



- Agenda Item 2 – Global & Regional PBN Updates



Activities related to PBN in APAC post PBNICG/6

Report of PBNICG/6 was reviewed in Twenty third meeting of the Communications/navigation and surveillance sub-group (CNS SG/23) of APANPIRG (Bangkok, Thailand, 2 – 6 September 2019):

- Asia/Pacific Regional Transition Plan for RNP APCH Chart Identification from RNAV to RNP as accepted in PBNICG/6 and endorsed by ATMSG/7 was reviewed and was proposed to be submitted to APANPIRG/30 in Nov 2019.
- Contingency measure for the Regional Transition Plan for RNP APCH Chart identification was presented.
- Performance indicators to show real PBN implementation status of the region were reviewed and amended and is available in the report of CNS SG/23.
- PBN implementation challenges received during the PBNICG/6 meeting were discussed.

Report of PBNICG/6 was reviewed in The thirtieth meeting of the Asia/Pacific Air navigation planning and implementation regional group (APANPIRG/30) Bangkok, Thailand, 4 to 6 November 2019:

- Asia/Pacific Regional Transition Plan for RNP APCH Chart Identification from RNAV to RNP as accepted by states in PBNICG/6 and endorsed by ATMSG/7 and CNSSG/23 was adopted.
- Proposed contingency measure for the Regional Transition Plan for RNP APCH Chart identification was accepted.
- PBN related APAC Seamless ATM Monitoring and Reporting as discussed in CNS SG/23 were accepted
- Outcomes of the GBAS/SBAS Implementation Workshop were presented.



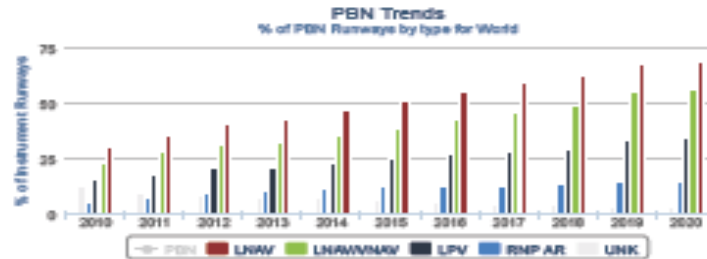
Activities related to PBN in APAC post PBNICG/6

- GBAS/SBAS Implementation Workshop was conducted in Seoul from 3-5 June'2019 as introduced in PBNICG/6.
 - GBAS/SBAS implementation activities of several APAC States, GNSS requirements and augmentation, approach classification and GBAS/SBAS implementation steps in terms of system, system operator and LPV/GLS procedure development were discussed.
- GBAS/SBAS Implementation Task force/1(ITF/1) was conducted from 23-24 June'2020 through VTC.
 - Terms & Reference of GBAS/SBAS ITF were reviewed.
 - Outcomes of GBAS/SBAS Workshop in Seoul 2019 were discussed.
 - An Exercise to capture the Issues and challenges regarding GBAS/SBAS implementations was conducted.
 - Initial list of action items for the APAC GBAS/SBAS ITF was developed.
- GBAS/SBAS Implementation Task force/2 was conducted from 9-10 Sept'2020 through VTC.
 - Two Co-Chairs were elected for GBAS-SBAS ITF.
 - Nomination of Focal points for GBAS-SBAS Implementation in the states was decided and accordingly a state letter has been sent to all the states.
 - Action List for the task force were discussed and finalized.



PBN Update(Dec2019) – Global- as per iSTARS 3.0

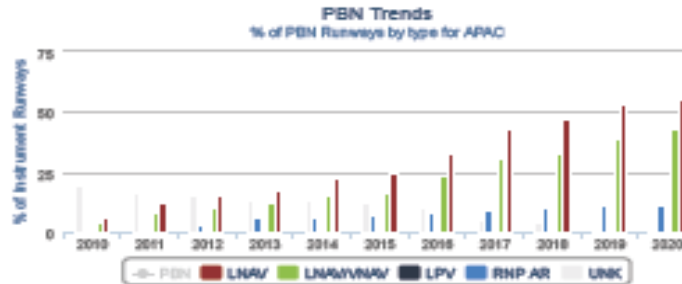
States in World	PBN Runway Ends	Intr. Runway Ends	PBN Runway Ends (%)
189	2641	3532	74.8%





PBN Update(Dec2019) – APAC- as per iSTARS 3.0

States in APAC	PBN Runway Ends	Intr. Runway Ends	PBN Runway Ends (%)
38	311	497	62.6%





