s) -Feasibility study of GBAS	-RNP APCH (Baro-VNAV or APV) at all instrument runways. -RNP AR operation -Trial for GBAS	-Expanded use of RNP APCH -Expanded use of GNSS based precision approach as a backup of the ILS.
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