



INTERNATIONAL CIVIL AVIATION ORGANIZATION

**REPORT OF THE ELEVENTH MEETING
OF THE MIDANPIRG ATM SUB-GROUP**

(ATM SG/11)

(Abu Dhabi, UAE, 19 – 23 October 2025)

The views expressed in this Report should be taken as those of the MIDANPIRG ATM Sub-Group and not of the Organization. This Report will, however, be submitted to the MIDANPIRG and any formal action taken will be published in due course as a Supplement to the Report.

Approved by the Meeting
and published by authority of the Secretary General

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PART I: HISTORY OF THE MEETING

PART I - HISTORY OF THE MEETING

1. PLACE AND DURATION

1.1 The Eleventh meeting of the MIDANPIRG Air Traffic Management Sub-Group (ATM SG/11) and the Fourteenth meeting of the MIDANPIRG Communication, Navigation and Surveillance Sub-Group (CNS SG/14) were kindly hosted by the General Civil Aviation Authority (GCAA) in Abu Dhabi, United Arab Emirates, at the Grand Hyatt Hotel Emirates Pearl, Abu Dhabi, from 19 to 23 October 2025. A plenary session was organised to discuss common interest subjects between both Sub-Groups.

2. OPENING

2.1 The Meetings were opened by Mr. Ahmed Ibrahim Al Jallaf, Assistant Director General, Air Navigation Services, General Civil Aviation Authority (GCAA), United Arab Emirates, and Mr. Mohamed Abubaker Farea, Regional Director, ICAO Middle East Office, Cairo, Egypt, who thanked ICAO for organizing these important meetings in UAE. He extended a warm welcome to all participants and wished them a pleasant stay in Abu Dhabi. Mr. Farea highlighted that the conduct of such important meetings in parallel would enable productive discussion between operational and technical experts in the MID Region, and enhance the coordination and cooperation between both teams to address the common interest subjects, eventually enhance the Safety and efficiency levels of Air Navigation Services.

2.2 In his opening address, Mr. Ahmad Amireh, Regional Officer, Air Traffic Management and Search and Rescue (RO/ATM/SAR), ICAO Middle East Office, Cairo, welcomed all the participants to the meeting. He expressed his gratitude and appreciation to the GCAA of UAE for hosting the meetings. Mr. Amireh extended special thanks to the organizing team from GCAA/SZC for the preparation and facilitation of these meetings and for the excellent hospitality extended to the ICAO team and all participants. He highlighted that the support to the ICAO MID Regional Office activities is evidence in the active role of the United Arab Emirates, GCAA and SZC and reflects the commitment to enhancing the overall safety and efficiency of air navigation in the MID Region.

2.3 Mr. Amireh provided an overview of the subjects that will be addressed during the ATM SG meeting and highlighted the main expected outcomes. Mr. Amireh indicated that the Agenda of the meeting includes subjects related Air Navigation Plans, ATS routes, Contingency Arrangements and performance monitoring, which will be reflected in the Annual Air Navigation Report at the end of the year.

2.4 Mr. Amireh recalled the Terms of Reference of the ATM SG, related to the review and enhancement of the MID Region ATS Route network, to meet the changing demand of operators and other constraints within the MID Region, and the need for the availability of different routing options and alternates, including readily available contingency measures, to support the international traffic flows. He also highlighted the priority of other implementations that support the overall traffic operations, including ATFM, CMC/FUA and RVSM implementation.

2.5 In closing, Mr. Amireh thanked all the participants for their active participation and appreciated the efforts made by the provided Working Papers, and Presentations reflecting the developments at national level during the last period and on the plans for the coming years. He wished the meeting success in its deliberations.

3. ATTENDANCE

3.1 The meeting was attended by a total of sixty-three (63) participants from nine (9) States (Egypt, Iran, Jordan, Libya, Oman, Qatar, Saudi Arabia, Syria and UAE) and four (4) Organizations

(EUROCONTROL, IATA, IFATCA and MIDRMA). The list of participants is at **Attachment A**.

4. CHAIRPERSON AND SECRETARIAT

4.1 The meeting was chaired by Mr. Khalid Hussain Alharbi, Airspace Management Director, General Authority of Civil Aviation (GACA), Saudi Arabia.

4.2 Mr. Ahmad Amireh, Regional Officer, Air Traffic Management and Search and Rescue (RO/ATM/SAR) and Mr. Ahmad Kavehfiroz, Regional Officer, Air Traffic Management (RO/ATM) were the Secretaries of the meeting, and Ms. Dina El Karimy provided technical assistance to the meeting.

5. LANGUAGE

5.1 Discussions were conducted in English and documentation was issued in English.

6. AGENDA

6.1 The following Revised Agenda was adopted:

Agenda Item 1:	Adoption of the Provisional Agenda
Agenda Item 2:	Follow-up on ATM SG/10 and MIDANPIRG/22 Conclusions and Decisions related to ATM/SAR
Agenda Item 3:	Planning and implementation issues related to ATM/SAR
Agenda Item 4:	MID Air Navigation Priorities and Targets related to ATM/SAR
Agenda Item 5:	Air Navigation Deficiencies in the ATM/SAR fields
Agenda Item 6:	Future Work Programme
Agenda Item 7:	Any other Business

7. CONCLUSIONS AND DECISIONS – DEFINITION

7.1 The MIDANPIRG records its actions in the form of Conclusions and Decisions with the following significance:

- a) **Conclusions** deal with matters that, according to the Group's terms of reference, merit directly the attention of States, or on which further action will be initiated by the Secretary in accordance with established procedures; and
- b) **Decisions** relate solely to matters dealing with the internal working arrangements of the Group and its Sub-Groups.

8. LIST OF DRAFT CONCLUSIONS AND DECISIONS

DRAFT CONCLUSION 11/1: MID RVSM SMR 2026

*DRAFT CONCLUSION 11/2: PROPOSAL FOR AMENDMENT TO THE MID EANP
VOLUME II, PART I, TABLE GEN II-1*

*DRAFT CONCLUSION 11/3: PROPOSAL FOR AMENDMENT TO THE MID EANP
VOLUME II, FF-ICE B0/1 (AIDC/OLDI)
APPLICABILITY AREA*

*DRAFT CONCLUSION 11/4: IMPLEMENTATION OF REDUCED LONGITUDINAL
SEPARATION IN THE MID REGION*

*DRAFT DECISION 11/5: AIR TRAFFIC MANAGEMENT SUB-GROUP (ATM SG)
TERMS OF REFERENCE*

PART II: REPORT ON AGENDA ITEMS

PART II: REPORT ON AGENDA ITEMS**REPORT ON AGENDA ITEM 1: ADOPTION OF THE PROVISIONAL AGENDA**

1.1 The subject was addressed in WP/1, presented by the Secretariat. The meeting reviewed and adopted the Provisional Agenda as at paragraph 6 of the History of the Meeting.

1.2 The meeting was organized in parallel with the CNS SG/14 meeting. Three (3) joint sessions were organized to address common interest subjects and exchange views between the operational (ATM) and technical (CNS) perspectives. Joint working papers were presented in the plenary session. In addition, a dedicated session was planned to conduct Flight and Flow — Information for a Collaborative Environment (FF-ICE) Workshop.

REPORT ON AGENDA ITEM 2: FOLLOW-UP ON ATM SG/10 AND MIDANPIRG/22 CONCLUSIONS AND DECISIONS RELATED TO ATM/SAR

2.1 The subject was addressed in WP/2, presented by the Secretariat. The meeting noted that the ATM Sub-Group is tasked with the follow-up on the implementation process related to ATM and SAR to inform the MIDANPIRG on the progress, achievement, and problems being encountered.

2.2 The meeting was updated on the status of the ATM SG/10 and the MIDANPIRG/22 meetings' Conclusions and Decisions related to ATM and SAR as well as the follow-up actions taken by concerned parties as at **Appendix 2A**.

REPORT ON AGENDA ITEM 3: PLANNING AND IMPLEMENTATION ISSUES RELATED TO ATM/SAR

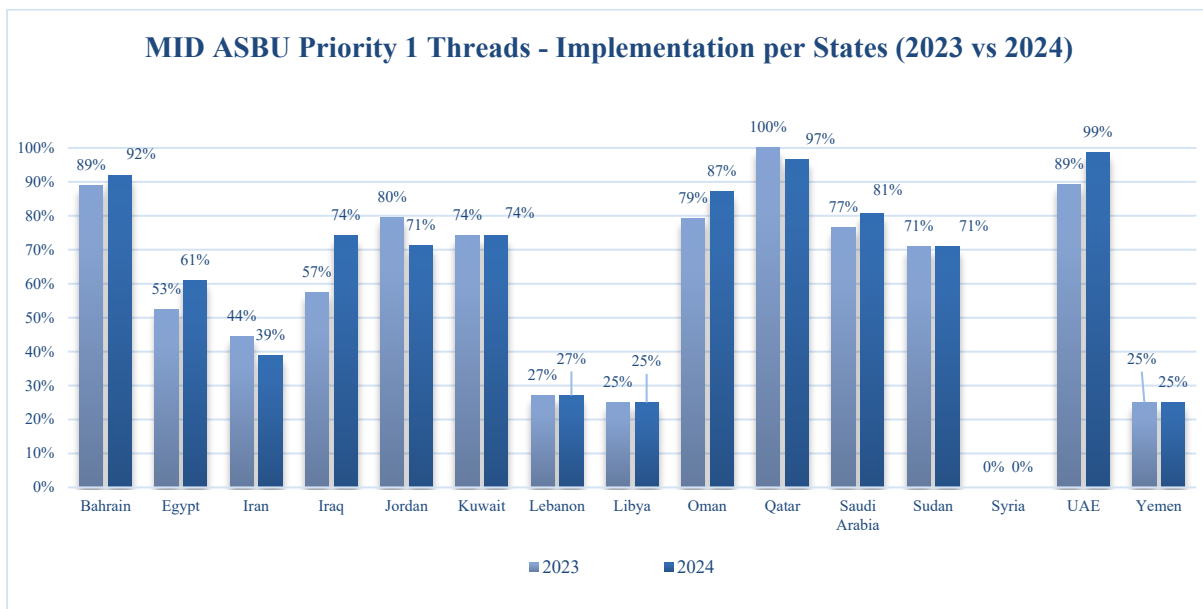
MID Air Navigation Report-2024

3.1 The subject was addressed in WP/3, presented by the Secretariat.

3.2 The meeting was apprised with the reported level of implementation of the MID priority one ASBU Threads/Elements available in the MID Air Navigation Report-2024. The Report was published under the ICAO MID Website at the link: <https://www.icao.int/MID/MIDANPIRG-RASG-MID/middle-east-air-navigation-reports>.

3.3 The meeting noted with concern the low level of implementation (50% or less) of the following Priority 1 elements:

- a) FICE (B0/1), the regional level of implementation is increased to 45.31% compared to 39.39% in 2023;
- b) NOPS (B0/1), the regional level of implementation is increased to 45.83% compared to 41.67%, in 2023;
- c) RSEQ (B0/1), the regional level of implementation is increased to 50% compared to 35.71%, in 2023;
- d) NAVS (B0/4), the regional level of implementation is decreased to 30% compared to 40% in 2023.



3.4 The meeting underlined that States are required to establish a national multidisciplinary team from all Air Navigation Services (ANS) areas to submit progress reports to ICAO MID in response to MIDANPIRG Conclusion 22/4 regarding the Air Navigation Report for 2025.

Air Navigation Plan (Vol.I): FIR Boundaries Pfa

3.5 The subject was addressed in WP/4, presented by the Secretariat.

3.6 The meeting noted that despite MIDANPIRG conclusions and ICAO MID follow up since 2017, so far, the progress of development of PfAs to incorporate MID FIRs/SRRs in MID ANP Volume I was not progressing as planned. The Secretariat provided updated status as follows:

States	States AIP	ANP Volume I FIR	ANP Volume I SRR	Remark
Bahrain	ENR 2.1	Not published	Not published	Bahrain & Saudi Arabia Pfa FIRSRR-MID Basic ANP 13.03-ATM-SAR is on-hold since 2013
Egypt	ENR 2.1	Not published	Not published	
Iran	ENR 2.1	Not published	Not published	
Iraq	Not published yet	Not published	Not published	
Jordan	ENR 2.1	Not published	Not published	
Kuwait	ENR 2.1	Not published	Not published	
Lebanon	ENR 2.1	Not published	Not published	
Libya	ENR 2.1	On-going	On-going	Pfa MID-I-2401 Approved by President of the ICAO Council. 14 November 2024
Oman	ENR 2.1	Not published	Not published	
Qatar	ENR 2.1	Published	Published	C-DEC 225/10 11 March 2022
Saudi Arabia	ENR 2.1	Not published	Not published	Bahrain & Saudi Arabia Pfa FIRSRR-MID Basic ANP 13.03-ATM-SAR is on-hold since 2013
Sudan	ENR 2.1	Not published	Not published	Sudan and South Sudan Task Force (SSS TF) is working on the subject. Draft Pfa AFI/MID ANP 18/02 – ATM/SAR was agreed and States are coordinating with adjacent FIRs
Syria	ENR 2.1	Not published	Not published	
UAE	ENR 2.1	Not published	Not published	
Yemen	ENR 2.1	Not published	Not published	

3.7 Based on the table in **Appendix 3A**, the meeting encouraged the Secretariat to continue monitoring and facilitating the coordination among relevant States to support verification and validation of their respective common FIR/SRR description and develop required PfAs, when required.

MID ANP Volume II - Optimization of MID Region ATS Route Designator and related Pfa***ATS Route Designator changes in accordance with approved PfAs***

3.8 The subject was addressed in WP/5, presented by the Secretariat.

3.9 The meeting recalled the MIDANPIRG Conclusions 19/13 and 20/27 regarding proposal for amendment to the MID eANP VOL II Table ATM II-MID-I. Additionally, the meeting recalled the discussion under ASM WG that resulted in the development of two PfAs: MID.II.2201-ATM and MID.II.2302-ATM to eliminate the identified issues and challenges related to ATS route network.

3.10 Accordingly, the Secretariat has updated the ATS route table in MID ANP Volume II. Furthermore, ASM WG/1 and ASM WG/2 meetings have taken further steps to ensure that the AIPs of the relevant States were align with the approved PfAs. The outcomes of the ASM Working Group are detailed in table below:

State	Change route designator PfA MID.II.2201-ATM & MID.II.2302-ATM
Bahrain	T557 to L557, Y604 to L704, Y856 to M556, T308 to M708, Z622 to M722, T872 to N572, T602 to N702, T319 to P319, T430 to P550, T444 to P700, T934 to P713.
Egypt	-
Iran	W4 to A414, W136 to M434, W148 to B418, W141 to B541, W147 to B547, J5 to M555, Z151 to L700/N717, Q13 to L713, Z627 to L717, Z680 to L720, T301 to M701, Z670 to M710, T215 to M715, T218 to M718, Q19 to M719, Z675 to N567, Z350 to N570, T665 to N700, T602 to N702, Z151 to N717, T202 to P302, T319 to P319, T430 to P550, Z855 to P558, T975 to P715 and Q18 to P718.
Iraq	-
Jordan	-
Kuwait	-
Lebanon	-
Libya	V300 to A420, W861 to B727, G659 to J615, G660 to J622, G661 to J725, G662 to J730, G663 to J850, G665 to J855, G739 to J977, G855 to J980, W9 to M709, Z178 to N708, V100 to N711, W857 to N982, Z350 to P310, M600 to P320, Z270 to P560, W863 to P563, Z333 to P573, W852 to P702, T295 to P706, T299 to P709, T297 to M707 & Y751 to M855.
Oman	L695, M303, M681, M877, N430, P304, P316, P513, R402 to non-regional T507 to L559, T980 to L700, Q620 to M700, Z515 to M717, T970 to N570, Q978 to N718, Z515 to M717
Qatar	Y604 to L704, T665 to N700, T430 to P550, T444 to P700
Saudi Arabia	G674, G799, M309 & R23 to non-regional H732 to M553, H741 to M320, J735 to P703, J749 to N709, J852 to M702, J874 to N704, T136 to L716, Y415 to M705, Y511 to M711, Z515 to M717, Q332 to N323, V13 to N703, Y517 to N707, T513 to N713, V975 to P705, Q510 to P710, T100 to P711, Q212 to P712, Q21 to P721, Q143 to P723, Q615 to P753, Q624 to P752, T295 to P706 & T142 to N722.
Sudan	B572 to L567, M320 to M323, Y613 to M713, Q733 to M723, V790 to N720, T238 to P318, P562 to P572, Z980 to P720.
Syria	A21 to R655, B538 to Q538, J222 to N310, Q52 to N565
UAE	L552 to Y552, T507 to L559, L562 to Q572, L565 to Q565, L568 to Q568, M302 to Q312, M322 to Q322, M552 to Z522, M558 to Y558, M560 to T560, M569 to Q569, N313 to Q323, N566 to Q576, T665 to N700, Q415 to N715, P308 to Q308, P311 to Q311, P317 to Q317, P321 to Q321, P553 to Q563.
Yemen	L566 to Y101, P552 to Y103, R799 to Y105

Removal of ATS Route prefix “U”

3.11 The meeting recalled the MSG meeting conclusion 6/9 regarding removal of the prefix “U” from ATS route designators. The meeting urged the remaining States to take required action to remove ATS Route designator prefix “U” from their AIPs and inform ICAO MID Office. The outcome of the ASM WG/2 is detailed the following table:

State	Status of removal “U” - PfA MID.II.2201-ATM & MID.II.2302-ATM
Bahrain	A453, B415, B416, B419, B457, G663, L305, L308, L319, L438, L443, L602, L604, L768, M430, M444, M677, M872, N300, N318, N563, N571, N685, N687, N697, N929, P425, P430, P559, P693, P699, P899, P975 & R659
Egypt	A1, A16, A411, A727, B12, B411, L315, L321, L550, L551, L604, L607, L612, L613, L617, L677, M305, M309, M312, M686, M690, M872, M999, N307, N316, N697, P557, P563, P751, R2 & R650.
Iran	A416, A418, A422, A453, A647, A788, B121, B411, B416, B417, B441, B451, G202, G452, G663, G665, G666, G667, G669, G670, G775, G781, G792, L124, L125, L223, L319, L333, L430, M316, M318, M434, M561, M573, N319, N440, P146, P567, P574, R205, R401, R462, R654, R659, R660, R661, R784 & R794.
Iraq	A424, B411, G202, G665, G667, G669, G795, L200, L417, L602, M203, M434, M688, M860, M861, P975 and R652.
Jordan	A412, B411, B544, G662, L200, L513, L768, M319, M449, M690, N318, R652 & R785.

