

25th COSCAP-SA STEERING COMMITTEE MEETING

ICAO SUPPORT FOR STATE IMPLEMENTATION OF PERFORMANCE-BASED NAVIGATION (PBN) IN COSCAP-SA STATES

Discussion Paper 11 (DP11)

(Presented by the ICAO Secretariat)

SUMMARY

This paper identifies the status of PBN implementation in the COSCAP-SA sub-region in relation to Assembly Resolution A37-11, the ICAO implementation support that is available to States and recommends action by the COSCAP-SA Steering Committee.

1. Background

1.1 The implementation of Performance-Based Navigation (PBN) is Air Navigation's highest priority because of the safety, efficiency and environmental benefits it provides. It is identified in both the Global Air Navigation Plan (GANP) and the Global Aviation Safety Plan as key to the implementation of the many Aviation Safety Block Upgrades (ASBUs) and to reducing the probability of Controlled Flight into Terrain (CFIT) and Runway excursions.

1.2 The 37th Assembly recognized the importance of PBN and approved Resolution A37-11 that set objectives for all States in regard to having a PBN Implementation Plans and to implementing PBN instrument procedures to all instrument runway ends. It also included implementation of PBN approach procedures with vertical guidance to all runway ends (instrument and non-instrument) serving aircraft with a maximum certificated take-off mass of 5700 kg or more. The first two objectives are to be achieved by the end of 2016. Unfortunately, many States will not meet this deadline.

1.3 ICAO has recognized that States need assistance with implementing PBN and has developed various tools to help them. Unfortunately, many States have not taken the opportunity to utilize this support.

2. Discussion

2.1 COSCAP-SA States include Bhutan, Bangladesh, Nepal, Maldives, India, Pakistan and Sri Lanka. The following table reflects each State's status with regard to PBN Implementation in relation to A37-11.

Table 1: Status of PBN Implementation in COSCAP-SA

| State | PBN Implementation Plan | % of Runways with PBN Procedures |
|------------|-------------------------|----------------------------------|
| Bangladesh | Yes | 25% |
| Bhutan | No | 0% |
| Maldives | Yes | 100% |
| Nepal | Yes | 100% |
| India | Yes | 1.9% |
| Pakistan | Yes | 60% |
| Sri Lanka | Yes | 0% |

Source: ICAO iSTARS 3.0

2.2 While most of the COSCAP-SA States have met the requirement to have a PBN Implementation plan, the design and publishing of PBN instrument procedures is insufficient in many States. Globally, 60% of international instrument runways have PBN capability, while in the COSCAP-SA sub-region only 20% have PBN procedures. It is recognized that there may be many different issues as to why the objective has not been met depending on the State. This could include insufficient of PBN capability in operations approval, airspace design, instrument procedure design, and/or PBN business cases.

2.3 The **Asia-Pacific Flight Procedures Programme (FPP)** offers States services related to PBN implementation. This includes courses in PBN procedure design as well as the ability to design PBN procedures for the State. States are encouraged to maximize the use of the FPP and join the programme as an Active Participating State (APS). Currently Sri Lanka is the only APS from COSCAP-SA States.

2.4 ICAO has also developed specialized PBN **Products and Services** aimed primarily with assisting States with PBN implementation. These products and services can be found at <http://www.icao.int/safety/pbn/Pages/PBN-Implementation-Services.aspx> and requests for assistance can be made by emailing pbn@icao.int directly. The products and services include assistance with how to assess a State's PBN requirements, how to conduct a PBN business case, how to obtain classroom and computer-based PBN training, and finally guidance on accessing funding for PBN initiatives. All of these products and services were developed as implementation tools for States to use as required.

2.5 One of the major hurdles to PBN Implementation is training. That is why ICAO has developed computer based training (CBT) programmes for Pilots and Air Traffic Controllers to enhance their operational knowledge of PBN. In addition, ICAO provides classroom instruction in Airspace Design using PBN and PBN Ops Approvals. The aim of the classroom courses is to provide hands-on training but also to provide train-the-trainer instruction to allow for development of regional in-house capability. It would significantly benefit COSCAP-SA States and PBN implementation to have in-house capability in both of these areas.

3. Actions for the Steering Committee meeting

The Steering Committee is invited to:

- a) Note the status of PBN implementation in the COSCAP-SA sub-region;
- b) Note the PBN implementation assistance that is available to COSCAP-SA member States (APAC FPP and ICAO HQ Products and Services);
- c) Urge COSCAP-SA member States to join and utilize the APAC FPP and the additional ICAO PBN Products and Services to meet the objectives of A37-11;
- d) Urge COSCAP-SA to establish an in-house capability for PBN Ops Approval; and
- e) Urge COSCAP-SA States to promote PBN Pilot training by their air operators.

Attachment

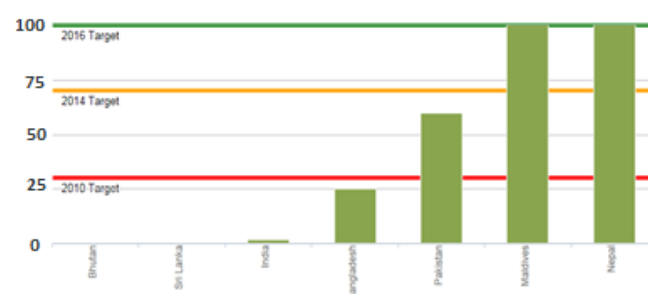
A. PBN Implementation Status – COSCAP-SA States

PBN IMPLEMENTATION STATUS – COSCAP-SA

A37-11 PBN Global Targets

- States complete a PBN Implementation Plan to achieve:
 - Approach procedures with vertical guidance (APV (Baro-VNAV) including LNAV-only minima for all instrument runway ends by 2016:
 - 30% by 2010, 70% by 2014
 - Straight-in LNAV only procedures as an exception to the above where there is:
 - no local altimeter setting; and
 - no aircraft equipped for APV with max certified mass of 5700kg or more
- States include in their PBN Implementation Plan provisions for implementation of:
 - Approach procedure with vertical guidance (APV) to all runway ends serving aircraft with a maximum certificated take-off mass of 5700 KG or more according to established timelines and intermediate milestones

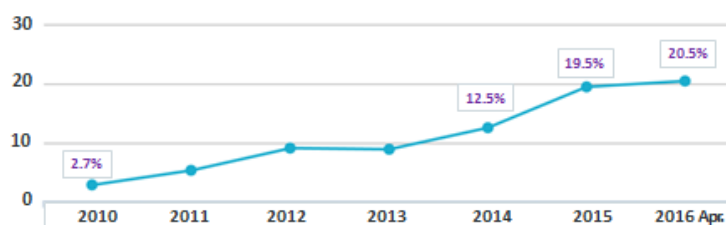
States in COSCAP-SA meeting the Resolution Targets for Applicable Years



This data is based on the International Aerodromes as listed in the Regional Air Navigation Plans

PBN IMPLEMENTATION TRENDS

% of PBN Runway by type for COSCAP-SA
(rate refers to the total number of instrument runways)



This data is based on the International Aerodromes as listed in the Regional Air Navigation Plans

PBN IMPLEMENTATION STATUS – COSCAP-SA

