International Civil Aviation Organization

MIDANPIRG Airspace Management Working Group

First Meeting (ASM WG/1)
(Doha, Qatar, 1 – 2 October 2024)

Agenda Item 5: **ASM Challenges and Enhancements**

OUTCOMES OF THE FRA WORKSHOP

(Presented by the Secretariat)

SUMMARY
This paper aims to present the outcomes of the Free Route Airspace Workshop to the ASM Working Group.
Action by the meeting is at paragraph 3.

REFERENCES
- MIDANPIRG/21 & RASG-MID/11 Meeting Report (Abu Dhabi, UAE, 4 – 8 March 2024)
- FRA Workshop (Doha, Qatar, 30 September 2024)

1. **INTRODUCTION**

1.1 The MIDANPIRG/21 Meeting tasked the ICAO MID Office to conduct a FRA workshop through Conclusion 21/22:

MIDANPIRG Decision 21/22: *Free Route Airspace (FRA) implementation Workshop*

That, the ICAO MID Office organize Workshop in 2024 with support of IATA and concerned States and Stakeholder, to foster the implementation of FRA in the MID Region.

2. **DISCUSSION**

2.1 ICAO MID with coordination of Qatar Civil Aviation Authority conducted the Free Route Airspace Workshop in Doha, on 30 September 2024. In this Workshop, 53 participants from 7 MID States and 2 International Organizations participated.

2.2 The main outcomes (key takeaways) of the Free Route Airspace Workshop are available at **Appendix A**.

3. **ACTION BY THE MEETING**

3.1 The meeting is invited to review and agree on outcomes (key takeaways) of the FRA Workshop at **Appendix A**.

FRA Workshop Key-Takeaways

- *Implementation of FRA at national level:*

1) Implementation of FRA contributes to operational efficiency by allowing for more flexible route planning and reducing air traffic complexity, enhances airspace utilization and contributes to the reduction of CO_2 emissions.

2) States planning to implement FRA are encouraged to:

    a) follow a step-by-step approach;

    b) collect required data and coordinate with concerned stakeholders, including Military Authorities, ATCOs, flight procedure designers, airspace planners and airspace users, to assess the needs for implementation of FRA;

    c) consider the traffic flows in adjacent FIRs and the impact of the FRA implementation;

    d) in determining the vertical and horizontal dimensions of the airspace where FRA would be implemented, ensure that the selected airspace is clear of conflicts and able to accommodate the main traffic flows and the needs of airspace users (civil and Military);

    e) foster the implementation of the pre-requisites for FRA implementation (FUA, ASBU FRTO B0/1 Direct Route, FICE B0/1 (AIDC/OLDI);

    f) consider the neighboring ANSP's requirements in regards to use of certain routes/waypoints for certain destinations;

    g) study and determine the most suitable flight level for the transition between FRA and non-FRA;

    h) conduct necessary safety assessments and change management studies;

    i) conduct necessary testing including through the use of simulators;

    j) conduct a benchmarking exercise with a leading ANSP that has successfully implemented FRA;

    k) consider the upgrade of their ATM systems to accommodate the flight planning in a FRA environment and also to have additional capabilities, such as Medium-Term Conflict Detection (FRTO B0/4 Basic conflict detection and conformance monitoring (MTCD));

    l) develop training package for ATCOs and concerned stakeholders and provide appropriate training to ATC personnel to acquire the skills necessary to properly conduct FRA operations (before implementation);

    m) develop specific procedures for air traffic controllers and assistants to manage FRA operations effectively; and publish these procedures for all operational staff to ensure uniform understanding and application;

