

**60<sup>th</sup> CONFERENCE OF  
DIRECTORS GENERAL OF CIVIL AVIATION  
ASIA AND PACIFIC REGIONS**

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**AGENDA ITEM 4:      AIR NAVIGATION**

**ENHANCING EFFICIENCY IN MALAYSIA'S OCEANIC  
AIRSPACE IN KUALA LUMPUR FIR THROUGH PHASED  
PBCS IMPLEMENTATION AND SPACE-BASED ADS-B**

(Presented by Malaysia)

**INFORMATION PAPER**

**SUMMARY**

This paper highlights Malaysia's ongoing efforts to improve the efficiency of air traffic operations in its oceanic airspace in KL FIR, specifically the Bay of Bengal area. Malaysia will implement Phase 2 of Performance-Based Communication and Surveillance (PBCS) operational trials beginning 7 August 2025, reducing longitudinal separation minima from 50NM to 30NM for PBCS compliance aircraft operating on route N571 between FL340 and FL370. In addition, Malaysia is preparing to procure space-based ADS-B (SB-ADS-B) services in the same area to enable improved climb and descent profiles in the oceanic airspace / non-radar airspace.

## ENHANCING EFFICIENCY IN MALAYSIA'S OCEANIC AIRSPACE IN KUALA LUMPUR FIR THROUGH PHASED PBCS IMPLEMENTATION AND SPACE-BASED ADS-B

### 1. INTRODUCTION

1.1 Malaysia continues its progressive implementation of Performance-Based Communication and Surveillance (PBCS) to enhance the efficiency and capacity of KL FIR's oceanic airspace, specifically the Bay of Bengal area.

1.2 Building on earlier initiatives, Malaysia will launch **Phase 2** operational trials of 'exclusive PBCS airspace' starting 7 August 2025, focusing on the application of 30NM longitudinal separation for PBCS compliance aircraft on Route N571, between FL340 and FL370, in the Bay of Bengal airspace.

### 2. DISCUSSION

#### Reducing Longitudinal Separation from 50NM to 30NM

2.1 The current separation standard for aircraft in this airspace is 50NM longitudinal. The implementation of a reduced 30NM longitudinal separation under PBCS Phase 2 is expected to:

- a) Increase route availability and flexibility;
- b) Allow more aircraft to operate at optimal flight levels;
- c) Reduce delays in altitude changes, contributing to fuel efficiency; and
- d) Improve predictability of flight operations and tactical flow management.

2.2 The trial will adopt ICAO's GOLD (Global Operational Data Link Document) and PBCS specifications for aircraft equipage and operational eligibility.

#### Benefits to Airlines

2.3 The following benefits are expected:

- a) Airlines will benefit from better altitude allocation and reduced level-off times, leading to lower fuel consumption and reduced emissions;
- b) More aircraft can be accommodated on high-density routes like N571;
- c) Reliable separation standards support better planning and reduced contingencies.

#### Space-Based ADS-B (SB-ADS-B) Implementation Plans

2.4 Malaysia is in the preparation stage to procure space-based ADS-B services to cover the Bay of Bengal oceanic area, where installing traditional ground-based radar or ADS-B infrastructure is not feasible.

2.5 The tender process is expected to be launched in August 2025. Once operational, SB-ADS-B is expected to:

- a) Enable continuous surveillance coverage;
- b) Support **flexible climb and descent** clearances in non-radar airspace;
- c) Enhance situational awareness and traffic safety; and
- d) Provide data for post-operations analysis and strategic ATM improvements.

Conclusion

2.6 Malaysia's progressive implementation of PBCS and SB-ADS-B reflects a commitment to enhancing regional and international airspace efficiency, safety, and environmental performance.

2.7 These initiatives support the long-term goals of the APAC Seamless ATM Plan and contribute directly to ANSP and airline operational optimization.

**3. ACTION BY THE CONFERENCE**

3.1 The Conference is invited to note the information contained in this Paper.

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