Kuwait	A453, A788, B416, B417, G667, G669, G782, G795, L602, M320, M677, N302, P891, P975 & R784.
Lebanon	G2, L620, N310, N438, P300, R219, R655
Libya	A411, M312, M999, R2
Oman	A454, A775, A777, B400, B424, B535, B549, G216, G652, L301, L306, L308, L310, L425, L430, L444, L555, L556, L602, L631, L695, L764, L883, M300, M303, M428, M440, M551, M628, M572, M677, M681, M762, N300, N315, N318, N324, N430, N563, N569, N571, N629, N685, N767, N881, P304, P307, P316, P513, P570, P574, P634, P899, R401, R402 & R462
Qatar	B415, L305, L564, M430, M444, N300, P430 & R659
Saudi Arabia	A424, A788, B407, B412, B413, B417, B419, B544, G650, G652, G660, G662, G663, G665, G667, G669, G674, G782, G783, G795, G799, L300, L308, L425, L550, L556, L564, L573, L604, L677, L681, L768, L883, M309, M318, M320, M321, M430, M440, M449, M550, M559, M628, M686, M691, M863, M872, M999, N303, N316, N318, N324, N563, N569, N571, N638, N685, N687, N694, N697, N929, P323, P425, P517, P559, P560, P562, P563, P693, P699, P752, P753, P891, R652, R777 & R785.
Sudan	A727, B407, B413, B526, B535, G660, M863, P560, P561, P751
Syria	A412, B544, G202, L513, L572, L601, L602, L768, M861, N310, P975, R655, R785
UAE	B415, G462, G666, G783, L223, L305, L308, L310, L313, L440, L519, M318, M428, M550, M557, M572, M628, M677, M762, N300, N318, N563, N685, P307, P559, P574, P634, P699, P899, R401, R784.
Yemen	A408, B400, B403, B404, B413, B424, B526, B535, B544, B549, G652, G667, L314, L425, L564, L677, L301, M318, M321, M551, M559, M574, M634, M651, M999, N303, N315, N764, P312, P323, P570, P751, P752, P753, R401, R674, R777.

Optimization of ATS Route Designator

3.12 The meeting recalled MIDANPIRG Conclusion 21/5 regarding optimization of the use of ATS route designator. the meeting noted that the MID States, in collaboration with Secretariate, has involved actively in development of the required PfA. the drafted PfA would be presented to the ASM WG/3 before submission.

Development of PfA related to Cairo FIR ATS Route Optimization

3.13 The meeting noted with appreciation that the PfA originated by Egypt was coordinated with the relevant States, ICAO and other concerned stakeholders, the project aims to optimize traffic flow, providing considerable operational benefits to aircraft operators within the Region. Specifically, the new routing options would reduce flight distances, resulting in reduced carbon and emissions; as well as offering increased flexibility for flight planning in response to meteorological phenomena, operational restrictions, or other factors that might affect traffic flows.

RVSM Implementation and Monitoring

3.14 The subject was addressed in WP/6, presented by the MIDRMA.

3.15 The meeting recalled MIDANPIRG/22 conclusion related to the development of Safety Monitoring Report (SMR) 2025, the meeting reviewed the preliminary results of the SMR2025 at **Appendix 3B**.

3.16 The meeting noted that based on the data provided to the MIDRMA (TDS and LHDs), the Safety Objectives continue to be met. The value computed for the overall risk was estimated and found below the ICAO overall TLS.

3.17 The meeting noted with concern the low level of LHD Reporting by the MID States and noted that the MIDRMA will continue the development of the final version of SMR2025, until the end of the reporting cycle (31 December 2025) and encouraged the States to provide the MIDRMA with the LHD Reports, if any.

3.18 The meeting noted that Damascus FIR was excluded from the SMR 2025 due to the non-provision of required data.

3.19 The meeting noted that both Safety protocols at the regional interface between Muscat – Mumbai and Sana'a – Mogadishu were still open. The meeting received update from Oman on the progress related to the AIDC/OLDI implementation with Mumbai which would reduce the number of coordination failures between both ACCs.

3.20 The meeting encouraged the relevant States and ANSPs to address the root causes of the LHD reports and to coordinate with the counter parties, with the support of the regional offices, to enable the progress of the Safety Protocols.

3.21 A side meeting was conducted between Oman and the MIDRMA to address the increased number of LHDs reports (particularly Cat E) between Muscat and Mumbai, both parties reviewed the status of the open RVSM Safety Protocol that has remained unresolved for more than seven years. The discussion highlighted that Oman has fully implemented and fulfilled all necessary requirements to establish the OLDI/AIDC connections. However, the remaining delay lies on the Mumbai side, which continues to impact the seamless coordination between the two FIRs.

3.22 In view of the above, both parties suggested on the need to convene an urgent coordination meeting between Oman, the ICAO Middle East Regional Office (MID Office), and the ICAO MIDRMA with the participation of Mumbai ATM, the ICAO APAC ATM Officer, and MAAR to collectively address the outstanding issues. The objective of this meeting will be to examine the continuous filing of LHD reports in depth, identify practical and workable solutions, and ensure the eventual closure of this long-standing RVSM Safety Protocol at the eastern boundary of the Muscat FIR.

3.23 The discussion was summarized in the following points:

- AIDC interface tests between Muscat and Mumbai ACCs were conducted several times, however, due to incompatibility from Mumbai side, the tests were unsuccessful.
- Mumbai reported they are in the process of upgrading the system, anticipated completion before the end of the 2025.
- Oman and Mumbai were confident that once the incompatibility issues are solved, the connection is established, the occurrence of LHDs between our FIRs will be significantly reduced or possibly eliminated.
- Meanwhile, Muscat and Mumbai initiated and agreed on enhancing the reporting system by immediate reporting of any communication failure through the Supervisors on each ACC, in the operations room, and on a closer follow up to reduce the reports. Additionally, the investigation process will also be continuously monitored and followed up.

3.24 The meeting received the updated Hotspot and Airway occupancy rate within the FIRs of the MID Region and encouraged the States to consider the report in Airspace planning and design.

3.25 Based on all the above, the meeting agreed to present the final results of the SMR2025 to the MIDANPIRG/23 for review and endorsement.

3.26 The meeting was informed that the Hajj season for 2026 will be during the period 15 April to 15 May 2026. Accordingly, the meeting agreed on the following Draft Conclusion:

DRAFT CONCLUSION 11/1: MID RVSM SMR 2026

That,

- a) the FPL/traffic data for the period 15th April – 15th May 2026 to be used for the development of the MID RVSM Safety Monitoring Report (SMR 2026);*
- b) Only the appropriate Flight Data form available on the MIDRMA website (www.midrma.com) should be used for the provision of FPL/traffic data to the MIDRMA;*
- c) States submit their FIR waypoints as published in AIP and routing options valid for the same period of traffic data; and*
- d) the final version of the MID RVSM SMR 2026 be ready for presentation and endorsement by the MIDANPIRG/24 meeting.*

Progress on the MID ADS-B Height Monitoring System AHMS

3.27 The subject was addressed in WP/26, presented by the MIDRMA.

3.28 The meeting recalled the MIDANPIRG Decision 21/16 related to the MID ADS-B Height Monitoring System (MID AHMS). The MIDRMA provided update on the progress of implementation, including the engagement with MAAR, assessment of ADS-B coverage, development of implementation framework and request for ASE analysis software from NARMO, in addition to the coordination with the MID States for submission of archived ADS-B data for trials.

3.29 The MIDRMA reiterated the need for a mandate to urge the State to submit and continue submissions of the relevant ADS-B data required for the AHMS implementation, and for the need of establishing the necessary legal framework governing protecting the use and exchange of this data, which would be proposed to the MIDRMA board for discussion.

3.30 The meeting noted with appreciation the successful submission of a trial ADS-B data for analysis from Bahrain and Oman. Additionally, the meeting was informed that the coordination started with Jordan and Kuwait related to the submission of ADS-B archive data for analysis.

Air Navigation Plan (Vol. II): Homogenous Areas and Major Traffic Flow

3.31 The subject was addressed in WP/7, presented by the Secretariat.

3.32 The meeting recalled the decision was taken by ATM SG/10 emphasized the need to revise MID ANP Volume II, Part I: General Planning Aspects, specifically Table GEN II-1 based on the main traffic flows in the MID Region. In this respect, ICAO MID according to data provided by MIDRMA, identified the main traffic flows in the MID Region and developed the Draft PfA in **Appendix 3C**.

3.33 The meeting requested the ASM WG/3 to review and finalize the draft outlined in **Appendix 3C** before presenting it to the MIDANPIRG/23. Accordingly, the meeting agreed on the following Draft Conclusion:

DRAFT CONCLUSION 11/2: PROPOSAL FOR AMENDMENT TO THE MID eANP VOLUME II, PART I, TABLE GEN II-1

That, the ICAO MID Office follow the process of the required Proposal for Amendment (PFA) to revise MID eANP, Volume II, Part I, Table GEN II-1 (Homogeneous areas and major traffic flows identified in the Region).

Resilient Operational Navigation Operational Network (RON)

3.34 The subject was addressed in WP/13, presented by Saudi Arabia.

3.35 The meeting noted Saudi Arabia feedback about the DME/DME network which plays a critical role in providing backup navigation capability. The meeting agreed that the resilience of the MID navigation infrastructure should be addressed through improved DME coverage and optimization rather than expansion of legacy systems.

3.36 The meeting acknowledged the proposal from Saudi Arabia to further analyse the operational aspects related to NAV RON and to engage the MID NAV-MON Action Group in reviewing data related to ATS route structures and existing ground-based aids to support regional GNSS RFI resilience planning.

3.37 The meeting also noted that the upcoming GNSS Inter-Regional Workshop in Doha, Qatar (18 – 20 November 2025), jointly organized by ICAO MID and EUR/NAT Offices, would focus on GNSS RFI resilience, and will provide a platform and opportunity to address related operational navigation continuity measures, including the emerging NAV RON concept and regional coordination requirements.

Operational Inputs to AIDC-OLDI Applicability Area

3.38 The subject was addressed in WP/14, presented by the Secretariat.

3.39 The meeting recalled the discussion during the MIDANPIRG/21 meeting related to extension of the timeline for implementation of AIDC/OLDI Priority 1 in the MID Region to the end of December 2026.

3.40 The meeting reiterated the criteria that were agreed in ATM SG/10 for determination of MID Priority 1 AIDC/OLDI implementation:

- a) if the traffic exchange rate between two adjacent ACCs has exceeded 30 flights per hour; or
- b) if two consecutive FIRs implemented longitudinal separation 10 NM or less at common FIR boundary point(s); or
- c) if two adjacent FIRs implemented cross border Free Route Airspace (FRA); or
- d) if the number of LHD recorded by MIDRMA related to adjacent ACCs has exceeded 10 reports per month and it lasts for more than 6 months; or
- e) if traffic movement at the common FIR boundary significantly increased during contingency situations; or
- f) where decided by both concerned States.

3.41 Consequently, the Secretariate developed draft AIDC/OLDI applicability area in **Appendix 3D**, in accordance with the agreement reached in the ATM SG/10 meeting.

3.42 Based on the above, the meeting granted the required authorization to ASM WG/3 to review and finalize the draft outlined in **Appendix 3D** before presenting it to the MIDANPIRG/23. Accordingly, the meeting agreed on the following Draft Conclusion:

***DRAFT CONCLUSION 11/3: PROPOSAL FOR AMENDMENT TO THE MID
eANP VOLUME II, FF-ICE B0/1 (AIDC/OLDI)
APPLICABILITY AREA***

That, the ICAO MID Office follows the process of the required Proposal for Amendment (PFA) to revise AIDC/OLDI applicability area priority 1 in ANP Volume II.

Progress of the ASM WG

3.43 The subject was addressed in WP/15, presented by the Secretariat.

3.44 The meeting noted that ASM WG Terms of Reference (ToR) in **Appendix 3E**, and the Free Route Airspace Implementation Guidance Material reviewed by MIDANPIRG/22 meeting and endorsed through Decision 22/12 and Conclusion 22/13.

3.45 Additionally, the meeting noted that the MIDANPIRG/22 meeting reviewed the ASM Action plan which has been developed based on the following “Focus Areas”, as a framework for the ASM WG Activities; and appreciated the work of the ASM WG and encouraged the States to include in the Action Plan Airspace optimization and enhancements projects; to enable the ASM to provide support on regional and cross-regional levels, track and monitor the activities, and, where required, provide a venue for the experts from States to exchange experience and knowledge.

- a) Implementation of PBN in Enroute
- b) Implementation of reduction of longitudinal separation
- c) ATS route structure network (including ATS route designators and 5LNCs)
- d) ASM improvement (CMC and FUA, FRA, RAD, TOS, FLAS & LoA)
- e) RPAS/UTM
- f) FF-ICE implementation
- g) Other ASM related enhancements

3.46 The meeting noted the ASM WG/2 meeting outcomes to update the status of implementation of the Action Plan, and to include the additional Action Items emanating from the ATM SG/10 meeting. The updated version of the ASM WG Action Plan is at **Appendix 3F**.

Route Availability Document (RAD) Portal

3.47 The subject was addressed in WP/11, presented by Saudi Arabia.

3.48 The meeting received updates on the RAD portal provided by Saudi Arabia; planned to be launched by 31 December 2025, after completion the trial and testing period. the meeting encouraged the States to contribute to the implementation of RAD portal and as single source of information, supporting the States, ANSP and Airspace users.

Channelling Regional Traffic Flow

3.49 The subject was addressed in WP/12, presented by the Secretariat.

3.50 The meeting noted the importance of creating a regional coordination mechanism to enhance airspace management and channelling of the main flow of the traffic in normal and contingency

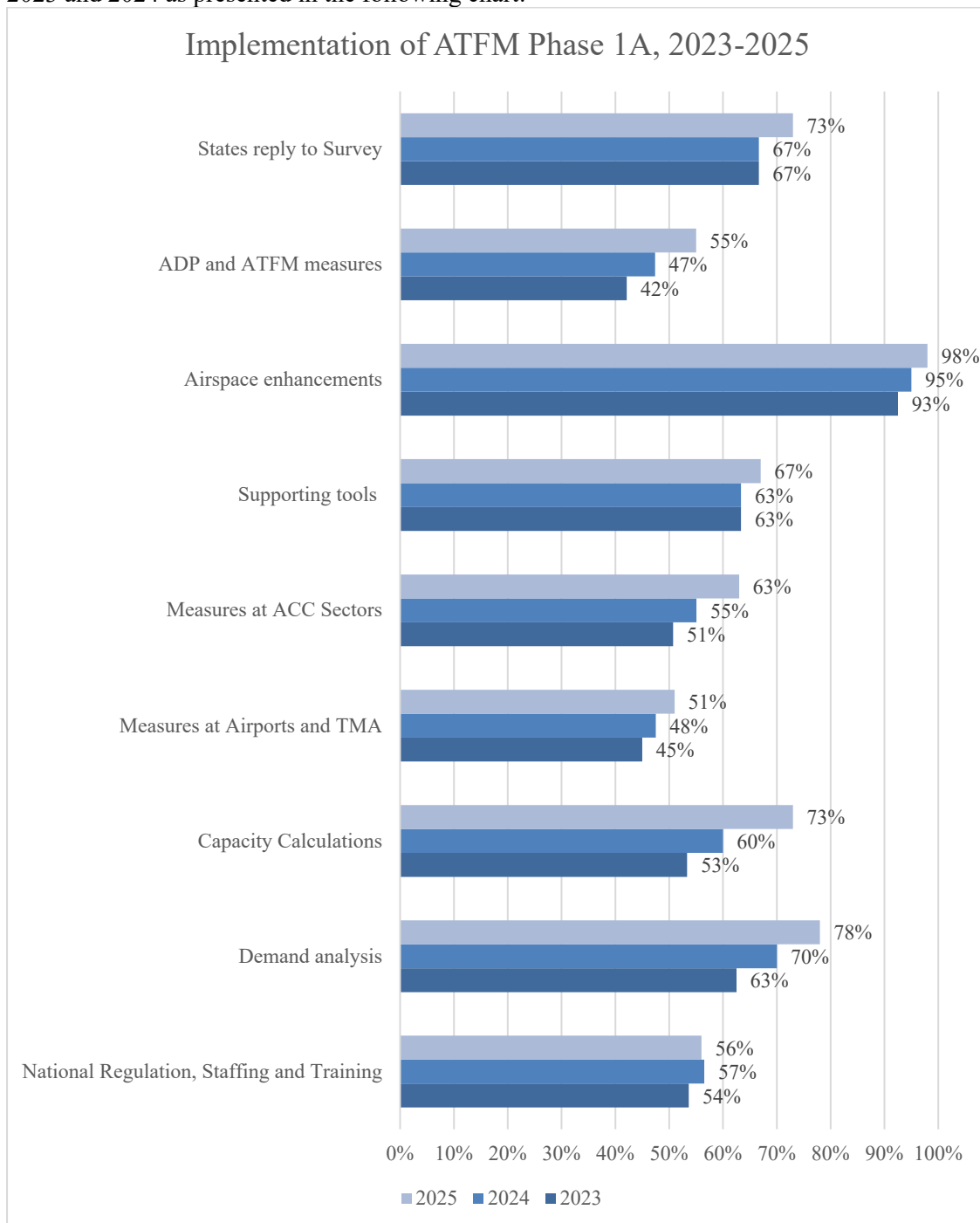
situation in the MID region in harmonized manner. Accordingly, the meeting agreed that this subject should be considered as one of the focus areas under the ASM WG Action Plan to assess requirements for implementation of such mechanism at MID region.