    n) use real-time simulations to test and validate FRA procedures; and

    o) coordinate with the ICAO MID Office and concerned AIS data service providers for the publication of the FRA related sections/parts in the AIP in a harmonized manner.
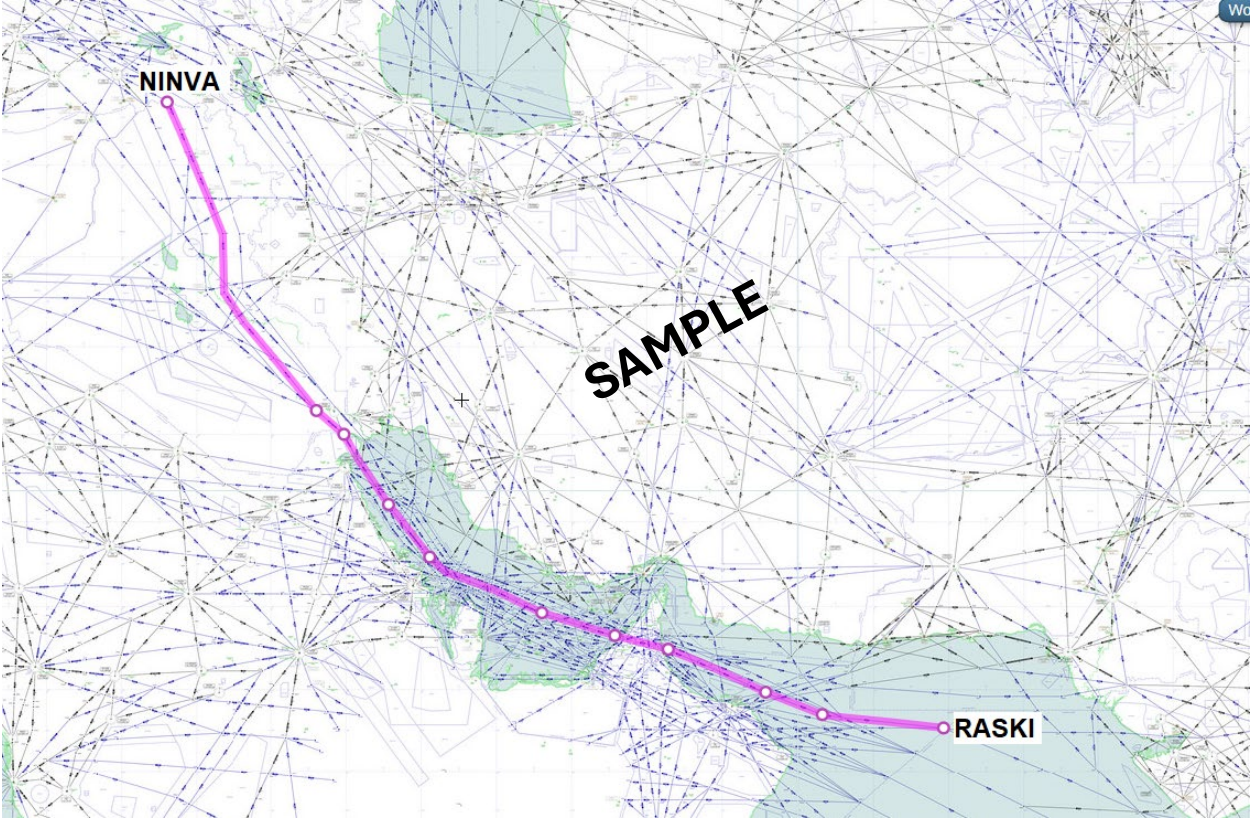
3) FRA implementation (ASBU FRTO B1/1):

In order to ensure a seamless and safe implementation/integration of FRA, States are encouraged to:

a) finalize the FRA design and ensure the readiness of all operational staff through comprehensive training and coordination with stakeholders;

b) monitor initial operations closely to identify and address any emerging issues;

c) maintain regular communication with stakeholders to provide updates and address any emerging challenge;

d) consider the implementation of Dynamic sectorization (ASBU FRTO B1/4 Dynamic Sectorization); and

e) measure the benefits accrued from FRA implementation using specific KPIs.

- Implementation of FRA at regional level:

The expansion of FRA implementation cross borders and ultimately across regions will increase operational efficiency and contribute to reduced fuel consumption.

Example for implementation of cross-border implementation of FRA.

1- Based on traffic statistic, identify the main flow which will bring maximum efficiency with minimum complexity;

2- Determine the horizontal delineation of the FRA in each consecutive FIRs to cover operational needs including buffer;

3- Determine the vertical dimension of the volume in a coordinated manner considering that this portion of airspace should be free from conflict;

4- Make sure that FRA implementation prerequisites have been implemented and required enablers are available to support implementation of FRA at concerned FIRs;

5- Amend relevant agreements and procedures such as LoAs including longitudinal separation to be considered; and

6- Publish required procedures and FRA specifications in the AIPs of the concerned States in a harmonized manner and agree on a common implementation date in accordance with the AIRAC procedures.

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