



International Civil Aviation Organization

**The Eighth Meeting of the Performance Based Navigation Task Force
(PBN/TF/8)**

New Delhi, India, 12 – 13 May 2011

Agenda Item 3: APAC Region PBN Plans and Implementation

STATE PBN IMPLEMENTATION PROGRESS

(Presented by the Secretariat)

SUMMARY

This paper presents information on the current status of State PBN Plan implementation, and discusses the importance of

This paper relates to –

- A: *Safety – Enhance global civil aviation safety*
- C: *Environmental Protection and Sustainable Development of Air Transport – Foster harmonized and economically viable development of international civil aviation that does not unduly harm the environment*

Global Plan Initiatives:

- GPI-5 RNAV and RNP (Performance-based navigation)
- GPI-7 Dynamic and flexible ATS route management
- GPI-10 Terminal area design and management
- GPI-11 RNP and RNAV SIDs and STARs
- GPI-21 Navigation systems

1. **INTRODUCTION**

1.1 APANPIRG/21 (6-10 September 2010, Bangkok) noted the following:

APAC Region PBN Implementation

3.4.27 States, which had not developed their State PBN Plan, were once again reminded about the requirement and an action item was adopted by PBN/TF encouraging the States to consider implementation of CDO. State were also encouraged to attend PBN related training and other programmes. The meeting was briefed about various issues related to PBN implementation in the region and about various action items adopted by the Task Force.

2. DISCUSSION

2.1 APANPIRG/21 made the following Conclusions with regard to the implementation of Asia and Pacific (APAC) State PBN Plans:

Conclusion 21/32 – Develop State PBN Implementation Plan

That, the States, which have not developed their State PBN Implementation Plans so far, be urged to develop the plan in accordance with the Asia/Pacific Regional PBN Implementation Plan at the earliest and advise the Regional Office of the impediments they are facing in the implementation of PBN.

Conclusion 21/35 – Slow Progress of PBN Implementation

That, ICAO highlights the slow progress and impediments in PBN implementation at the upcoming 47th DGCA Conference for its support to expedite implementation.

2.2 The 47th DGCA Conference (25-29 October, Macao) agreed to the following Action Item regarding PBN Implementation:

Action Item 47/4

Noting the lack of completion of State PBN Implementation Plan in the APAC Region and in keeping with the ICAO Assembly Resolution A37-11, the Conference urges States/Administrations that are yet to develop their plans, to complete a State PBN implementation plan as a matter of urgency to achieve the timelines and intermediate milestones and:

- a) requests States/Administrations to identify the focal point, consider deploying some resources to the PBN implementation plan and ensure the responses made within the deadline;
- b) submit their plans to the ICAO APAC Office at the earliest; and
- c) requests the ICAO APAC Office to initiate a questionnaire to find out the problem/issues faced by States in not being able to submit a State PBN Implementation Plan.

2.3 In response to APANPIRG Conclusion 21/32 and DGCA Action Item 47/4, the ICAO Asia and Pacific (APAC) Regional Office issued State Letter T 3/10.0, T3/8.30 – AP042/11 (ATM) dated 25 March 2011, urging States to, *inter alia*, update and submit their PBN Plans. The Asia and Pacific (APAC) Office currently has 38 States, 2 territories and 2 Special Administrative Regions accredited to it, for a total of 42 administrations. Of those, only 20 have presented their PBN Plans to the APAC Office. Details of PBN planning and progress are summarised in the WP02 **Attachment**.

PBN Plan Status

2.4 To date, PBN Plans have been categorized in to three categories based on quality:

- i) Robust – when 8 to 10 basic plan elements (BPE) are satisfied;
- ii) Marginal – when 5 to 7 BPE are satisfied; and
- iii) Incomplete – when 4 or less BPE are satisfied.

2.5 Out of the 20 current PBN Plans, nine (9) have been assessed by the PBN Plan Review Team as robust, four (4) were rated as marginal and eight (8) were rated incomplete. This means that less than one quarter of APAC administrations have adequate plans, when all States were expected to have appropriate PBN Plans in place by 2009. This number is expected to change significantly after the current PBN Plan assessments have been completed.

2.6 A large number of State PBN Plans or revisions to Plans are being assessed by the PBN Plan Review Team at present, and are expected to be assessed by the end of May 2011:

- Sri Lanka (received 4 February 2010);
- Fiji (21 February 2010);
- Democratic People’s Republic of Korea (30 December 2010);
- Hong Kong China (16 January 2011);
- Mongolia (3 March 2011);
- Republic of Korea (08 April 2011);
- Malaysia (11 April 2011);
- Bangladesh (17 April 2011, Roadmap only);
- Indonesia (26 April 2011);
- Philippines (26 April 2011); and
- Myanmar (27 April 2011); and
- Maldives (4 May 2011).

PBN Point of Contact

2.7 Despite several previous PBN APANPIRG Conclusions, a DGCA Action Item, and numerous State Letters reminding States, 13 administrations have not provided their PBN Point of Contact (POC). Of these administrations, 12 are small Pacific Island/Rim States. Given that the Pacific Island States often have poor resources to maintain traditional navigation aid infrastructure and PBN procedures can derive great benefits for aircrew that operate on long ATS routes with few navigation aids and many ‘black hole’¹ approaches, it should be a matter of priority to assist these States. It would appear that a coordinated and joint effort to assist these Administrations is required if the airspace users are to benefit in the medium term. It is noteworthy that the same 13 administrations which have not provided their POC also constitute the majority of the total (17) which have not submitted a PBN Plan to the Regional Office.

Terminal Procedures

2.8 Recalling that the ICAO Assembly Resolution A37-11 required, inter alia, States to implement approach procedures that have vertical guidance on 30% of runway ends by 31 December 2010², only four APAC States have advised the Regional Office that this has been achieved. The vast majority of administrations that have advised the Regional Office of progress indicate that they had not achieved the 30% implementation target.

2.9 Regarding Standard Instrument Departure and Standard Terminal Arrival Procedures (SID and STAR), only two States have submitted data indicating compliance with the short-term Regional PBN Plan target (RNAV 1 SIDs/STARs for 50% of international airports by 2010).

En-route Procedures

2.10 No administration has provided any detail of PBN en-route procedure development, despite the implementation target of re-defining routes into PBN navigation specification by 2012 and implementing additional RNAV/RNP routes.

Asia/Pacific Regional PBN Implementation Plan Short Term Targets (2008-2012)*		
Airspace	Acceptable Specifications	Preferred Specifications
Route – Oceanic	RNAV 10	RNP 4
Route – Remote continental	RNAV 10	RNP 4
Route – Continental en-route	RNAV 2, RNAV 5	

* **Note:** Early completion of an implementation is encouraged within the timeframe on the basis of coordination between affected States and airspace users.

¹ A ‘black hole’ approach has few features to aid pilots to acquire visual recognition in poor visibility or at night.

² Except where there is no local altimeter setting available and there are no aircraft suitably equipped for APV operations with a maximum certificated take-off mass of 5 700 kg or more, implementation of straight-in LNAV only procedures are acceptable.

3. **ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) update the PBN Plan Status document in the WP02 **Attachment**; and
- b) discuss the progress of PBN implementation in the APAC Regions and make recommendations to improve PBN implementation deficiencies.

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