ATFM Implementation Progress

3.51 The subject was addressed in WP/16, presented by the Secretariat.

Progress Implementation of ATFM in the MID region based on ICAO MID Doc 014 phase 1A

3.52 The meeting noted that ATFM implementation survey Phase IA has been conducted in March 2025. Accordingly, the meeting noted the progress of ATFM implementation compared to years 2023 and 2024 as presented in the following chart:



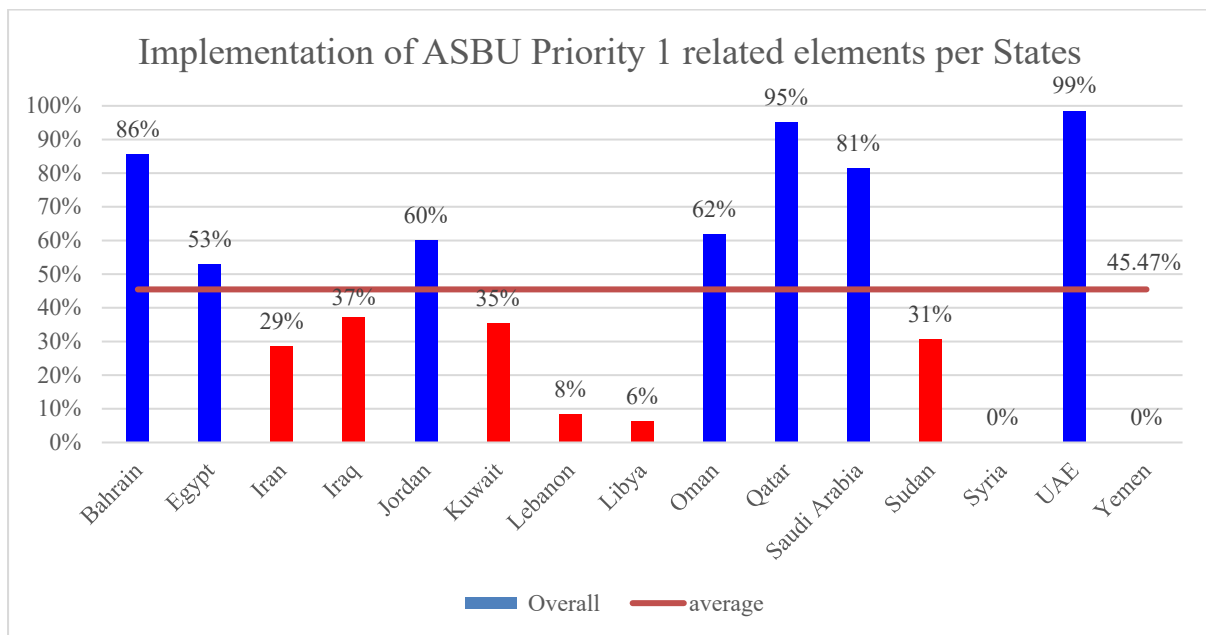
3.53 The meeting noted that the ATFM TF/9 meeting tasked the Secretariat, in collaboration with the ATFM Chairperson, carry out a new survey to assess the implementation of ICAO MID Doc 014 Phase I (including the requirements of Phase IA and IB) before end of 2025.

Progress of implementation of MID ASBU Priority 1 elements related to ATFM

3.54 The meeting recalled ASBU elements related to implementation of ATFM Phase 1A in accordance with ICAO MID Doc 014 and Doc 002 as follows:

- a) AMET B0/1: Meteorological observations products
- b) AMET B0/2: Meteorological forecast and warning products
- c) FICE B0/1: AIDC/OLDI
- d) FRTO B0/2: FUA
- e) NOPS B0/1: Initial integration of collaborative airspace with ATFM
- f) RSEQ B0/1: Airspace Management
- g) SURF B0/2: Comprehensive situational awareness of surface operations
- h) ACDM B0/1: Airports CDM information sharing
- i) ACDM B0/2: Integration with ATM network function

3.55 The meeting noted the progress of ASBU Elements related to implementation of ATFM Phase 1A in the MID region as shown in the following chart.



Development of MID States ATFM implementation plan

3.56 The meeting recalled MIDANPIRG Conclusion 21/19, Item a); regarding development of States National ATFM implementation plan based on ICAO Doc 014. Accordingly, the meeting agreed on the checklist in **Appendix 3G** to monitor progress of development of States national plan.

Emirates ACC ATFM Unit

3.57 The subject was addressed in PPT/34, presented by UAE.

3.58 UAE provided an update on the inauguration of the Emirates ACC ATFM Unit and the development of the UAE's ATFM Daily Plan (ADP). The ADP represents a strategic framework for managing daily demand across the Emirates FIR. Emirates ACC extends an open invitation to all States and Airspace Users to join the ADP initiative, aiming to foster regional collaboration and harmonization of ATFM practices. The paper also highlights the progress made in the phased implementation of ATFM measures within the UAE, including both pre-tactical and tactical processes, and reaffirms the UAE's commitment to advancing ATFM capabilities in alignment with ICAO MID regional objectives and registered this as a progress for the ATFM implementation phases.

Reduction of Longitudinal Separation between FIRs

3.59 The subject was addressed in WP/21, IP/4, IP/5 & IP/6, presented by the Secretariat, UAE and Saudi Arabia, respectively. Oman presented the progress on the implementation of Reduction of Longitudinal separation in PPT/25.

3.60 The meeting recalled that the AN-Conf/14 agreed while uniform application of separation minima would reduce bottlenecks and improve air navigation safety and efficiency, akin to the goals of Project 30/10, modern ATM solutions should also be applied across large portions of airspace that have similar traffic flow characteristics. These included air traffic flow management (ATFM), flexible use of airspace (FUA), free route airspace (FRA) and civil-military cooperation (CMC). The Conference recognized that such initiatives should be based on the needs of a wide cross-section of the aviation community, which may entail sending out surveys, as necessary.

3.61 The meeting noted that the MIDANPIRG meeting Decision 22/10 regarding "*PROJECT 30/10 ROADMAP*" and Conclusion 22/11 related to "*IMPLEMENTATION OF REDUCED LONGITUDINAL SEPARATION IN THE MID REGION*".

3.62 The meeting recalled MIDANPIRG Conclusion 22/11, and agreed on matrix in **Appendix 3H** related to longitudinal separation minima for aircraft operating on the same track and same level in non-surveillance environment and their corresponding requirements, based on ICAO Doc 4444, Chapter 5.

3.63 In addition, the meeting reviewed the matrix in **Appendix 3I** to monitor the progress of reducing longitudinal separation between the MID FIRs as well as adjacent regions based on common FIR boundary points.

3.64 The meeting encouraged MID States to provide required update to ICAO MID regarding the current status of longitudinal separation minima in common FIR boundary points in **Appendix 3I**.

3.65 Regarding MIDANPIRG Decision 22/10, the meeting agreed on the following criteria to prioritize the current status of the longitudinal separation over the common FIR boundary points.

- a) if a common FIR boundary point in non-surveillance environment (at least on one side) is subject to longitudinal separation of 10 minutes (equivalent to 80 NM) or greater; or
- b) if the large longitudinal separation over common FIR point imposes additional workload to ATCOs and flight crew which may have an impact on safety of traffic operation; or
- c) if the common FIR point carries the main flows in the MID region and/or at interface with adjacent region(s) in accordance with MIDRMA report; or

- d) if the common FIR boundary point is utilized for unidirectional operation and amount of movement reaches 90,000 or more per year; or
- e) if the common FIR boundary point is utilized for bidirectional operation and amount of movement reaches 50,000 or more per year; or
- f) if traffic movement at the common FIR boundary point significantly increases during contingency situations; or
- g) where decided by both concerned States.

3.66 Based on the above criteria, the meeting agreed to prioritize the common FIR boundary points in **Appendix 3I** as well as Draft Action Plan at **Appendix 3J** for implementation of reducing longitudinal separation in the MID region.

3.67 The meeting also urged concerned States to make required coordination with adjacent FIR, conduct required safety assessment, choose the most appropriate separation minima based on the requirements in **Appendix 3H**, develop their Sub-Action Plans under regional Action plan in **Appendix 3J** for monitoring and take necessary actions to implement its requirements and implement agreed reducing longitudinal separation minima.

Optimized Implementation of Longitudinal Separation Minima in MID Region

3.68 The subject was addressed in WP/39, presented by Saudi Arabia.

3.69 The meeting noted that MIDANPIRG Conclusion 22/11 stated that, the 30 NM separation minimum should be implemented in areas lacking ATS Surveillance capability. However, Project 30/10 subsequently classified the separation minima based only on whether the area is remote/oceanic (where 30 NM is proposed) or other (where 10 NM is proposed), without explicitly correlating the 30 NM implementation with the absence of ATS Surveillance service. Consequently, the current classification in Project 30/10 does not support the implementation of the 30 NM separation minimum solely based on the absence of ATS Surveillance service. Accordingly, the meeting agreed on following draft Conclusion to supersede MIDANPIRG Conclusion 22/11 for more clarity.

DRAFT CONCLUSION 11/4: IMPLEMENTATION OF REDUCED LONGITUDINAL SEPARATION IN THE MID REGION

That,

- a) *States, that have not yet done so:*
 - i. *be urged to implement reduction of longitudinal separation where appropriate:*
 - *reduce longitudinal separation down to 10 NM; where ATS surveillance service is provided, and*
 - *reduce longitudinal separation minimum subject to PANS ATM Chapter 5, 5.4.2.2, 5.4.2.3, 5.4.2.4, 5.4.2.6 & 5.4.2.9; where ATS surveillance service is not provided, and*
 - ii. *be invited to agree with their adjacent FIRs/States on the date of implementation and updating of the LoAs.*
- b) *the ASM Working Group to:*
 - i. *monitor the progress of implementation and undertakes necessary measures to promote its advancement.*

- ii. *develop a guidance material to implement the different method of separation mentioned in PANS ATM Chapter 5, 5.4.2.2, 5.4.2.3, 5.4.2.4, 5.4.2.6 & 5.4.2.9.*

States National Civil and Military Cooperation Plan

3.70 The subject was addressed in WP/22, presented by the Secretariat.

3.71 The meeting recalled MIDANPIRG/20 meeting Decision 20/31, which was tasked States and ICAO to develop their own Civil and Military Cooperation (CMC) Plan in line with ICAO Doc 10088:

MIDANPIRG DECISION 20/31: CONTINUATION OF THE CMC/FUA ACTION GROUP

That, ICAO to organize a workshop to raise awareness among all stakeholders regarding the CMC implementation, including operations of due regard aircraft over high seas, and support State to develop the national CMC plan.

3.72 The meeting also noted the progress of development of States National CMC and ASBU element FRTO B0/2 in **Appendix 3K**, urge MID States, with support of ICAO MID, develop required CMC Plan, foster implementation of ASBU element FRTO BO/2 and provide required update to ICAO MID.

Regional Contingency Planning

3.73 The subject was addressed in PPT/25A presented by Egypt, PPT/25B presented by Jordan and PPT/9 presented by the Secretariat.

3.74 The meeting recalled the ICAO MID Doc 003 related to the MID Regional ATM Contingency Plan, including preliminary information useful for planning of operations during contingency situations within the MID Region, including the Contingency Coordination Team (CCT) process. The meeting recalled that the document was developed by the MID ATM Contingency Planning action group and endorsed by the MIDANPIRG/21.

3.75 The meeting was updated on the progress of current contingency situation in the MID region, associated with the Khartoum FIR (since 17 April 2023) and the MID political tension (Since 11 April 2024). The meeting appreciated the prompt response of MID States and ANSPs to the contingency situations within the MID Region, as well as the assistance extended to the CCTs,

3.76 The meeting urged the MID States, if not yet done so, develop their national Contingency plans, in coordination with the MID Office, and publish contingency routing options, if necessary, in the respective AIPs based on ASBU Element FRTO B0/3.

3.77 The meeting was informed about the Global priorities –priority Focus Areas included in the ICAO Business Plan, including the ICAO Crisis response mechanism/framework; and the plan to develop ATM/ATS Contingency arrangement and Procedures harmonized across the regions; including the identification of levels of response, categories and playbooks. The meeting was also informed that Contingency Planning Workshop will be included in the ICAO MID Work Programme 2026.

3.78 Egypt presented the impact of the shifted traffic through Cairo FIR during the contingency situation occurred during June, and the implemented measures applied in coordination within the internal stakeholders and adjacent ACCs to ensure the continued safe operations during the crisis.

3.79 Jordan presented the results of coordination mechanism under the national CMC committee, during the contingency situation occurred in June, and the integrated methodology applied to address the potential risks.

3.80 IATA, on behalf of Airspace users, expressed their appreciation for the swift and coordinated response of the CCT team and the MID States. and recommended a post event review/analysis to consider lessons learnt and improve further the planning.

Contingency Event and ESCAT Implementation in Emirates FIR

3.81 The subject was addressed in PPT/10, presented by UAE.

3.82 UAE presented Emirates ACC swift and coordinated response to the recent airspace contingency event in the region. It outlines the successful activation of the Emergency Security Control of Air Traffic (ESCAT) and establishment of contingency routes through collaborative civil-military coordination. The UAE striving efforts, in cooperation with Oman, & Saudi Arabia, ensured operational continuity, airspace safety and efficient traffic flow amidst significant regional closures. The presentation emphasizes lessons learned, stakeholder feedback, and the importance of standardized regional ESCAT procedures to strengthen future readiness.

Artificial Intelligence in ANS (AI in ANS)

3.83 The subject was addressed in PPT/42, presented by UAE.

3.84 The meeting was appraised with the developments related to AI within SZC, including the generation and analysis of the training and simulation exercise, analysis of safety monitoring reports, AIP AI Bot, and communication compliance; beside the integration on regular business related to personal learning, content creation and admin support; to enhance efficiency, cost saving, service level enhancement, accessibility and quality.

3.85 Additionally, the meeting noted with appreciation that the Middle East Regional Monitoring Agency (MIDRMA), the MIDRMA Risk Analysis Software (MIDRAS), was recently upgraded to a new version that integrates advanced Artificial Intelligence (AI) capabilities, enabling the MIDRMA to calculate the ICAO Target Level of Safety (TLS) with higher precision, while substantially reducing the analytical workload. The AI component has also allowed the system to identify and compute complex safety parameters that previously required considerable manual effort and time consuming. In addition, the MIDRMA is currently exploring the use of AI within the framework of the MID ADS-B Height Monitoring System (MID-AHMS) Project, particularly to enhance and simplify the existing process of calculating the Altimetry System Error (ASE). This process has traditionally been highly technical and resource-intensive, but with the continued collaboration of the software developers, the MIDRMA aims to make ASE computation more efficient, accurate, and less dependent on extensive manual intervention.

3.86 The meeting appreciated the efforts made by UAE and the MIDRMA, in integrating AI in their daily work, and encouraged the States to explore opportunities for AI implementation within the ANS areas to enhance efficiency, safety and sustainability, utilizing modern technologies.

Need for Regional Guidance on ATM–UTM integration in the MID Region

3.87 The subject was addressed in WP/20, presented by Oman.

3.88 The meeting noted that the UAS activities in the MID Region, utilizing airspaces near CTR/CTA; while the States were developing national UAS/UTM regulations and rules, divergent approaches create risks at the ATM–UTM interface.

3.89 The meeting noted the needs for harmonized guidance to define roles/boundaries, a minimum ATM-UTM data set, ATCO training/unit procedures, and common contingency handling—implemented in a phased manner as key technical enablers mature.

3.90 The meeting encouraged the states to share their experience related to UAS/UTM, towards a regional cooperation and sharing experiences. To be considered by the ASM WG as one of the focus areas.

Flight and Flow — Information for a Collaborative Environment (FF-ICE)

3.91 The subject was addressed on WP/17, presented by the Secretariat.

3.92 The meeting recalled ICAO plan related to the planning for implementation of Flight and Flow-Information for a Collaborative Environment (FF-ICE) and cessation of FPL2012, as essential advancement in air traffic management, with envisaged proposed implementation date by 2034.

3.93 The meeting noted with appreciation that the ICAO APAC MID FF-ICE Seminar was successfully conducted in Dubai, during the period 23 – 26 February 2025, hosted by General Civil Aviation Authority of the United Arab Emirates (GCAA/UAE). The Seminar provided comprehensive background information on the ATFM and FF-ICE, including the operational requirements and the prerequisites for the implementation on planning phase.

3.94 IATA reiterated their support to the development of harmonized regional transition roadmap to avoid fragmented implementation, and underlined that successful implementation requires a coordinated transition plan from FPL2012 to FF-ICE, supported by compatible automation systems, clear communication procedures, and contingency measures.

3.95 The meeting recalled that the MIDANPIRG/22 meeting reviewed the outcomes of the Seminar at **Appendix 3L**, noting that the majority of the MID States indicated their intension to transit to FF-ICE and cessation of FPL2012 ahead of the planned date in 2034. Accordingly, the MIDANPIRG/22 meeting tasked the AIM SG, ATM SG, and CNS SGs to include FF-ICE as part of their work programme and agreed that a joint FF-ICE workshop would be organized, and to recommend to the MIDANPIRG/23 meeting (planned to be organized in Egypt mid 2026) the best way forward for planning and implementing FF-ICE in the MID Region.

3.96 The meeting noted with appreciation that the joint FF-ICE Workshop was conducted during the ATM SG/11 and CNS SG/14 meetings. in order to commonly raise awareness and consider the implementation constraints towards the development of regional transition plan.

3.97 The Workshop provided detailed view of the FF-ICE implementation as follows:

- FF-ICE Concept and related provisions (PPT/24)
- IATA perspective related to FF-ICE implementation (PPT/35)
- EUROCONTROL - NM Experience in FF-ICE implementation (PPT/36)
- EUROCONTROL - Understanding FF-ICE through Scenarios (PPT/37)
- FF-ICE Regulatory Requirements, Template, ASBU Enablers, Dependencies and Relations (PPT/41).

3.98 The meeting recalled that, at the initial phases the Airspace Management Working Group (ASM WG) main task was to ensure continues development of airspaces and air traffic management, including the development of regional FF-ICE roadmap.

3.99 Accordingly, based on the information provided in the Workshop, the meeting agreed that the ASM WG to develop an initial roadmap including the operational requirements from ATM

perspective, and share it with the CNS and AIM SGs for their feedback (Virtual meeting to be organized). The consolidated roadmap would be therefore submitted to the MIDANPIRG/23 for review and endorsement.

3.100 The meeting noted with appreciation the support provided by EUROCONTROL and IATA in sharing the views and experience in the Workshop and stressed on the need for harmonized plans to support operation of many carries of the MID Region operating globally.

SAR Implementation within the MID Region

3.101 The subject was addressed in WP/23, presented by the Secretariat.

3.102 The meeting recalled the SAR related Standards, Recommended Practices and Procedures and guidance material related to the implementation of Search and Rescue (SAR) mainly contained in ICAO Annex 12, International Aeronautical and Maritime Search and Rescue Manual (IAMSAR - Doc 9731). And the regional requirements available in the MID SAR Implementation Plan which was endorsed and published as MID Doc 010, in 2018.

3.103 The meeting reviewed the contact lists for the SAR Focal Points of the MID States and encouraged States to coordinate with the MID Office the required update and contact details.

3.104 The meeting invited the State to consider the conduct of a regional SAREX in the planning of the working programme of 2026, the MID Office would be readily available to provide the required support.

