



International Civil Aviation Organization

MIDANPIRG Air Traffic Management Sub-Group

Ninth Meeting (ATM SG/9)

(Sharm El Sheikh, Egypt, 14 – 16 November 2023)

Agenda Item 4: Planning and Implementation issues related to ATM/SAR

**AIRSPACE OPTIMIZATION OVER HIGH SEAS AT THE INTERFACE BETWEEN THE
MIDDLE EAST AND ASIA PACIFIC REGIONS**

(Presented by the Sultanate of Oman)

SUMMARY

This paper highlights the need for optimizing the airspace over the high seas between the Middle East and Asia Pacific regions to enhance safety, address capacity and inefficiencies constraints, reduce fuel consumption, thus CO2 emissions from aircraft operations, and optimize available navigation systems.

Action by the meeting is at paragraph 3.

REFERENCE(S)

- 41ST ICAO ASSEMBLY RESOLUTION A41-21
- MIDRMA BOARD/18-REPORT
- MID RVSM SMR [2021]
- MIDANPIRG/20 & RASG-MID/10-REPORT

1. INTRODUCTION

1.1 The meeting may wish to acknowledge the substantial investment and advancements made by Oman, in developing their national airspace, aviation infrastructure and implementing advanced air navigation systems since 2009 onwards, to accommodate the sustained growth of air traffic.

1.2 The initiatives undertaken by Oman has extended beyond national levels. Bilateral and joint initiatives have been established among neighbouring States to foster seamless air traffic flow, high level of integration between their respective airspaces and air traffic management systems. This collaborative approach has significantly enhanced safety, efficiency, and capacity within the region.

1.3 This paper emphasizes the critical need to improve airspace over the high seas between the Middle East and the Asia-Pacific regions to enhance safety, address inefficiencies capacity and constraints, reduce operating costs and carbon emissions, and optimize the current and future CNS/ATM system capabilities.

2. DISCUSSION

2.1 The airspace in the Middle East region adjacent to the Asia-Pacific region is characterized by RNAV1/5 ATS routes. The separation minimum within the Muscat FIR is 5NM, 8NM at the boundary with the Emirates FIR and 20NM at the boundary with Jeddah FIR. However, the current operational procedures in the Asia-Pacific region mandate a lateral separation minimum of 50NM and a longitudinal separation minimum of 10 minutes at the interface with Mumbai FIR and 30NM at the interface with Karachi FIR.

2.2 It is, moreover, obvious that that the current airspace infrastructure may not be able to accommodate the projected surge in demand for air travel. This significant increase in aircraft numbers will require the development of more efficient and advanced airspace infrastructure to enable safe and efficient air travel.

2.3 Improving airspace over the high seas between the Middle East and the Asia-Pacific regions is a significant concern for several key factors that drive the need for such improvements:

- Increasing Air Traffic: The airspace between the Middle East and the Asia-Pacific regions is a critical corridor for global air travel. With the continuous growth of the aviation industry, there has been a significant increase in air traffic in this region. This increased congestion can lead to delays, increased operational costs, and decreased efficiency.
- Economic Impact: Inefficient airspace management can have substantial economic implications. Flight delays and inefficiencies can result in higher fuel costs, increased operational expenses for AOs, and potential losses in revenue for airlines.
- Safety: safety is paramount in the aviation industry. Effective airspace management and communication systems are vital to ensuring the safety of flight operations. Improving airspace over the high seas can help prevent collisions, reduce the risk of LHDs, and enhance overall safety.
- Environmental Considerations: Inefficient flight paths and congested airspace can lead to increased fuel consumption and greenhouse gas emissions. By optimizing airspace management, it helps to reduce the carbon footprint of the aviation industry and contribute to environmental sustainability.
- Search and Rescue (SAR): In remote areas over the high seas, rapid response to emergencies or distress situations is critical. Improving airspace management can facilitate quicker response times and enhance search and rescue capabilities.

2.4 To address these issues, there is a need for international collaboration and coordination among the States and aviation authorities in the regions. This might involve the development of more efficient air traffic routes, the implementation of modern air traffic management systems, implementing reduced longitudinal separation of 20NM and the establishment of agreements and protocols to ensure safe and effective airspace management. International Civil Aviation Organization (ICAO) plays a crucial role in facilitating such cooperation.

2.5 The meeting may wish to recall that MIDANPIRG/20 and RASGMID/10 meetings held in *Muscat, Oman, 14 – 17 May 2023*, agreed through *PIRG/RASG CONCLUSION 6*; That, a) ICAO MID is tasked to initiate and foster inter-regional and sub-regional initiatives that aim to enhance the airspace at the interface with the ASIA Pacific region; and b) States and aviation stakeholders are encouraged to collaborate and support airspace development initiatives aiming at enhancing safety, improve efficiency of the airspace over the high seas at the interface with Asia Pacific.

2.6 In the light of the above, Oman carried out a number of meetings with Mumbai (28th February 2023) and with Pakistan on 2nd May 2023, in an ongoing effort to explore the possibilities of association with adjacent Asia Pacific States to enhance & optimise the airspace.

2.7 Moreover, Oman has already initiated the airspace optimization process through a joint effort with India who had offered, to introduce a new mechanism of reduced longitudinal separation limited to a single route at which is currently under a trial process planned to start during the month of November for a period of 3 months to analyse the implications on traffic capacity and movement, also to address the safety issues of LHD's as reported in the **SMR 2017** the level of LHD reports filed by Muscat and Mumbai.

2.8 Oman is also engaged to have a workshop/meeting with Islamic Republic of Pakistan under the same scope of airspace optimization program which will be conducted between 26- 30 Nov 2023 in Sultanate of Oman. This comes as another regional collaboration meeting.

2.9 In order to accommodate this projected growth, the Sultanate of Oman reiterates ICAO MID, States CAA, ANSPs, airspace users, and aviation stakeholders in the Middle East and Asia Pacific call for action to collaborate and support airspace development initiatives aiming at enhancing safety, improve efficiency of the airspace over the high seas at the interface with Asia Pacific.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the updates and the information contained in this paper;
- b) discuss any relevant matters as appropriate; and
- c) provide direction as deemed necessary.