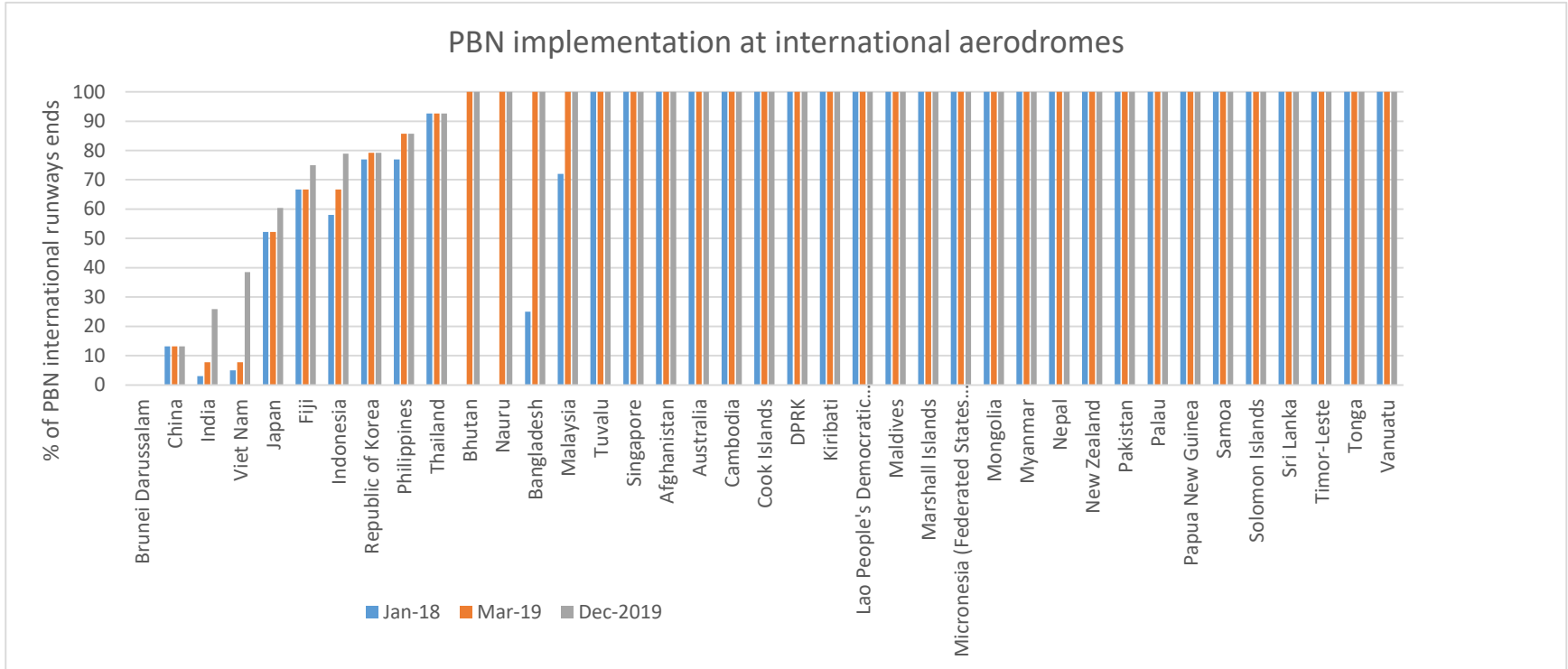
ICAO Assembly Resolution A37-11 Implementation Status

Dec 2019	PBN Approach	APV		PBN SID	PBN STAR
		LNAV/VNAV	LPV		
Global (%)	74.8	56.5	34.1	47.8	43.9
Asia/Pacific (%)	62.6	43.5	0	70	67.8

March 2019	PBN Approach	APV		PBN SID	PBN STAR
		LNAV/VNAV	LPV		
Global (%)	69	49.1	29.7	41.3	38.8
Asia/Pacific (%)	56.6	33.0	0	61.4	61.8



PBN Update(Dec2019) –APAC-as per iSTARS 3.0





New Version of ASIA/PACIFIC SEAMLESS ANS PLAN V3.0(Nov 2019) is approved by APANPIRG/30 and has been published by ICAO APAC office and is available on following link:

<https://www.icao.int/APAC/Documents/edocs/Asia%20Pacific%20Seamless%20ATM%20Plan%20V%203.0.pdf>



ASIA/PACIFIC SEAMLESS ANS PLAN V3.0

Table 1: Asia/Pacific ASBU Block 0 and Block 1 Priority- PBN

ASBU Element	Priority
APTA-B0/1 – 2: Basic PBN SID and STAR procedures, PBN non-precision approaches (PARS 7.4, 7.5, 7.10, 7.13, 7.14, 7.21) Preferred Aerodrome/Airspace and Route Specifications (PARS)	1
APTA-B0/3 and 6: SBAS/GBAS CAT I precision approach procedures, and PBN Helicopter PinS Operations (PARS 7.5, 7.6, 7.10, 7.14, 7.21)	3
APTA-B0/4 – 5, 7 – 8: CDO (Basic) and CCO (Basic), and performance-based aerodrome operating minima for advanced/basic aircraft (PARS 7.14, 7.19, 7.21)	2
APTA-B1/1 – 5: advanced capability PBN approaches, PBN SID and STAR procedures and performance-based aerodrome operating minima for advanced aircraft with SVGS, CDO and CCO (Advanced) (PARS 7.14, 7.21, 7.22, 7.23)	3



- **Priority 1** - critical upgrade assignment based on whether the implementation of an element could bring most benefit to the region or regional upgrade by States and is essential to achieve the service level required globally;
- **Priority 2** - recommended upgrade for those elements which would bring benefits to the region and generally to be implemented from 2022, but States are encouraged to implement earlier if beneficial; and
- **Priority 3** - assigned to those elements which may not be universally implemented in the Asia/Pacific Region.



THANK YOU!