MID States Presentations

Update from Cairo FIR

3.105 Egypt presented updates on the “Cairo FIR Optimization- phase 3” project, highlighting Egypt’s continuous efforts to enhance the efficiency, safety, and sustainability of air traffic operations within the Cairo Flight Information Region (FIR) in line with the regional and global plans. The project focuses on implementing of new optimized ATS routes, reducing fuel consumption and minimizing environmental impact while strengthening regional connectivity and increased capacity.

3.106 Through close coordination with neighbouring FIRs, ICAO, IATA, and Eurocontrol, Egypt successfully introduced multiple new routes and restructured key airspace segments.

Updates from Amman FIR

3.107 The Civil Aviation Regulatory Commission updated the meeting on the ongoing progress and developments within Amman FIR, including the progress related to the Airspace restructure project and the integration of the DME/DME coverage for used for navigation, and enhanced surveillance capabilities using the MLAT coverage.

Update from Muscat FIR

3.108 Oman provided updates on the progress of Oman Airspace Strategic Project, as an initiative to enhance and optimize the airspace within Muscat FIR and at the regional interface with APAC, meeting the national and regional targets, and addressing the increased traffic growth and the associated number of hotspots and traffic conflicting areas.

3.109 Oman underlined the importance if close and continuous collaboration between neighbouring States, regional partners, and industry stakeholders, as vital to the success of project, ensuring interoperability, shared benefits, and a seamless, safe, and efficient regional airspace network.

3.110 The meeting noted the conduct of side meetings organized during the period of the SG meeting, to address common challenges and agree on future plans, including the following meetings:

- Oman – Saudi Arabia.
 - Oman – UAE.
 - Oman – national carriers in UAE (Etihad, Emirates, Fly Dubai and Arabia) and IATA.
 - Egypt – Saudi Arabia.
-

REPORT ON AGENDA ITEM 4: MID AIR NAVIGATION PRIORITIES AND TARGETS RELATED TO ATM/SAR

New ASBU Elements Blocks 0, 1 & 2 relevant to CNS/ATM/SAR

4.1 The subject was addressed in WP/27, presented by the Secretariat.

STATUS OF MID ASBU PRIORITY 1 IMPLEMENTATION BLOCKS 0 & 1

4.2 The meeting noted that as per the ASBU timeline detailed in the ICAO GANP portal, Block 1 has concluded, and Block 2 commenced at the beginning of 2025. Consequently, utilizing data supplied by MID States and additional analysis performed by ICAO MID, the following key points were emphasized.

a) ASBU Block 0 (2013-2018)

- 28 elements out of 52 are priority 1; the average level of implementation of priority 1 ASBU block 0 elements is 68.94%;
- Qatar, Bahrain, UAE, Oman, Saudi Arabia & Jordan have the highest level of implementation;
- NAVS B0/4, RSEQ B0/1, ASUR B0/2, FICE B0/1 & NOPS B0/1 have the lowest level of implementation with 20.00%, 35.71%, 37.50%, 40.63% and 41.67%, respectively;
- Block 0, related CNS including 6 elements; the average level of implementation is 63.75%; and
- Block 0, related ATM/SAR including 8 elements; the average level of implementation is 70.32.

b) ASBU Block 1 (2019-2024)

- 6 elements out of 58 are priority 1; the average level of implementation of priority 1 ASBU block 1 elements is 63.60%;
- Bahrain, Qatar, Saudi Arabia & UAE have the highest level of implementation with 100%;
- DAIM B1/4 and DAIM B1/3 have the lowest level of implementation with 33.47% & 42.11%, respectively;
- Block 1, related CNS including 1 element; the average level of implementation is 73.33%; and
- Block 1, related ATM/SAR including 2 elements; the average level of implementation is 83.33%.

4.3 The meeting noted with appreciation that Bahrain, Qatar, Saudi Arabia and UAE implemented additional ASBU elements from Block 0, 1 and 2, which have not been identified as priority 1 at the regional level presented in **Appendix 4A**.

4.4 The meeting recalled MIDANPIRG Conclusion 22/4 regarding the provision of MID Region Air Navigation Report as follows:

MIDANPIRG CONCLUSION 22/4: MID REGION AIR NAVIGATION REPORT (2025)

That,

- a) *States urged to provide the ICAO MID Office with the following data for the*

development of the MID Region Air Navigation Report-2025 by 31 December 2025:

- i. the status of implementation of Priority 1 ASBU elements;*
 - ii. major achievements and success stories;*
 - iii. information about any additional ASBU elements from Block 0, 1 and 2 that have been identified as a priority for implementation at National level; and*
 - iv. progress achieved for the implementation of the Performance Based Approach and development of National Air Navigation Plan (NANP).*
- b) the MID Air Navigation Report (2025) be presented to the MIDANPIRG/23 for endorsement.*

4.5 Based on the above Conclusion, the meeting noted that ICAO MID conducted additional review on ASBU elements in Blocks 0, 1 & 2 and proposed new elements, applicability area, indicators and metrics in MID Air Navigation Strategy at **Appendix 4A**.

4.6 The meeting urged States to review and assess the proposed MID ASBU Priority 2 elements and block 2 related to CNS, ATM/SAR elements at **Appendix 4B**, in order to identify new MID ASBU Priority 1 to the RANP/NANP TF/3 meeting (planned in Q1 2026) for further study, and to draft new version of MID Air Navigation Strategy which will be presented to the MIDANPIRG/23 meeting for endorsement.

Regional ANP New Framework

4.7 The subject was addressed in WP/28, presented by the Secretariat.

4.8 The meeting noted that due to the lack of harmonization in the development of the content for Air Navigation Plan Volume III compared to Volume II and III, ICAO has initiated a specific project aimed at achieving the necessary harmonization across the ICAO Regions. This initiative intended to assist States in formulating National Air Navigation Plans (NANPs) in line with both Regional and Global Plans.

4.9 The meeting recalled the discussion during the ICAO Assembly 42nd, particularly the new version of GANP 8th edition. The meeting was briefed on the ICAO MID Tentative Work Programme for 2026, and the plan to organize the RANP/NANP TF/3 meeting, which would include further elaboration on the new Regional ANP Framework and its components. The meeting encouraged the States to include in their plans the conduct of RANP/NANP Workshop in coordination with the Secretariat of the ICAO MID Office.

REPORT ON AGENDA ITEM 5: AIR NAVIGATION DEFICIENCIES IN THE ATM/SAR FIELDS
Potential Deficiencies related to ATM/SAR

- 5.1 The subject was addressed in WP/29, presented by the Secretariat.
- 5.2 The meeting recalled Chicago Convention Article 28 (Air navigation facilities and standard systems), Article 37 (Adoption of international standards and procedures), related SARPs, PANS, and the Regional requirements stipulated in MID ANP Volume II, the meeting highlighted the current Air Navigation Deficiencies and the support provided to the States to rectify related matters and the development of Corrective Action Plans (CAPS).
- 5.3 The meeting recalled the requirements related to ATM contained in Annex 11, ICAO DOC 4444: PANS ATM, MID ANP Volume II as well as MIDANPIRG Conclusions and Decisions, and noted the basic requirements extract in **Appendix 5A**.
- 5.4 In addition, the meeting recalled the requirements related to SAR contained in Annex 11, Annex 12 and ICAO DOC 4444: PANS ATM, MID ANP Volume II as well as MIDANPIRG Conclusions and Decisions, and noted the basic requirements extract in **Appendix 5B**.
- 5.5 Based on the above, the meeting urged States to conduct comprehensive review and identify the potential list of deficiency(ies) for further corrective actions. In this respect, the meeting tasked ICAO MID to provide assistance to States in addressing the current and potential deficiencies and if required, the development of Corrective Action Plans with the necessary follow-up with the relevant Stakeholders to rectify the related issues and challenges.

Air Navigation Deficiencies in the ATM/SAR fields

- 5.6 The subject was addressed in WP/30.
- 5.7 The meeting reviewed the list of deficiencies as reflected in the MID Air Navigation Deficiency Database (MANDD) at: <https://mandd.icao.int>, particularly related to ATM and SAR fields as at **Appendices 5C** and **5D**, respectively; and urged States to take necessary actions to implement the provisions of the MIDANPIRG/15 Conclusion 15/35, in particular the submission of a specific Corrective Action Plan (CAP) for each deficiency and update the status accordingly.
- 5.8 The meeting noted with concern that the majority of deficiencies listed in the MIDANPIRG Air Navigation Deficiencies Database (MANDD) have no specific Corrective Action Plan (CAP) with a valid completion date. In this respect, the meeting recalled MIDANPIRG Conclusion 22/33 related to the elimination of Air Navigation Deficiencies as follows:

MIDANPIRG CONCLUSION 22/33: AIR NAVIGATION DEFICIENCIES

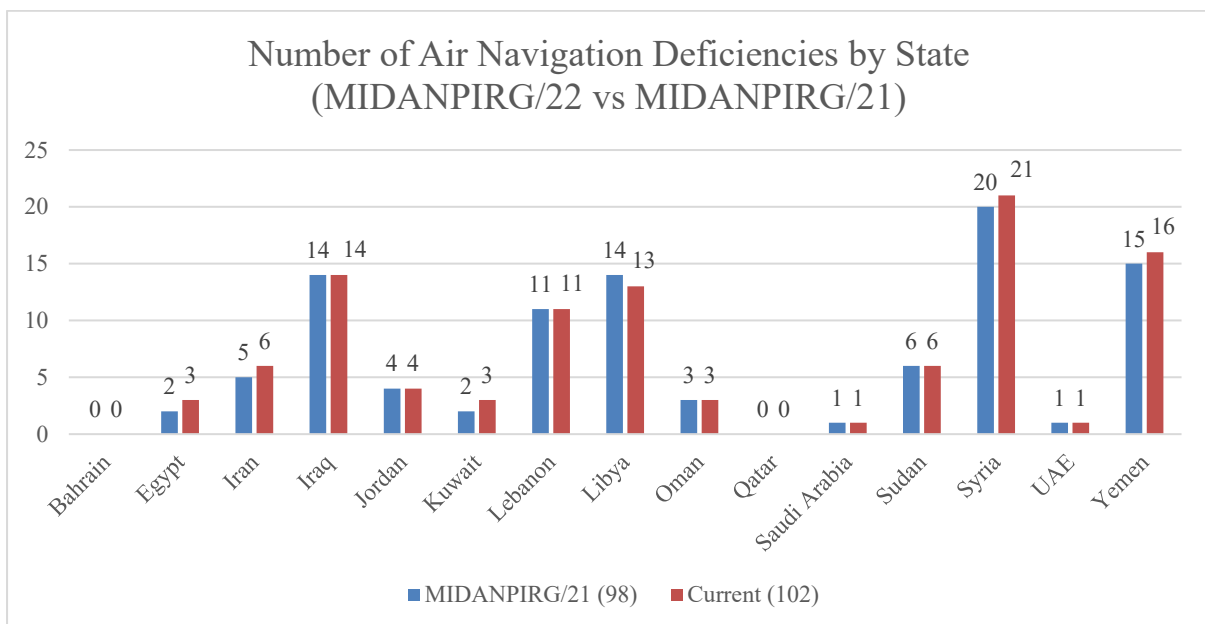
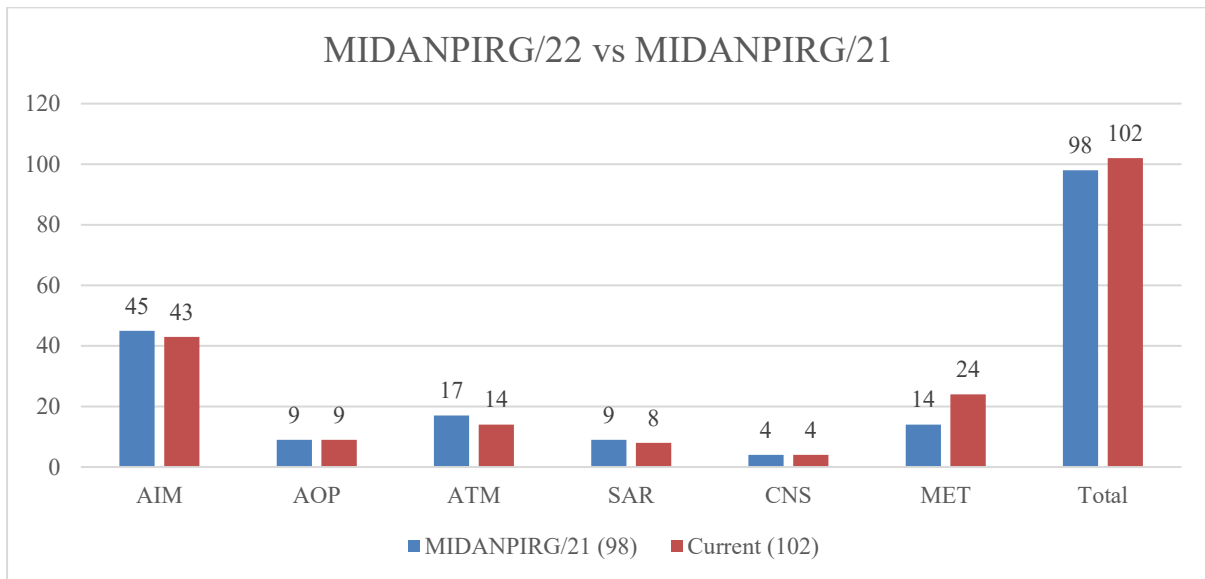
That,

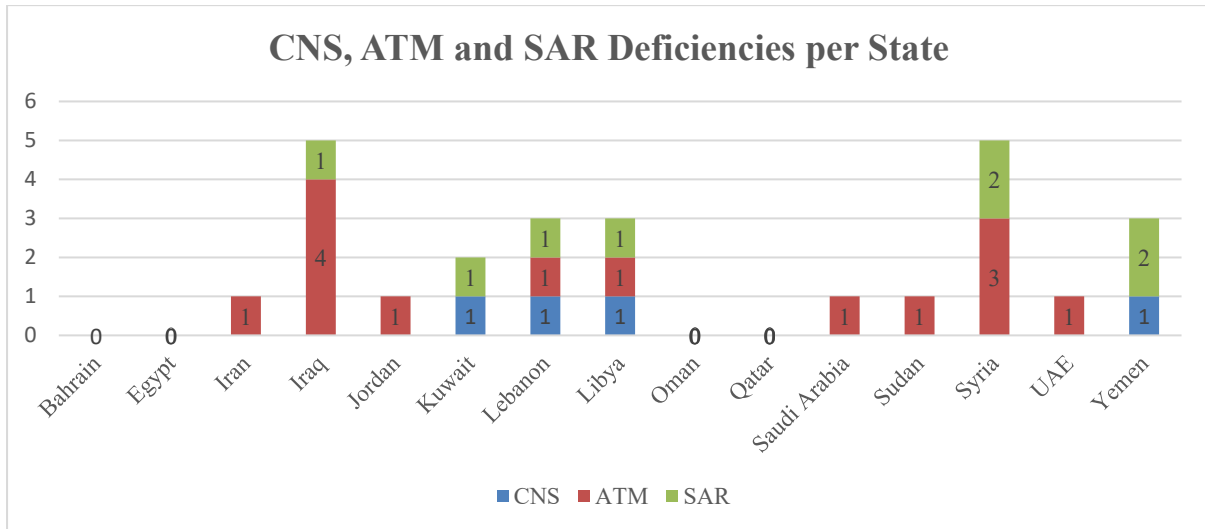
- a) States be urged to:*
- i. use the MID Air Navigation Deficiency Database (MANDD) for the submission of requests for addition, update, and elimination of Air Navigation Deficiencies, including the submission of a specific Corrective Action Plan (CAP) and completion date for each deficiency; and*
 - ii. submit a Formal Letter to the ICAO MID Regional Office containing the evidence(s) that mitigation measures have been implemented for the elimination of deficiency(ies) when requesting the elimination of deficiency(ies) from the MANDD.*

b) ICAO MID be urged to:

- i. review the status of the recorded deficiency in MANDD on a quarterly basis and send reminder to States focal point(s) to ensure MANDD is kept up to date; and
- ii. technically support MID States to eliminate recorded deficiencies in MANDD.

5.9 The meeting noted that the number of Air Navigation Deficiencies in MANDD, reported to the MIDANPIRG/22 meeting, was 102 deficiencies compared to 98 deficiencies reported to the MIDANPIRG/21 meeting as shown in the charts below:





- a) *In the ATM field:* as reported by MIDRMA, the MIDANPIRG/22 meeting agreed to remove the deficiency against Lebanon, Libya and Sudan related to provision of TDS to MIDRMA; the total number of deficiencies is fourteen (14); seven (7) priority “A” and seven (7) priority “B”. Seven (7) related to the uncompleted signature of contingency agreements and seven (7) related to the non-implementation of planned regional ATS Routes.
- b) *In the SAR field:* based on documents provided by Libya, the MIDANPIRG/22 meeting agreed to remove the deficiency against Libya related to provision of SAR service; the total number of deficiencies was eight (8) priority “A”. Four (4) related to the lack of implementation of SAR provisions; and four (4) related to non-compliance with the carriage of Emergency Locator Transmitter (ELT) requirements.
- c) *In the CNS field:* the total number of CNS deficiencies is four (4); two (2) priority “A” and two (2) priority “B”. Two (2) deficiencies are related to ATS Direct speech circuits, one (1) related to Inter-Regional Communication link with ICAO EUR/NAT Region and one (1) for HF service.

5.10 Based on the above, the meeting strongly urged States to take required action per MIDANPIRG Conclusion 22/33 and tasked the ICAO MID Office to make the required follow up with State Focal Points to develop required Corrective Action Plan (CAP) for elimination of deficiencies and keep update ICAO MANDDD.

REPORT ON AGENDA ITEM 6: FUTURE WORK PROGRAMME***Revision of Terms of Reference (ToR) and Future Work Programme***

6.1 The subject was addressed in WP/31, presented by the Secretariat.

6.2 The meeting noted that the MIDANPIRG/22 endorsed the ToR of the Airspace Management Working Group (ASM WG). Accordingly, the meeting reviewed the ToR of the ATM SG, as at **Appendix 6A**, and agreed on the following Draft Decision:

***DRAFT DECISION 11/5: AIR TRAFFIC MANAGEMENT SUB-GROUP (ATM SG)
TERMS OF REFERENCE***

That, the Terms of Reference of the Air Traffic Management Sub-Group, as at Appendix 6A, are endorsed.

