



International Civil Aviation Organization

MIDANPIRG Air Traffic Management Sub-Group

Tenth Meeting (ATM SG/10)

(Jeddah, Saudi Arabia, 20 – 23 October 2024)

Agenda Item 3: Planning and Implementation issues related to ATM/SAR

TRIAL OPERATION OF 20 NM SURVEILLANCE BASED LONGITUDINAL SEPARATION IN THE OCEANIC AIRSPACE IN THE INTERFACE BETWEEN MUSCAT AND MUMBAI FIRS

(Presented by Sultanate of Oman)

SUMMARY

This Information Paper provides a brief overview of the trial operation for the implementation of a 20 NM surveillance-based longitudinal separation minima over the Transfer of Control Point RASKI. The paper outlines the planning, execution, and key outcomes of the trial, while emphasizing operational feedback and the next steps toward formal implementation. The initiative aims to mitigate traffic congestion and enhance the efficiency of traffic flows between Europe, the Middle East, and Asia/East Asia.

Action by the meeting is at paragraph 3.

REFERENCES

- PANS ATM, Doc 4444

1. INTRODUCTION

1.1 Muscat FIR serves as a critical gateway, connecting Europe, the Middle East, and the nations of East and Southeast Asia, facilitating considerable air traffic flow between those regions.

1.2 A 10 minutes longitudinal separation is being implemented at Transfer of Control Points between these FIRs. Consequently, the upper portion of the Muscat FIR is becoming congested, leading to the emergence of hotspots as identified by MIDRMA reports.

1.3 The Joint ATM Coordination Meeting between the Airports Authority of India (AAI) and the Oman Civil Aviation Authority (OCAA), held on 15–16 August 2023, focused on enhancing airspace safety over the Arabian Sea.

1.4 The meeting identified RASKI as a significant point along L301/L639, through which a substantial portion of air traffic flows between the Muscat and Mumbai FIRs, often leading to congestion and increased coordination challenges.

1.5 The meeting jointly recognized the need to implement surveillance-based 20 NM longitudinal separation along those routes in the oceanic airspace between Muscat and Mumbai FIRs to reduce ATC workload, increase airspace efficiency, and enhance airspace safety. The meeting also agreed to conduct a trial operation to analyze the impact of this separation before full operational implementation.

1.6 With the implementation of this separation, Oman will ensure 20 NM longitudinal separation for east-bound traffic prior to the transfer of control at RASKI, and accept such separation for west-bound traffic after RASKI, facilitating its safe and efficient application in the oceanic airspace of the Mumbai FIR.

2. DISCUSSION

Preparatory and follow-up meetings

2.1 A series of online preparatory meetings with India, held between 8 August and 29 August 2024, laid the groundwork for the trial. These meetings facilitated discussions on key operational elements, including the LOA and SOP, determination of the trial period, issuance of NOTAMS, and sharing experiences related to operational hazards.

2.2 The trial officially commenced on 1 September 2024 and ran for 13 days, with two time slots totaling six hours daily, to assess performance under low to medium traffic conditions.

2.3 A follow-up virtual meeting with India was held on 11 September 2024 to evaluate the outcome of the trial operations. Following positive feedback shared during the meeting, the trial period was extended by an additional two months, from 14 September to 13 November 2024, with a single 12-hour daily slot to build further confidence in the application of 20 NM longitudinal separation.

2.4 A second follow-up meeting took place on 26 September 2024 to assess the impact of the extended trial. The meeting concluded that the trial was overall successful and agreed to increase the trial hours, introducing medium to high traffic levels to further enhance ATCO confidence.

Aircraft Capabilities

2.5 Aircraft participating in the trial operation are required to be capable of and/or equipped with the following:

- RNP 2/RNP 4,
- CPDLC (RCP 240),
- ADS-B Out,
- Mode S transponder, and
- GNSS.

Initial Operational Feedback on the Trial

2.6 Feedback forms collected from ATCOs revealed that the trial operation proceeded smoothly, characterized by normal coordination and response times, with no safety issues in applying the 20 NM Longitudinal Separation, ultimately contributing to a reduction in their workload.

2.7 While the overall initial feedback on the trial has been positive, a few challenges were encountered, such as suspension of the trial due to weather, which were mitigated using established procedures.

Regulatory Compliance

2.8 CAA was consulted and prior approval was received to implement trial operation of 20 NM longitudinal separation.

2.9 The following activities were performed to ensure the operational safety and efficient application of such separation standards, while ensuring regulatory compliance:

- SOP jointly drafted,
- LOA jointly updated,
- Hand Down Item issued for the Trial Operation,

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- Safety Risk Assessment to evaluate the safety implications,
- Issuance of NOTAM,
- Post Monitoring Feedback Form developed and feedback collected, etc.

Future Plan

2.10 The success of the trial operation will pave the way for the formal implementation of surveillance-based 20 NM longitudinal separation minima along L639/L301. Additionally, it will support future planning along N571 and other parallel airways within the Muscat and Mumbai FIRs.

3. ACTION BY THE MEETING

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

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