



*International Civil Aviation Organization*

**MIDANPIRG/20 and RASG-MID/10 Meetings**

**(Muscat, Oman, 14 - 17 May 2023)**

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## **Agenda Item 6.5: MIDANPIRG Work Programme – ATM/SAR**

### **FREE ROUTE AIRSPACE IMPLEMENTATION IN THE EMIRATES FIR**

*(Presented by the United Arab Emirates)*

#### **SUMMARY**

This paper presents the process of implementation Free Route Airspace (FRA) in the Emirates FIR, the challenges that faced the implementation of this project and the requirements for AIP publication.

Action by the meeting is at paragraph 3.

## **1. INTRODUCTION**

1.1 Free Route Airspace (FRA) aims to enhance the infrastructure of the Emirates FIR (at FL355 & above) for airspace users by freedom to flight plan freely between known and published entry and exit point. This intended to improve efficiency, reduce flight times, fuel consumption, CO2 emissions, and improve airspace capacity while maintaining safe and orderly flow of traffic. It supports the development of a more modern and efficient air traffic management system.

## **2. DISCUSSION**

2.1 Early inclusion of the regulatory side was vital for the project in order to obtain the initial approval and to identify the regulatory requisites, along with other supported documentation.

2.2 The beginning of the idea of applying FRA in UAE FIR was by categorizing the FRA routes to implementable, conditional and not implementable due to PDRs or due to infringement of neighboring FIR's

2.3 Then the idea was developed to consider the FRA in the Emirates FIR from FL355 and above purely for over flyers traffic to minimize effect on ANSPs. And to exclude restricted areas used for military activity from the FRA environment.

2.4 Numerous simulation sessions were conducted to assess and evaluate the concept. The target was to minimize the impact on current ATC sectorization with the objective of reducing ATC workload. Also features such as MTCD would be beneficial to aid ATCOs to identify new conflict areas.

2.5 Eventually, The FRA design has been enhanced on simulation feedback. So, the final concept for FRA is to keep it from FL355 and above all over the Emirates FIR to include all traffic patterns

whether they are climbing, descending and cruising within the FIR. And as an initial phase it has been decided to exclude a certain sector due to reduce complexity and allow different stakeholders to utilize the airspace in balance.

2.6 Numerous simulation sessions were conducted further to assess and evaluate the final concept for FRA. The feedback received was positive and indicated that the final concept doesn't increase ATC workload and/or complexity. General consensus that the final concept of FRA is enhancing the efficiency of air traffic flow in the Emirates FIR.

2.7 It has been identified that FRA implementation would have significant impact on the publication of the AIP. Therefore, workshops have been conducted to identify affected AIP sections and how to implement changes in the UAE AIP that would be impose minimum effect on the airspace users.

2.8 Continuous workshops along different concerned sections were conducted in order to ensure the publication of the AIP is supported with sufficient information for the airspace users to understand the concept and able to submit correct flight plans to ease the process and ensure harmonious transition to FRA.

2.9 In order to provide airspace users with early information about the implementation of FRA, AIC A 02/2023 has been published in the UAE AIP with a description of the step-by-step implementation plan, also the AIC provided the airspace users of a smooth transition from the normal ATS route structure to FRA at FL355 and above with minimal impact on their operations.

2.10 A number of familiarization workshops are planned to be conducted on wide span of the airspace users to ensure a smooth operation of FRA and familiarity with the concept developed by the UAE

### **3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) take note of the information contained in this paper;
- b) encourage States to explore the possibility of developing FRA within their AoR in a step-by-step implementation; and
- c) Consider the UAE's willingness to share the experience and knowledge of the FRA implementation