6.3 The meeting recalled that the ATM SG and CNS SG meetings were organized in parallel for 2 cycles, to discuss and agree on common interest subjects and align implantation plans. The meeting highlighted that an increased number of common interest subjects to be addressed between ATM and AIM. Accordingly, the meeting proposed that the next meeting should be organized in parallel with the AIM SG.

6.4 The meeting agreed that the next ATM SG/12 meeting will be held during the period 18 – 22 October 2026. The meeting noted with appreciation the offer received from Qatar to host the ATM SG/12 and AIM SG/12 meetings in parallel, further details will be communicated in due course.

6.5 Furthermore, the meeting invited States and Organizations to review and support the conduct of the ICAO MID Tentative Working Programme for 2026, which will be posted under the ICAO MID website by the end of 2025; and to include the regional activities in the national planning of the year.

Election of Chairpersons

6.6 The subject was addressed in WP/32, presented by the Secretariat.

6.7 The meeting recalled the procedure in the MID Doc 001: MIDANPIRG Procedural Handbook, Part IV, Section 6, related to the election of Chairpersons; and recalled that Mr. Khalid Hussain Alharbi, Airspace Management Director, General Authority of Civil Aviation (GACA) Saudi Arabia, and Mr. Hilal Ali Mohammed Al-Maqbali, Director of ATC, Civil Aviation Authority, Oman, were elected as the Chairperson and Vice Chairperson, respectively. The elected Chairpersons assumed their duties at the ATM SG/9 meeting (Sharm El Sheikh, Egypt, 14 – 16 November 2023).

6.8 The meeting unanimously agreed on the continuation of the current Chairpersons for another cycle, starting at the next SG meeting.

REPORT ON AGENDA ITEM 7: ANY OTHER BUSINESS***ATM Monitoring Dashboard***

7.1 The subject was addressed in WP/33, presented by Saudi Arabia.

7.2 The meeting recalled the Chairperson initiative to develop the ATM monitoring dashboard to support the activities of the ATM SG and the monitor the implementation levels, using the available tools and expertise within GACA and SANS in Saudi Arabia.

7.3 The meeting noted MIDANPIRG/22 Conclusion 22/6 regarding development of ATM dashboard by Saudi Arabia to support MID States for monitoring the status of ATM related subjects, as follows:

MIDANPIRG CONCLUSION 22/6: DEVELOPMENT OF REGIONAL ATM MONITORING DASHBOARD

That,

- a) the Air Traffic Management Monitoring Dashboard be developed by ATM SG to monitor ATM related items, based on the offer received from Saudi Arabia; and*
- b) the progress of the Dashboard be presented to the MIDANPIRG/23 meeting for further deliberation, including the potential expansion of the proposed dashboard to monitor status of other ANS items.*

7.4 Based on that, Saudi Arabia presented the initial version of the ATM Dashboard, including the following elements:

- a) Reducing Longitudinal Separation.
- b) ATS Routes Designator.
- c) ATFM (Phase 1A).
- d) ATS Routes Direction.
- e) MIDRMA data.
- f) Air Navigation Report, MID ASBU Priority 1 elements.
- g) LoAs & Plans Tracker.

7.5 The meeting appreciated the efforts of GACA/SANS and tasked the Secretariat to complete the development of the ATM Dashboard and data entry before presenting to the next MIDANPIRG.

Smart Headset Project – Mental Health

7.6 The subject was addressed in WP/40, presented by UAE.

7.7 The meeting was apprised with the development of the Smart Headset, and the integration and testing of wearable neuro-monitoring device in Sheikh Zayed Air Navigation Center; used for training session and supporting the advancement of mental health and operational performance which could support the Fatigue Management implementation and monitoring.

APPENDICES

FOLLOW-UP ON PREVIOUS CONCLUSIONS & DECISIONS

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
C. 20/31	<p>CONTINUATION OF THE CMC/FUA ACTION GROUP</p> <p>That, ICAO to organize a workshop to raise awareness among all stakeholders regarding the CMC implementation, including operations of due regard aircraft over high seas, and support State to develop the national CMC plan.</p>	<p>Need to conduct regional workshop</p> <p>States required to develop their National CMC plan</p>	<p>Conduct CMC Workshop</p> <p>States National CMC Plan</p>	<p>ICAO MID & MID States</p>		<p>On going Refer WP/22</p> <p>On going Refer WP/22</p>
C. 21/17	<p>MID REGIONAL ATM CONTINGENCY PLAN (V5.0)</p> <p>That, a) the MID Regional ATM Contingency Plan (V5.0), at Appendix 5J is endorsed and be published as the MID Regional ATM Contingency Plan (V5.0); b) ICAO MID Office develop required structure on ICAO MID website and keep it up to date regarding MID States contingency plans, agreement, SOD of CCT meetings, contact list and etc.; c) based on the guidelines and template provided in regional contingency plan (V5.0), MID States develop their respective contingency plan and arrangement with adjacent FIRs and share them with ICAO MID; and d) by organizing individual workshops, ICAO MID supports the development of National Contingency Plans by the MID States.</p>	<p>Need to conduct regional workshop</p> <p>States required to develop their National Contingency plan</p> <p>Need to create Contingency repository under ICAO MID website</p>	<p>Conduct Contingency Workshop</p> <p>States National Contingency Plan</p> <p>ICAO MID Contingency website</p>	<p>ICAO MID & MID States</p>		<p>Conducted</p> <p>On going Refer WP/9</p> <p>On going Refer WP/9</p>
C. 21/19	<p>DEVELOPMENT OF MID STATES ATFM PLAN</p> <p>That, a) based on the guidelines provided in ICAO MID Doc 014: ATFM Plan (V2.0), MID States develop their respective ATFM implementation plan and agreements with adjacent FIRs and share them with ICAO MID;</p>	<p>States required to develop their National ATFM plan</p> <p>Need to conduct individual workshop</p>	<p>State ATFM National Plan</p> <p>Conduct Workshop</p>			<p>On going Refer WP/16</p>

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
	<p>b) by organizing individual workshops, ICAO MID supports the development of States National ATFM Plans and implementation of ICAO Doc 014 requirements for Phase I (including Phase IA & IB), where requested; and</p> <p>c) the MID ATFM Task Force is tasked with the identification of Priority ATFM Implementation Areas within the MID Region, to enable further implementation support activities.</p>	<p>Need to identify ATFM priority implementation Area</p>	<p>List of priority</p>			
C. 2	<p>CONSOLIDATED REGIONAL APPROACH TO GNSS RFI MANAGEMENT</p> <p>That, a consolidated regional approach for the management of GNSS RFI be established with the following actions:</p> <p>a) States be urged to:</p> <ul style="list-style-type: none"> i. Support the establishment of regional GNSS RFI monitoring and reporting mechanisms through the appropriate MID regional frameworks; ii. maintain an adequate network of conventional navigation aids to ensure continuity of air navigation services in case of GNSS signal degradation; iii. strengthen civil-military coordination and ensure timely sharing of information related to intentional GNSS interference; iv. define reversion scenarios and associated contingency procedures to maintain safe and efficient operations in the event of GNSS unavailability. <p>b) ICAO MID Office be requested to:</p> <ul style="list-style-type: none"> i. coordinate the development of the regional GNSS RFI management framework and potential reporting mechanism; ii. support States through regional capacity building and awareness activities on GNSS interference detection and mitigation; 	<p>need to develop CMC plan</p> <p>need to update State contingency plan</p>	<p>develop CMC plan</p> <p>update State contingency plan</p>		<p>MID States</p>	<p>On going</p> <p>Refer WP/8</p>

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
	iii. liaise with ICAO Headquarters to contribute to the deployment of global guidance material specifications, including the GNSS RFI mitigation iPack and available information exchange mechanisms.					
D. 3	AMENDED RASG-MID SAFETY ADVISORY 14 That, the amended RASG-MID Safety Advisory 14 (RSA-14) at Appendix 2B is endorsed.	need for its revision to incorporate inputs from both ATM, CNS and PBN SGs operational response measure	Revised version of RSA-14	MIDANPIRG/22	2025	Completed Refer WP/8
C. 22/1	MID AIR NAVIGATION REPORT-2024 That, the MID Air Navigation Report-2024 be endorsed and published under the ICAO MID Office website.	To publish the status of implementation in the MID Region for the year 2024	MID AN Report 2024 is endorsed and posted	ICAO MID	May 2025	Completed Refer WP/3
C. 22/2	MID AIR NAVIGATION PLAN VOLUME III (EDITION 2025) That, MID Air Navigation Plan Volume III (Edition 2025) be endorsed and published under the ICAO MID Office website.	To update the MID ANP VOL III (Edition 2025)	Revised MID Air Navigation Plan Volume III is endorsed and posted	ICAO MID	May 2025	Completed Refer WP/27
C.22/3	MID AIR NAVIGATION STRATEGY (EDITION MARCH 2024 REVISION FEBRUARY 2025) That, the MID Air Navigation Strategy (ICAO MID DOC 002, Edition March 2024, Revision February 2025) be endorsed and	To update the MID Air Navigation	Revised MID Air	ICAO MID	May 2025	Completed Refer WP/27

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
	published under the ICAO MID Office website.	Strategy (Edition 2025)	Navigation Strategy is endorsed and posted			
C. 22/4	<p>MID REGION AIR NAVIGATION REPORT (2025)</p> <p>That,</p> <p>a) States urged to provide the ICAO MID Office with the following data for the development of the MID Region Air Navigation Report-2025 by 31 December 2025:</p> <ul style="list-style-type: none"> i. the status of implementation of Priority 1 ASBU elements; ii. major achievements and success stories iii. information about any additional ASBU elements from Block 0, 1 and 2 that have been identified as a priority for implementation at National level; and iv. progress achieved for the implementation of the Performance Based Approach and development of National Air Navigation Plan (NANP). <p>b) the MID Air Navigation Report (2025) be presented to the MIDANPIRG/23 for endorsement.</p>	To monitor and report the status of implementation within the MID Region for the year 2025	<p>ICAO MID State Letter</p> <p>Data collection for AN Report 2025</p> <p>Development of Air Navigation Report 2025</p>	<p>ICAO MID</p> <p>MID States</p> <p>ICAO MID</p>	<p>End of 2024</p> <p>Q1 2025</p> <p>MIDANPIRG/23</p>	<p>On going</p> <p>Refer WP/3</p>
C. 22/5	<p>ARTIFICIAL INTELLIGENCE IN ANS</p> <p>That, States and industry stakeholders be encouraged to prioritize and conduct capacity-building initiatives, to foster expertise and knowledge-sharing in AI technologies, regulatory frameworks, and risk management strategies.</p>	To prioritize and conduct capacity-building initiatives, to foster expertise of AI implementation in ANS				<p>On going</p> <p>Refer WP/19</p>

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
C. 22/6	<p>DEVELOPMENT OF REGIONAL ATM MONITORING DASHBOARD</p> <p>That,</p> <p>a) the Air Traffic Management Monitoring Dashboard be developed by ATM SG to monitor ATM related items, based on the offer received from Saudi Arabia; and</p> <p>b) the progress of the Dashboard be presented to MIDANPIRG/23 meeting for further deliberation, including the potential expansion of the proposed dashboard to monitor status of other ANS items.</p>	<p>To support visualization of complex data monitored by TM SG</p>	<p>Initial ATM Monitoring Dashboard</p>	<p>ICAO MID Saudi Arabia</p>	<p>MIDANPIRG/23</p>	<p>On going Refer WP/33</p>
C. 22/7	<p>MID RVSM SMR 2024</p> <p>That, the MID RVSM Safety Monitoring Report (SMR) 2024 at Appendix 5E, be endorsed.</p>	<p>Develop SMR2024</p>	<p>SMR2024</p>	<p>MIDRMA</p>	<p>MIDANPIRG/22</p>	<p>Completed Refer WP/6</p>
C. 22/8	<p>REPORTING OF LHDS</p> <p>That, in order to assess compliance with Safety Objective 2, the MIDRMA Member States be urged to:</p> <p>a) take necessary measures to ensure that LHDs (Categories A, B, C, D, E, H, J and K) are reported in timely manner to the MIDRMA using the LHD Online LHD Reporting Tool available on the MIDRMA website (https://midrma.com/lhd/home/login);</p> <p>b) provide, on timely bases, their reported LHDs (related to the above LHD Categories) to the MIDRMA for the development of the MID RVSM Safety Monitoring Reports and to ensure that RVSM implementation continue to be safe in the MID Region;</p> <p>c) coordinate with MIDRMA, as required;</p>	<p>Collection of LHD to assess compliance with Safety Objective #2</p> <p>Capacity building for states, when required</p>	<p>Submission of LHDs</p> <p>Training and capacity building (virtual)</p>	<p>MID States</p> <p>MIDRMA</p>	<p>2025</p> <p>Continuous</p>	<p>Completed Refer WP/6</p>

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
	<p>d) MIDRMA conduct periodic meetings (vis web conference), at least once every 3 months, with the ATC Focal Points; and</p> <p>e) MIDRMA presents the ATM-technical matters to the ATM SG for appropriate actions.</p>					
C. 22/9	<p>MID RVSM SMR 2025</p> <p>That,</p> <p>a) the FPL/traffic data for the period 01 – 31 May 2025 to be used for the development of the MID RVSM Safety Monitoring Report (SMR 2025); before 1 July 2025.</p> <p>b) only the appropriate Flight Data form available on the MIDRMA website (www.midrma.com) should be used for the provision of FPL/traffic data to the MIDRMA; and</p> <p>c) the final version of the MID RVSM SMR 2025 be ready for presentation and endorsement by the MIDANPIRG/23 Meeting.</p>	Development of SMR2025	<p>State Letter</p> <p>Submission of the TDS and LHD Data</p> <p>Develop SMR2025</p>	<p>ICAO MID</p> <p>MID States</p> <p>MIDRMA</p>	MIDANPIRG/23	<p>On going</p> <p>SL Ref: AN 6/5.10.15A – 25/106 dated 27 May 2025</p> <p>Data submission by MID States</p> <p>Preliminary results discussed in WP/6</p>
D. 22/10	<p>PROJECT 30/10 ROADMAP</p> <p>That, the ATM SG develop roadmap for the implementation of Project 30/10 in the MID Region, including the inter-regional aspects.</p>	Need to develop roadmap to implement Project 30/10	implement Project 30/10 roadmap	ICAO and MID States		<p>On-going</p> <p>Refer WP/21</p>
C. 22/11	<p>IMPLEMENTATION OF REDUCED LONGITUDINAL SEPARATION IN THE MID REGION</p> <p>That,</p> <p>a) States, that have not yet done so:</p> <p>i. be urged to implement reduction of longitudinal separation</p>	Need to reduce longitudinal separation	Implementation of reduction longitudinal	ICAO and MID States		<p>On-going</p> <p>Refer WP/21</p>

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
	<p>where appropriate:</p> <ul style="list-style-type: none"> - reduce longitudinal separation down to 10 NM; where ATS surveillance service provided; and - reduce longitudinal separation down to 30 NM, where no ATS surveillance service provided. <p>ii. be invited to agree with their adjacent FIRs/States on the date of implementation and updating of the LoAs.</p> <p>b) the ATM SG monitors the progress of implementation and undertakes necessary measures to promote its advancement.</p>	<p>Need to update LoA with adjacent FIRs</p> <p>Need to develop required monitoring mechanism to monitor the progress of implementation</p>	<p>separation</p> <p>Update LoAs</p> <p>Monitoring tools including indicator, metrics etc.</p>			
D. 22/12	<p>AIRSPACE MANAGEMENT WORKING GROUP (ASM WG) TERMS OF REFERENCE</p> <p>That, the Terms of Reference of the Airspace Management Working Group, at Appendix 5H, is endorsed.</p>	<p>Development of ASM WG TOR</p>	<p>ASM TOR</p>	<p>ASM WG members</p>	<p>MIDANPIRG/22</p>	<p>Completed</p> <p>WP/15 refers</p>
C. 22/13	<p>FREE ROUTE IMPLEMENTATION GUIDANCE MATERIAL</p> <p>That, the Guidance material for Free Route implementation at Appendix 5I, is endorsed.</p>	<p>Development of FRA guidance material supported by the expertise of states implemented the FRA within their FIRs</p>	<p>FRA guidance material</p>	<p>MID States</p>	<p>MIDANPIRG/23</p>	<p>Completed</p>
C. 22/14	<p>NATIONAL ATM CONTINGENCY PLAN/ARRANGEMENT</p> <p>That,</p> <p>a) ICAO MID Office assist MID States, where required, in the development of their National ATM Contingency Plans in a harmonized manner by organizing tailored workshops for each State upon request;</p>	<p>Assistance to States in the development of their National CPs in consultation with the Airspace users.</p>	<p>National Contingency Plans</p>	<p>MID States</p>	<p>MIDANPIRG/23</p>	<p>On going</p> <p>Refer WP/9</p>

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
	<p>b) States be encouraged to coordinate with IATA and Airspace Users on the planning and implementation of contingency measures within the National ATM Contingency Plans; and</p> <p>c) IATA to provide the available operational data and users' requirements to enable proper planning.</p>					
C. 22/33	<p>AIR NAVIGATION DEFICIENCIES</p> <p>That,</p> <p>a) States be urged to:</p> <p>i. use the MID Air Navigation Deficiency Database (MANDD) for the submission of requests for addition, update, and elimination of Air Navigation Deficiencies, including the submission of a specific Corrective Action Plan (CAP) and completion date for each deficiency; and</p> <p>ii. submit a Formal Letter to the ICAO MID Regional Office containing the evidence(s) that mitigation measures have been implemented for the elimination of deficiency(ies) when requesting the elimination of deficiency(ies) from the MANDD.</p> <p>b) ICAO MID be urged to:</p> <p>i. review the status of the recorded deficiency in MANDD on a quarterly basis and send reminder to States focal point(s) to ensure MANDD is kept up to date; and</p> <p>ii. technically support MID States to eliminate recorded deficiencies in MANDD.</p>	<p>Need update MANDD including CAP and completion date</p> <p>Need to submit letter to ICAO MID with supporting documents and evidence</p> <p>Need to review the records in MANDD and send reminder to FPs</p> <p>Need to support States to eliminate their deficiencies</p>	<p>ICAO and MID States</p> <p>MANDD will be updated</p> <p>Official letter to ICAO MID</p> <p>Reminder email to States FPs</p> <p>Elimination of deficiency</p>			<p>On going</p> <p>Refer WP/30</p>

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D.22/34	<p>REVISED TERMS OF REFERENCE FOR MIDANPIRG SUBSIDIARY BODY</p> <p>That, all Subsidiary bodies include in its meeting agenda revision of Terms of Reference, in a collaborated manner with other subgroups to ensure less duplication of assigned tasks and responsibilities.</p>	Need to revise the TOR of SGs	Revised TOR	ATM SG	MIDANPIRG/23	<p>On going</p> <p>Refer WP/31</p>
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ANP Volume I, Status of Common FIRSRR Verification

(Verification **Completed** or **Not completed**)

FIR/SRR	Adjacent FIRs/SRRs												PfA	
Amman	Baghdad	Cairo	Damascus	Jeddah	Riyadh	Tel Aviv								
Baghdad	Amman	Ankara	Damascus	Jeddah	Kuwait	Riyadh	Tehran							
Bahrain	Doha	Emirates	Jeddah	Kuwait	Riyadh	Tehran								
Beirut	Damascus	Tel Aviv	Nicosia											
Cairo	Amman	Athens	Jeddah	Khartoum	Nicosia	Tel Aviv	Tripoli							
Damascus	Amman	Ankara	Baghdad	Beirut	Nicosia	Tel Aviv								
Doha	Bahrain	Emirates	Jeddah	Riyadh	Tehran									
Emiratis	Bahrain	Doha	Jeddah	Muscat	Riyadh	Tehran								
Jeddah	Amman	Asmara	Baghdad	Bahrain	Cairo	Doha	Emirates	Khartoum	Kuwait	Muscat	Riyadh	Sana'a		
Riyadh	Amman	Baghdad	Bahrain	Doha	Emirates	Kuwait	Jeddah	Muscat	Sana'a					
Khartoum	Addis	Asmara	Cairo	Jeddah	Juba	N'Djamena	Tripoli							
Kuwait	Baghdad	Bahrain	Jeddah	Riyadh	Tehran									
Muscat	Emirates	Jeddah	Karachi	Mumbai	Riyadh	Sana'a	Tehran							
Sana'a	Addis Ababa	Asmara	Jeddah	Mogadishu	Mumbai	Muscat	Riyadh							
Tehran	Ankara	Ashgabat	Baghdad	Bahrain	Baku	Doha	Emirates	Kabul	Karachi	Kuwait	Muscat	Yerevan		
Tripoli	Algiers	Athens	Cairo	Khartoum	Malta	N'Djamena	Niamey	Tunis						

1 Safety Monitoring Report 2025

1.1 Preliminary Results of the MID RVSM SMR 2025:

1.1.1 The implementation and continued operation of RVSM airspace depend on safety assessments that confirm compliance with the objectives outlined in ICAO Doc 9574 (Third Edition). The preliminary calculations for 2025 indicate that all safety objectives have been met based on the available data and analytical methods used.

Objective 1 The risk of collision in MID RVSM airspace due solely to technical height-keeping performance meets the ICAO target level of safety (TLS) of 2.5×10^{-9} fatal accidents per flight hour. The value computed for technical height risk is estimated 8.932×10^{-11} this is satisfying RVSM Safety Objective 1.

Objective 2 The overall risk of collision due to all causes which includes the technical risk and all risk due to operational errors and in-flight contingencies in the MID RVSM airspace meets the ICAO overall TLS of 5×10^{-9} fatal accidents per flight hour. The value computed for the overall risk is estimated 9.278×10^{-10} this is satisfying RVSM Safety Objective 2.

Objective 3 Address any safety-related issues raised in the SMR by recommending improved procedures and practices; and propose safety level improvements to ensure that any identified serious or risk-bearing situations do not increase and, where possible, that they decrease. This should set the basis for a continuous assurance that the operation of RVSM will not adversely affect the risk of en-route mid-air collision over the years.

Scope:

1.1.2 The geographic scope of the MID RVSM Safety Monitoring Report for 2025 covers the MID RVSM airspace, which comprises the following FIRs/UIRs:

Amman	Bahrain	Beirut	Baghdad	Cairo	Damascus*	Emirates
Jeddah	Kuwait	Khartoum	Muscat	Sana'a	Tehran	Tripoli
			Doha			

T-1: FIRs/UIRs of the Middle East RVSM Airspace

*Note: Damascus FIR excluded from the RVSM safety analysis due to lack of data

1.1.3 The Data Sampling periods covered by SMR 2025 are as displayed in the below table

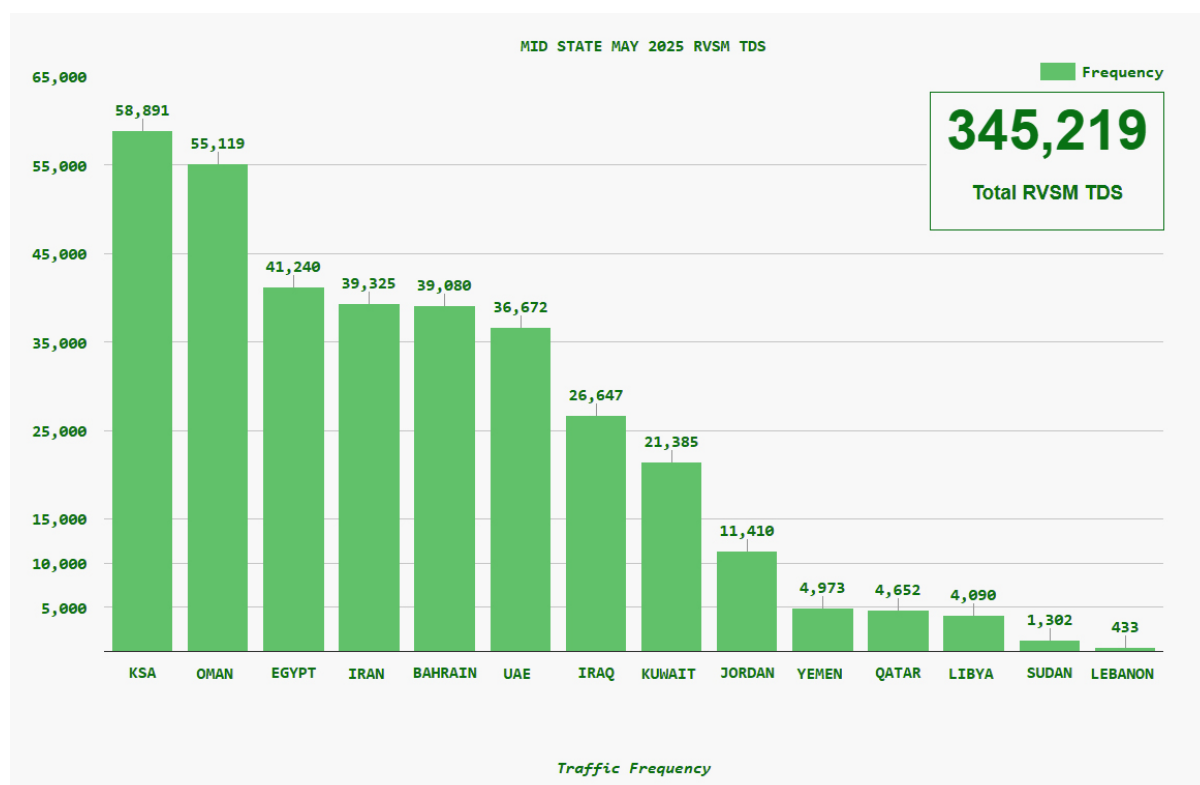
Report Elements	Time Period
Traffic Data Sample	01/05/2025 - 31/05/2025
Operational & Technical Errors	01/01/2025 - 30/09/2025*

* The final results will include the remaining period of year 2025 cycle.

1.1.4 Despite the encouraging results, the MIDRMA reiterates that the incomplete and improperly formatted TDS submissions from several States, combined with the near absence of LHD reports, continue to undermine the confidence level of the final risk estimation. This issue remains a serious obstacle to maintaining a reliable safety monitoring process.

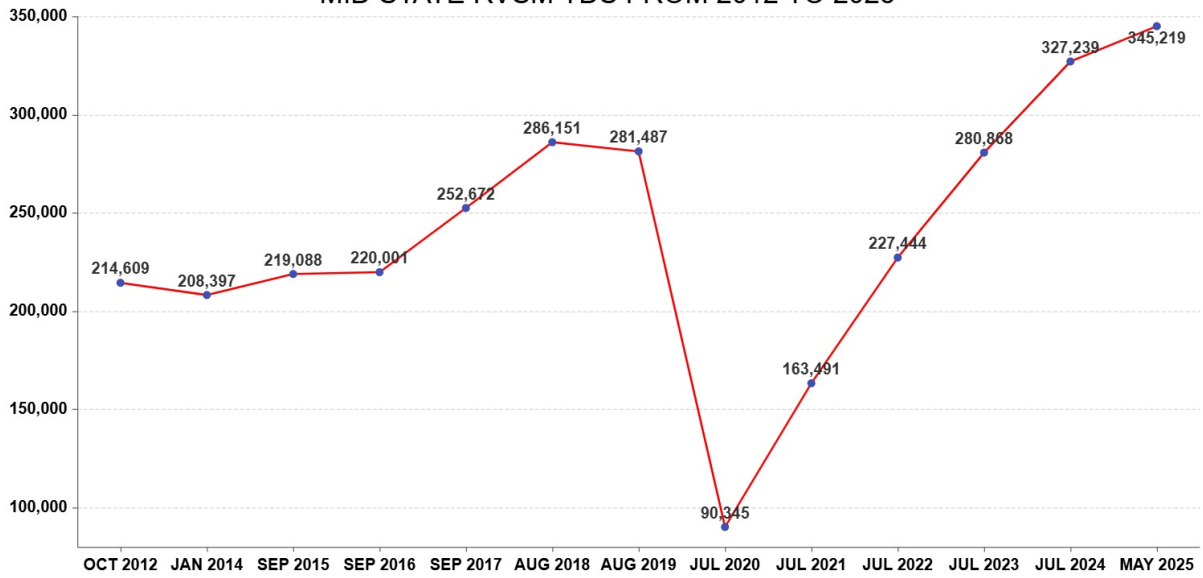
MID States	Received Date	No. of Flights
BAHRAIN	7/3/2025	39080
EGYPT	6/30/2025	41240
IRAN	7/28/2025	39325
IRAQ	6/12/2025	26647
JORDAN	7/1/2025	11410
KUWAIT	6/13/2025	21385
LEBANON	9/3/2025	433
LIBYA	6/30/2025	4090
OMAN	6/19/2025	55119
KSA	6/29/2025	58891
QATAR	6/23/2025	4652
SUDAN	7/20/2025	1302
SYRIA	No data submitted *Excluded from SMR 2025	
UAE	6/11/2025	36672
YEMEN	6/30/2025	4973
Total	345219	

1.1.5 The tables and graphs below illustrate the distribution of submitted Traffic Data Samples (TDS) across all MID States, the overall number of flights analyzed, and the long-term trend of TDS submissions from 2012 to 2025. These visuals reflect a steady increase in total data volume.

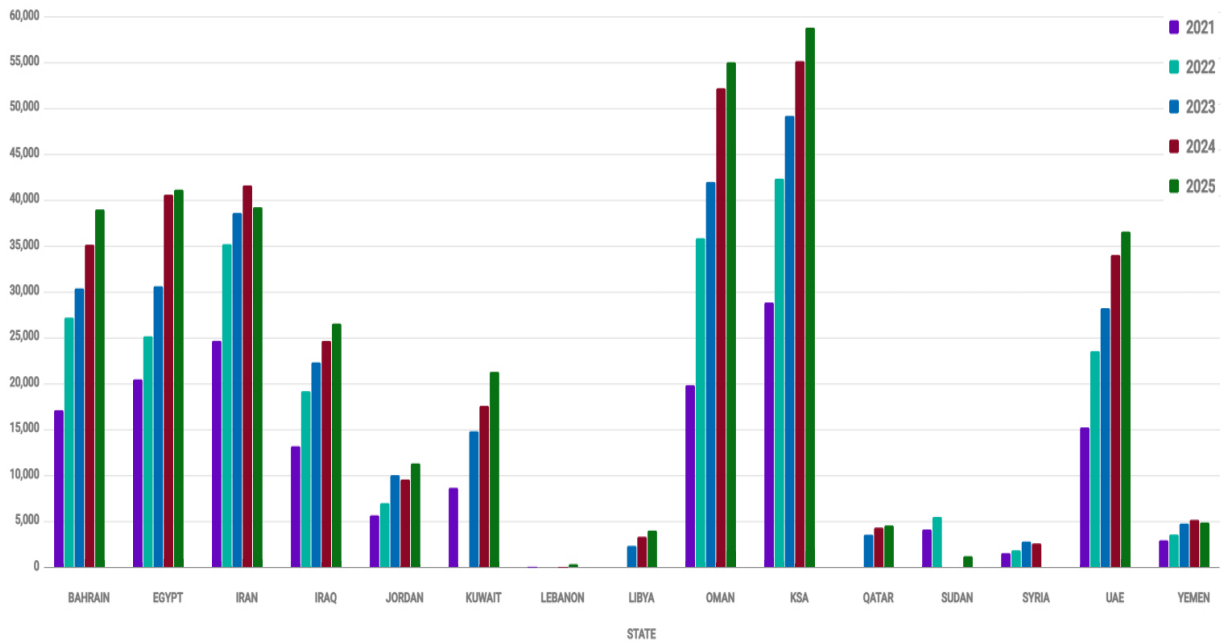


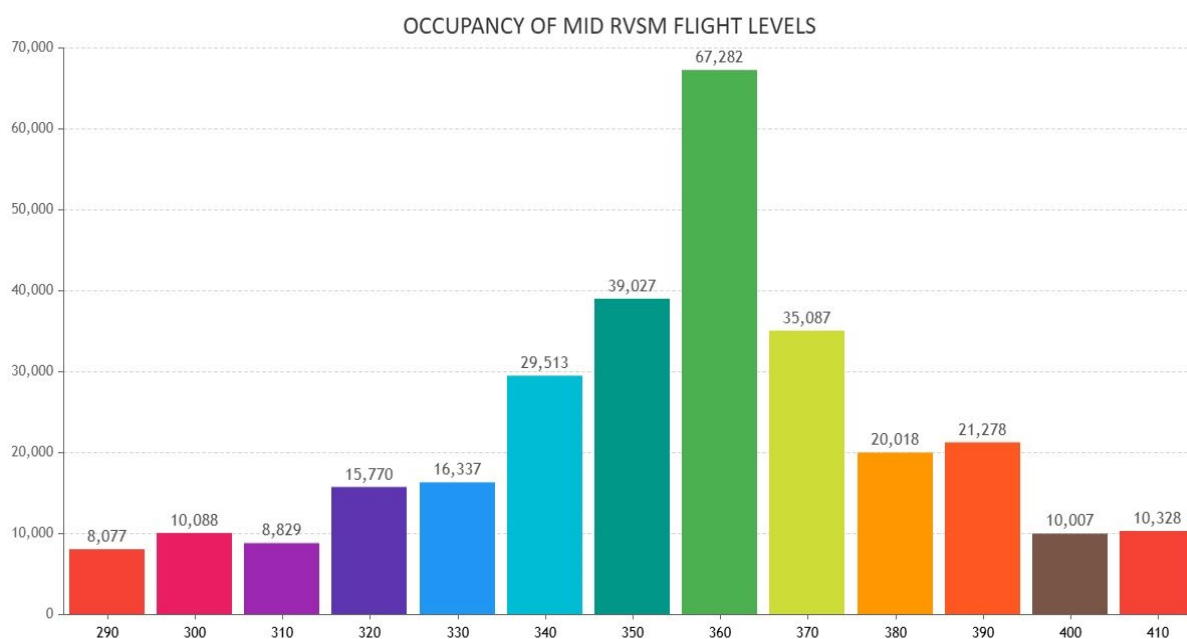
3B-3

MID STATE RVSM TDS FROM 2012 TO 2025



TREND OF THE NUMBER OF RVSM TDS OF 2021, 2022, 2023, 2024 and 2025





1.1.6 Pz(1000) Compliance

1.1.6.1 The Pz(1000) represents the likelihood of two aircraft at adjacent RVSM flight levels losing vertical separation due to technical height-keeping errors. Based on the observed Altimetry System Errors (ASE) and typical Aircraft Altimetry Data (AAD), the estimated probability of vertical overlap Pz(1000) is calculated to be **1.456 x 10⁻⁹**.

1.1.6.2 This result complies with the Global System Performance Specification, which states that the probability of losing the 1000ft procedural vertical separation between two aircraft must not exceed **1.7x10⁻⁸**.

Note 1: MIDRMA continues to distribute the Minimum Monitoring Requirements (MMRs) using its automated MMR software. This software is designed to provide member states with updated monitoring requirements based on the most recent RVSM approvals.

Note 2 : All member states must review and adhere to their MMRs, which are accessible on the MIDRMA website (www.midrma.com).

1.1.7 Large Height Deviation (LHD) Reports 2025

2.1.7.1 The MIDRMA remains deeply concerned that the submission of Large Height Deviation (LHD) reports continues to be extremely inadequate, despite the Agency’s extensive and ongoing efforts to resolve this persistent issue. Throughout the first nine months of this year, only two LHD reports were received—both submitted by Emirates ATC, whose proactive cooperation and responsiveness to safety monitoring requirements are highly appreciated.

1.1.7.2 Despite repeated official requests, monthly reminders, and continuous direct coordination with the designated focal points of all Member States, the overall level of LHD reporting remains critically low. It is important to emphasize that this shortfall specifically concerns the LHD reports that have direct operational relevance to RVSM safety, namely those classified under Categories A, B, C, D, J, and K.

1.1.7.3 The continued lack of such data severely undermines the accuracy and reliability of the operational risk assessment and significantly reduces the confidence level associated with Safety Objective No. 2. This situation remains a matter of serious concern from a regional safety oversight perspective and requires urgent corrective action by all Member States.

MID FIRs	No. of Reported LHDs	No. of Related LHDs
Bahrain	6	5
Baghdad	4	-
Amman	-	2
Tehran	-	3
Cairo	2	1
Damascus	-	2
Khartoum	-	-
Kuwait	-	1
Muscat	61	79
Jeddah/ Riyadh	5	30
Qatar	4	-
Tripoli	-	-
Emirates	2	4
Sana'a	265	8

1.1.7.1 RVSM Safety Protocol at the Eastern Boundaries of Muscat FIR and the increased number of LHD reports submitted by Muscat and Mumbai ATCUs related to each other:

- a. The latest review of the RVSM safety situation at the Eastern Boundaries of Muscat FIR shows that the concern over Large Height Deviation (LHD) occurrences between Muscat and Mumbai ATC units continues in 2025. The table below presents the number of LHD reports exchanged between both ATC units over the past years, reflecting the current situation:

YEAR	LHD Reported by Muscat	LHD Reported by Mumbai
2022	16	41
2023	25	79
2024	75	98
2025	38 (Jan – Jun 2025)	44 (Jan – Aug 2025)

- b. Although several corrective and preventive measures have been introduced since opening this protocol, the number of LHD reports remains unacceptably high, showing that the safety concerns are still unresolved. While there was a slight reduction in the first half of 2025 compared with 2024, the figures remain well above acceptable safety thresholds and clearly indicate that the implemented measures have not yet achieved the desired level of safety improvement.
- c. This ongoing issue demonstrates that the problem is systemic rather than occasional, and unless more robust corrective actions are taken, it will continue to pose a significant safety risk to RVSM operations between Muscat and Mumbai FIRs. The current trend underscores the urgent need to reassess coordination procedures, improve data-sharing and incident investigation processes, and implement sustained monitoring mechanisms to ensure that corrective actions lead to measurable and lasting safety benefits.
- d. Given the critical nature of these deviations, it is essential that both Muscat and Mumbai ATC units intensify their collaborative efforts to identify the underlying causes particularly those related to handover procedures, communication errors, and flight level transition management and take decisive actions to ensure that this situation does not persist beyond 2025.

Note: More details of the LHD reports field by Muscat and Mumbai related to each other is in Appendix A of this working paper.

1.1.7.4 RVSM Safety Protocol for Sana'a FIR:

- a. A comparison between the first nine months of 2024 and 2025 shows a continuing increase in Large Height Deviation (LHD) reports involving Sana'a FIR and its surrounding FIRs, reflecting a persistent and serious safety concern for the region's RVSM operations. During the same period in 2024, a total of 218 LHD reports were filed, while in 2025, the number rose to 265 reports, representing an increase of approximately 22%. The most notable rise is observed in coordination with Addis Ababa FIR (from 107 to 123 LHDs) and Muscat FIR (from 36 to 77 LHDs), while a reduction was recorded with Jeddah FIR (from 33 to 22). This uneven pattern indicates that while progress is being made in some areas, others continue to experience significant operational and coordination difficulties.

Sanaa Related To ---▶	Addis Ababa	Asmara	Jeddah	Mumbai	Muscat	TOTAL
Jan-25	18	2	2	8	17	47
Feb-25	7	0	2	2	10	21
Mar-25	7	0	3	0	8	18
Apr-25	4	1	1	4	7	17
May-25	2	0	2	4	7	15
Jun-25	11	0	2	10	10	33
Jul-25	20	1	4	3	3	31
Aug-25	34	1	2	4	13	54
Sep-25	20	0	4	3	2	29
Total Report	123	5	22	38	77	265

Sanaa Related To ---▶	Addis Ababa	Asmara	Jeddah	Mumbai	Muscat	Total
Jan-2024	1	0	8	0	3	13
Feb-2024	1	0	3	4	2	11
Mar-2024	6	1	3	5	3	19
Apr-2024	1	1	2	3	4	13
May-2024	5	2	1	0	0	9
Jun-2024	8	0	3	2	6	22
Jul-2024	39	0	3	2	8	52
Aug-2024	29	0	6	11	7	54
Sep-2024	17	1	4	10	3	35
Total	107	5	33	37	36	218

- b. The increase in LHD occurrences between Yemen and Muscat FIRs, in particular, is highly concerning and suggests that existing procedural and communication measures have not yet effectively mitigated the underlying causes of the deviations. The frequency and persistence of such reports reflect a lack of stability in handover coordination, level assignment verification, and real-time communication, especially under challenging operational conditions. This continuing rise in figures highlights the urgency for Yemen ACC and its neighbouring ACCs to

adopt more robust coordination mechanisms, reinforce standard phraseology, and implement stronger monitoring and verification procedures during flight handovers. Without decisive corrective actions, these deviations could compromise the safety of the RVSM airspace.

1.1.8 Assessment of Non-RVSM Approved Aircraft 2025:

- a. In line with the guidance outlined in ICAO Documents 9574 and 9937, the MIDRMA continues to closely oversee the operational compliance of aircraft flying within the RVSM airspace. Through its regular monthly safety monitoring, MIDRMA has detected a small number of flights conducted by aircraft lacking valid RVSM authorization. These cases are generally attributed to temporary lapses in approval validity or administrative processing delays rather than intentional non-compliance. Member States are therefore urged to maintain their RVSM approval databases accurately and promptly, ensuring that any renewal or status update is reflected without delay to preserve the safety and integrity of RVSM operations across the region.
- b. The MIDRMA extends its sincere appreciation to the Civil Aviation Authorities of Bahrain, Iraq, and the United Arab Emirates for their continued collaboration and timely provision of monthly RVSM traffic data. Their ongoing support plays an essential role in sustaining the effectiveness of the regional RVSM safety monitoring framework and ensuring the reliability of the risk assessment process.

Note: The results for the assessment of Non-RVSM approved aircraft for the first nine months are in **Appendix B** of this working paper.

1.1.9 The MID RVSM Risk Analysis Hotspots and Airways Occupancy – May 2025, are displayed in **Appendix C**.

2 Conclusions:

The estimated technical and overall collision risks within the MID RVSM airspace for the first nine months of 2025 remain below the ICAO TLS. However, the persistent lack of standardized and timely TDS submissions and the chronic non-receipt of LHD reports from most Member States seriously compromise the accuracy and confidence level of the safety analysis. The MIDRMA considers this an urgent regional concern that requires immediate attention and coordinated corrective action by all States and ICAO MID Office.

Appendix A

LHD Reports Submitted by Muscat ACC related to Mumbai ACC

#	ID	Date of Occ	Reported By	Related to	Location	Nature of the occurrence:	Category
1	12299	Jan 01, 2025	Muscat	Mumbai	TOTOX	Revised FL Not Coordinated	E
2	12347	Jan 03, 2025	Muscat	Mumbai	PARAR	ACFT Entered FIR Without Coordination	E
3	12348	Mar 03, 2025	Muscat	Mumbai	KITAL	ACFT Entered FIR Without Coordination	E
4	12349	Mar 03, 2025	Muscat	Mumbai	LOTAV	ACFT Entered FIR Without Coordination	E
5	12350	Mar 05, 2025	Muscat	Mumbai	PARAR	ACFT Entered FIR Without Coordination	E
6	12351	Mar 06, 2025	Muscat	Mumbai	PARAR	ACFT Entered FIR Without Coordination	E
7	12352	Mar 09, 2025	Muscat	Mumbai	PARAR	ACFT Entered FIR Without Coordination	E
8	12353	Mar 09, 2025	Muscat	Mumbai	TOTOX	ACFT Entered FIR Without Coordination	E
9	12354	Mar 12, 2025	Muscat	Mumbai	RASKI	ACFT Entered FIR Without Coordination	E
10	12355	Mar 15, 2025	Muscat	Mumbai	LOTAV	Revised FL Not Coordinated	E
11	12356	Mar 22, 2025	Muscat	Mumbai	PARAR	Revised FL Not Coordinated	E
12	12357	Mar 24, 2025	Muscat	Mumbai	REXOD	ACFT Entered FIR Without Coordination	E
13	12358	Mar 25, 2025	Muscat	Mumbai	RASKI	ACFT Entered FIR Without Coordination	E
14	12385	Apr 05, 2025	Muscat	Mumbai	RASKI	Revised FL Not Coordinated	E
15	12386	Apr 06, 2025	Muscat	Mumbai	RASKI	Revised Estimate Not Coordinated	E
16	12477	Jun 06, 2025	Muscat	Mumbai	RASKI	Revised FL Not Coordinated	E
17	12478	Jun 05, 2025	Muscat	Mumbai	RASKI	Revised Estimate Not Coordinated	E
18	12479	Jun 05, 2025	Muscat	Mumbai	RASKI	Revised FL Not Coordinated	E
19	12480	Jun 06, 2025	Muscat	Mumbai	LOTAV	Revised FL Not Coordinated	E
20	12481	Jun 13, 2025	Muscat	Mumbai	RASKI	Revised FL Not Coordinated	E
21	12482	Jun 13, 2025	Muscat	Mumbai	LOTAV	ACFT Entered FIR Without Coordination	E
22	12483	Jun 14, 2025	Muscat	Mumbai	TOTOX	ACFT Entered FIR Without Coordination	E
23	12484	Jun 14, 2025	Muscat	Mumbai	RASKI	Revised FL Not Coordinated	E
24	12485	Jun 15, 2025	Muscat	Mumbai	PARAR	ACFT Entered FIR Without Coordination	E
25	12486	Jun 17, 2025	Muscat	Mumbai	RASKI	Revised FL Not Coordinated	E
26	12487	Jun 18, 2025	Muscat	Mumbai	TOTOX	ACFT Entered FIR Without Coordination	E
27	12488	Jun 18, 2025	Muscat	Mumbai	RASKI	Revised FL Not Coordinated	E
28	12489	Jun 20, 2025	Muscat	Mumbai	PARAR	Revised FL Not Coordinated	E
29	12490	Jun 22, 2025	Muscat	Mumbai	LOTAV	Revised FL Not Coordinated	E
30	12491	Jun 24, 2025	Muscat	Mumbai	PARAR	ACFT Entered FIR Without Coordination	E
31	12492	Jun 24, 2025	Muscat	Mumbai	ASPUX	ACFT Entered FIR Without Coordination	E
32	12493	Jun 24, 2025	Muscat	Mumbai	REXOD	ACFT Entered FIR Without Coordination	E
33	12494	Jun 25, 2025	Muscat	Mumbai	TOTOX	ACFT Entered FIR Without Coordination	E
34	12495	Jun 26, 2025	Muscat	Mumbai	RASKI	ACFT Entered FIR Without Coordination	E
35	12496	Jun 28, 2025	Muscat	Mumbai	RASKI	Revised FL Not Coordinated	E
36	12497	Jun 29, 2025	Muscat	Mumbai	RASKI	Revised FL Not Coordinated	E
37	12498	Jun 30, 2025	Muscat	Mumbai	RASKI	Revised FL Not Coordinated	E
38	12499	Jun 26, 2025	Muscat	Mumbai	RASKI	ACFT Entered FIR Without Coordination	E

LHD Reports Submitted by Mumbai related to Muscat

#	ID	Date of Occ	Reported By	Related to	Location	Nature of the occurrence:	Category
1	LHD003030	30-1-2025	Mumbai	Muscat	PARAR	No or late FL revision	E
2	LHD003031	3-1-2025	Mumbai	Muscat	PARAR	No transfer information	E
3	LHD003032	4-1-2025	Mumbai	Muscat	RASKI	No or late FL revision	E
4	LHD003033	7-1-2025	Mumbai	Muscat	PARAR	No or late FL revision	E
5	LHD003034	7-1-2025	Mumbai	Muscat	TOTOX	No or late FL revision	E
6	LHD003035	13-1-2025	Mumbai	Muscat	TOTX	No or late FL revision	E
7	LHD003037	18-1-2025	Mumbai	Muscat	RASKI	No or late FL revision	E
8	LHD003038	19-1-2025	Mumbai	Muscat	PARAR	No or late FL revision	E
9	LHD003039	21-1-2025	Mumbai	Muscat	TOTOX	No or late FL revision	E
10	LHD003040	28-1-2025	Mumbai	Muscat	RASKI	No or late FL revision	E
11	LHD003067	9-2-2025	Mumbai	Muscat	PARAR	No or late FL revision	E
12	LHD003068	9-2-2025	Mumbai	Muscat	KITAL	No or late FL revision	E
13	LHD003069	12-2-2025	Mumbai	Muscat	LOTAV	No or late FL revision	E
14	LHD003109	3-3-2025	Mumbai	Muscat	PARAR	No transfer information	E
15	LHD003110	3-3-2025	Mumbai	Muscat	PARAR	No transfer information	E
16	LHD003111	8-3-2025	Mumbai	Muscat	PARAR	No or late FL revision	E
17	LHD003112	9-3-2025	Mumbai	Muscat	LOTAV	No or late FL revision	E
18	LHD003113	24-3-2025	Mumbai	Muscat	KITAL	No or late FL revision	E
19	LHD003114	24-3-2025	Mumbai	Muscat	REXOD	No or late FL revision	E
20	LHD003153	3-4-2025	Mumbai	Muscat	PARAR	No or late FL revision	E
21	LHD003154	5-4-2025	Mumbai	Muscat	RASKI	No or late FL revision	E
22	LHD003155	5-4-2025	Mumbai	Muscat	PARAR	No or late FL revision	E
23	LHD003156	11-4-2025	Mumbai	Muscat	PARAR	No or late FL revision	E
24	LHD003157	17-4-2025	Mumbai	Muscat	PARAR	No or late FL revision	E
25	LHD003158	21-4-2025	Mumbai	Muscat	LOTAV	No or late FL revision	E
26	LHD003159	23-4-2025	Mumbai	Muscat	LOTAV	No or late FL revision	E
27	LHD003176	5-5-2025	Mumbai	Muscat	TOTOX	No or late FL revision	E
28	LHD003178	8-5-2025	Mumbai	Muscat	LOTAV	No or late FL revision	E
29	LHD003179	14-5-2025	Mumbai	Muscat	REXOD	No or late FL revision	E
30	LHD003180	22-5-2025	Mumbai	Muscat	TOTOX	No or late FL revision	E
31	LHD003181	22-5-2025	Mumbai	Muscat	TOTOX	No or late FL revision	E
32	LHD003182	27-5-2025	Mumbai	Muscat	REXOD	No or late FL revision	E
33	LHD003183	27-5-2025	Mumbai	Muscat	TOTOX	No transfer information	E
34	LHD003217	29-6-2025	Mumbai	Muscat	KITAL	No transfer information	E
35	LHD003218	27-6-2025	Mumbai	Muscat	KITAL	No or late FL revision	E
36	LHD003253	4-7-2025	Mumbai	Muscat	KITAL	No estimate time revi.	E
37	LHD003254	9-7-2025	Mumbai	Muscat	PARAR	No or late FL revision	E
38	LHD003255	23-7-2025	Mumbai	Muscat	PARAR	No transfer information	E
39	LHD003256	3-7-2025	Mumbai	Muscat	LOTAV	No or late estimate rev.	E
40	LHD003305	3-8-2025	Mumbai	Muscat	LOTAV	No or late FL revision	E
41	LHD003306	22-8-2025	Mumbai	Muscat	LOTAV	No or late FL revision	E
42	LHD003307	29-8-2025	Mumbai	Muscat	LOTAV	No or late estimate rev.	E
43	LHD003308	30-9-2025	Mumbai	Muscat	PARAR	No or late FL revision	E
44	LHD003309	24-8-2025	Mumbai	Muscat	RASKI	No or late FL revision	E

Appendix B

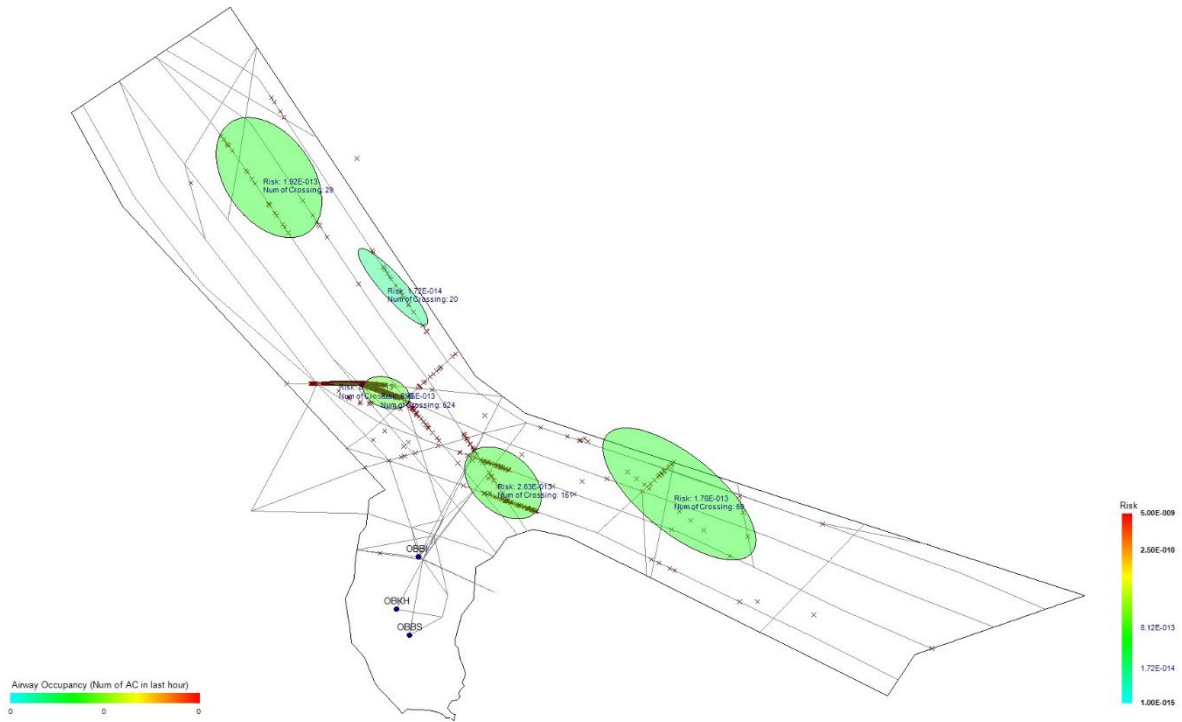
Non-RVSM Approved Aircraft

#	Registration of Violating ACFT	ICAO Type	First Observed on	FIR/RMA Observed	STATE/RMA Responsible
1	40001A	C17	25-01-2020	MIDRMA	AAMA
2	60208A	C17	30-03-2020	MIDRMA	AAMA
3	PKBGZ	B738	13-12-2022	MIDRMA	AAMA
4	PKBKM	A320	30-11-2022	MIDRMA	AAMA
5	PKLSU	B739	27-11-2022	MIDRMA	AAMA
6	PKLSV	B739	21-12-2022	MIDRMA	AAMA
7	PKLSW	B739	8/3/2023	MIDRMA	AAMA
8	PKLVF	B739	20-01-2023	MIDRMA	AAMA
9	PKSJH	A320	6/11/2022	MIDRMA	AAMA
10	PKSTD	A320	19-01-2023	MIDRMA	AAMA
11	PKSTH	A320	27-11-2022	MIDRMA	AAMA
12	5HONE	GLF5	15-05-2024	MIDRMA	AFIRMA
13	5HTCP	B39M	19-05-2024	MIDRMA	AFIRMA
14	5HTCQ	B39M	15-05-2024	MIDRMA	AFIRMA
15	5NADM	B744	28-05-2024	MIDRMA	AFIRMA
16	5NBBN	B772	18-05-2024	MIDRMA	AFIRMA
17	5NBOD	GLF4	28-01-2022	MIDRMA	AFIRMA
18	5NBYJ	E290	6/6/2024	MIDRMA	AFIRMA
19	5NHMM	B744	15-05-2024	MIDRMA	AFIRMA
20	5YFAN	CRJ2	15-07-2020	MIDRMA	AFIRMA
21	5YFQA	B734	15-05-2024	MIDRMA	AFIRMA
22	5YFQC	B734	20-05-2024	MIDRMA	AFIRMA
23	5YWBH	C56X	14-07-2020	MIDRMA	AFIRMA
24	9SPRR	IL76	9/6/2024	MIDRMA	AFIRMA
25	ETATF	B350	8/7/2020	MIDRMA	AFIRMA
26	TTDAB	H25B	31-05-2024	MIDRMA	AFIRMA
27	XTEBO	IL76	7/6/2024	MIDRMA	AFIRMA
28	ZSCQP	CRJ9	7/7/2020	MIDRMA	AFIRMA
29	CCBGV	B789	8/6/2022	MIDRMA	CARSAM
30	FAB2857	KC39	22-05-2022	MIDRMA	CARSAM
31	21140	IL76	19-06-2022	MIDRMA	CHINARMA
32	EW550TH	IL76	4/12/2021	MIDRMA	EURRMA
33	ICJSN	C25C	15-05-2023	MIDRMA	EURRMA
34	UR11316	AN12	22-07-2020	MIDRMA	EURRMA
35	URAZN	B753	1/2/2022	MIDRMA	EURRMA
36	URAZO	B753	1/2/2022	MIDRMA	EURRMA
37	URAZR	B77W	3/2/2022	MIDRMA	EURRMA
38	URFSA	IL76	9/5/2021	MIDRMA	EURRMA
39	URFSC	IL76	5/12/2021	MIDRMA	EURRMA
40	URFSD	IL76	24-12-2021	MIDRMA	EURRMA
41	URFSE	IL76	11/12/2022	MIDRMA	EURRMA
42	URSQO	B738	2/12/2021	MIDRMA	EURRMA
43	80002A	C17	23-07-2020	MIDRMA	MAAR
44	CB8001	C17	29-07-2020	MIDRMA	MAAR

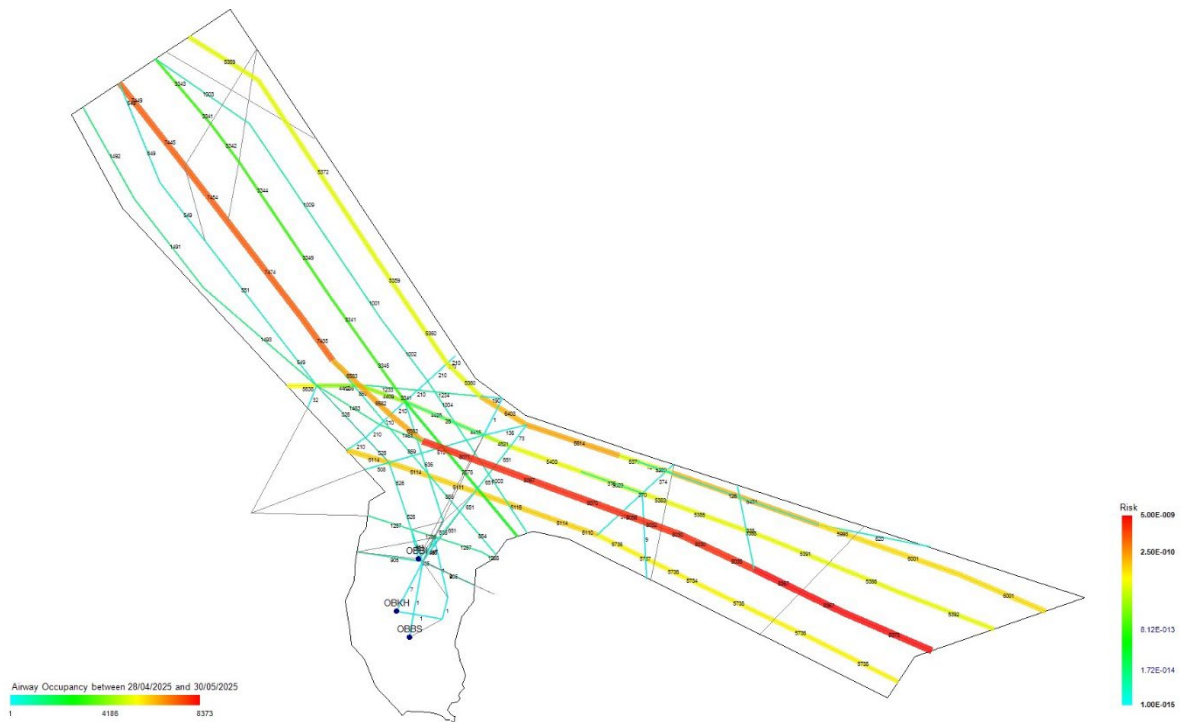
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45	CB8004	C17	24-07-2020	MIDRMA	MAAR
46	IN307	IL38	3/12/2020	MIDRMA	MAAR
47	K3604	E35L	17-07-2020	MIDRMA	MAAR
48	KJ3452	IL76	3/8/2020	MIDRMA	MAAR
49	KJ3454	IL76	16-03-2020	MIDRMA	MAAR
50	5ALEX	BE200	9/7/2022	EURRMA	MIDRMA
51	STALL	CRJ1	11/6/2022	MIDRMA	MIDRMA
52	STPSA	F900	18-10-2023	EURRMA	MIDRMA
53	N1112B	B350	16-07-2020	MIDRMA	NAARMO
54	N145DB	E35L	22-01-2022	MIDRMA	NAARMO
55	N27GA	FA50	30-05-2024	MIDRMA	NAARMO
56	N298RB	GLF4	14-05-2021	MIDRMA	NAARMO
57	N320MK	GLF3	24-09-2022	MIDRMA	NAARMO
58	N411VP	EA50	1/5/2022	MIDRMA	NAARMO
59	N44UA	CL60	7/6/2020	MIDRMA	NAARMO
60	N46HB	F9000	22-08-2022	MIDRMA	NAARMO
61	N505MS	C55B	3/6/2024	MIDRMA	NAARMO
62	N605AS	PC12	11/4/2022	MIDRMA	NAARMO
63	N651CV	C650	21-11-2022	MIDRMA	NAARMO
64	N685MF	GLF4	8/12/2021	MIDRMA	NAARMO
65	N779CK	B77W	8/6/2024	MIDRMA	NAARMO
66	N788DP	B737	25-02-2024	MIDRMA	NAARMO
67	N800AJ	CL60	10/2/2023	MIDRMA	NAARMO
68	N882RR	PC12	10/3/2025	MIDRMA	NAARMO
69	N890DA	GLF5	25-02-2023	MIDRMA	NAARMO
70	N981DB	H25B	5/4/2022	MIDRMA	NAARMO
71	N993JA	A333	18-03-2025	MIDRMA	NAARMO

Appendix C
MID RVSM Risk Analysis Hotspots and Airways Occupancy – May 2025

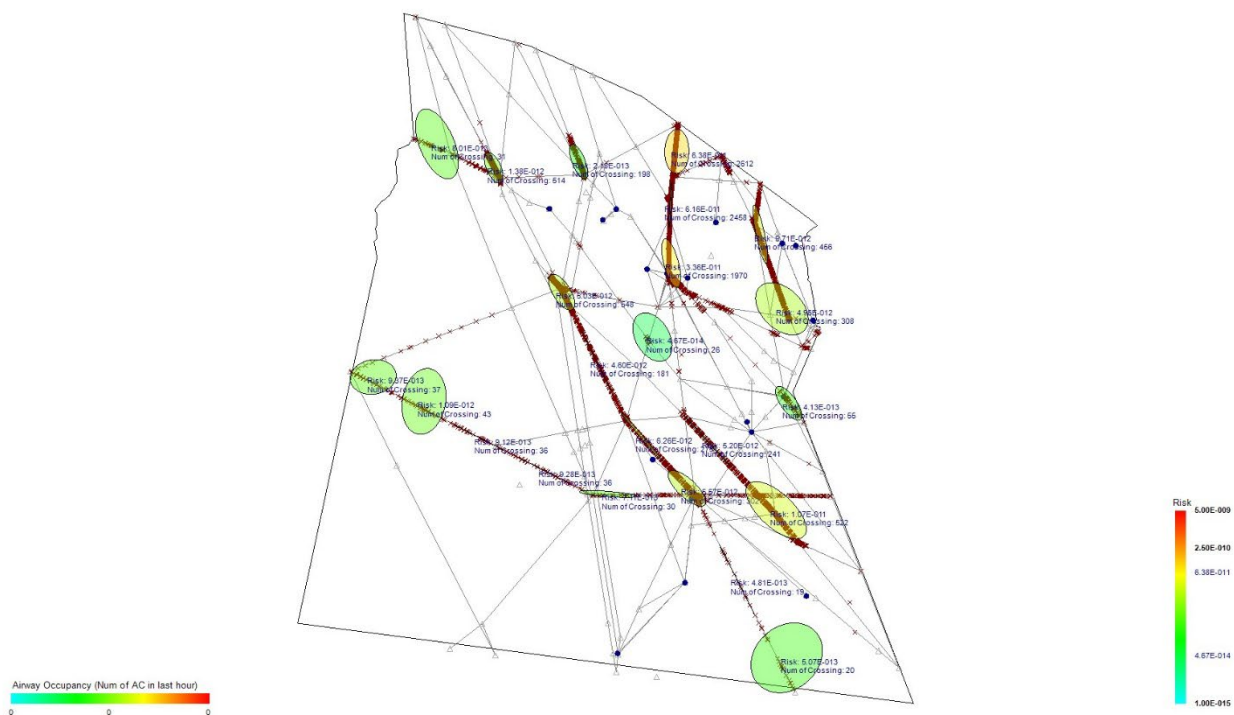


Bahrain FIR Hotspots

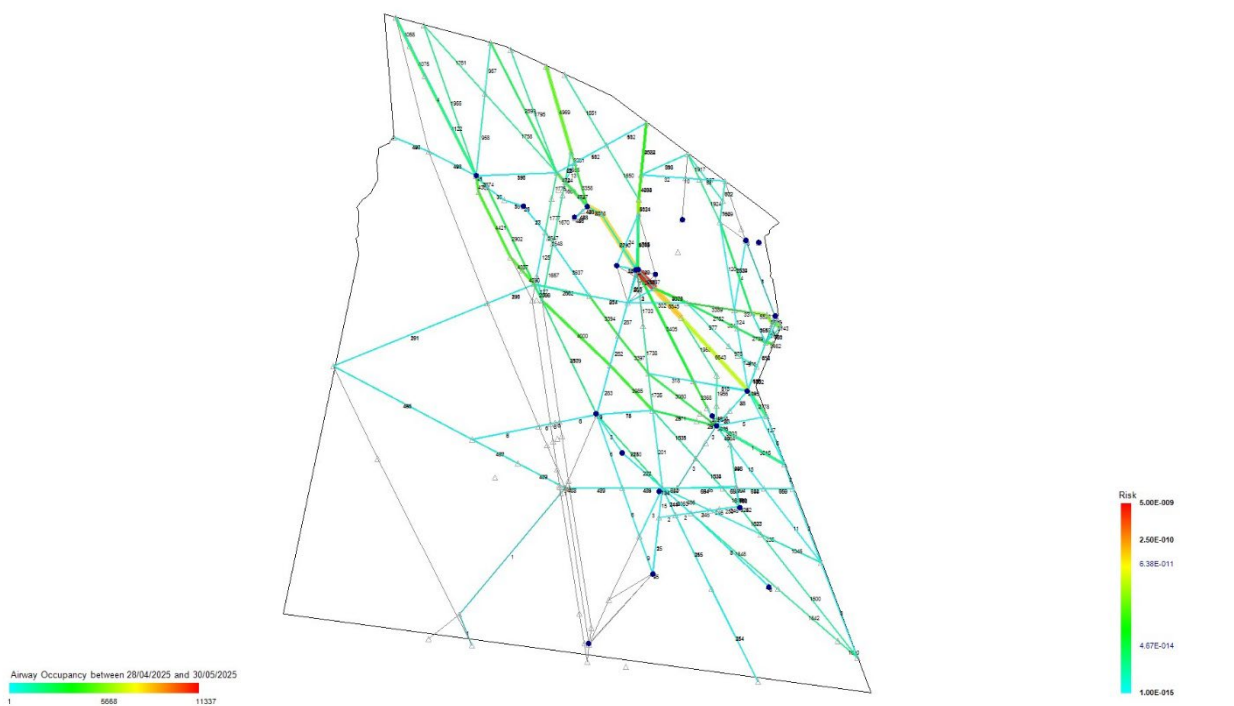


Bahrain FIR Airways Occupancy

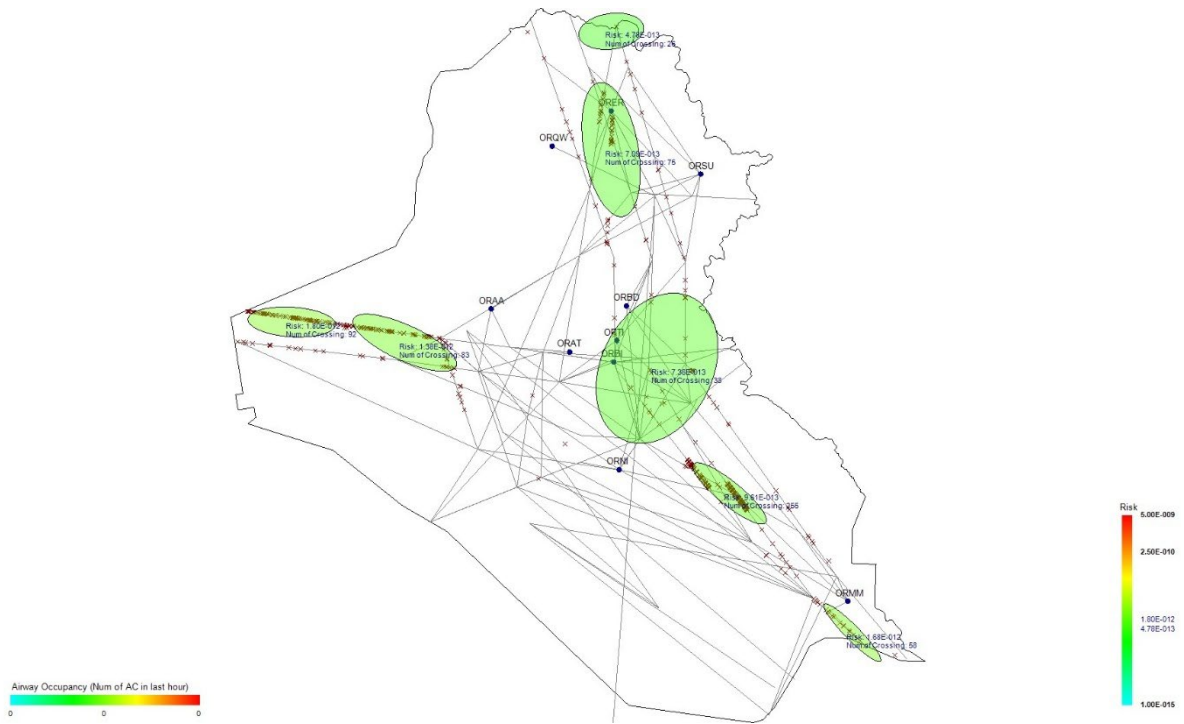
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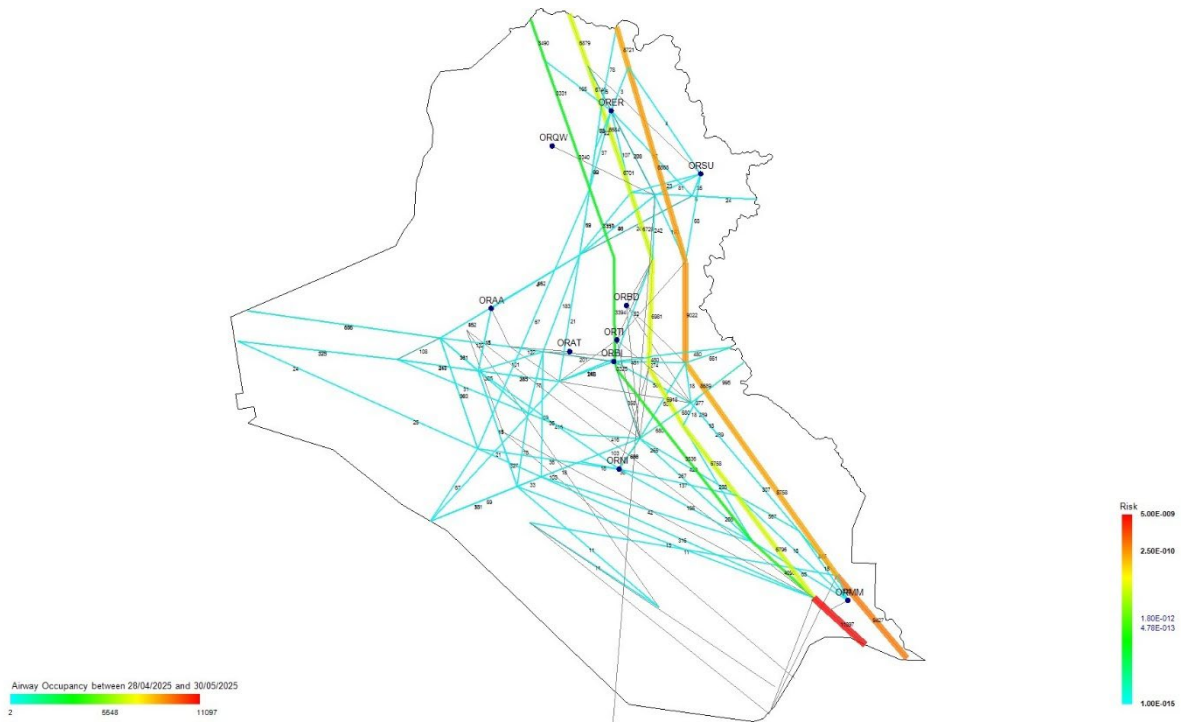
Cairo FIR Hotspots



Cairo FIR Airways Occupancy

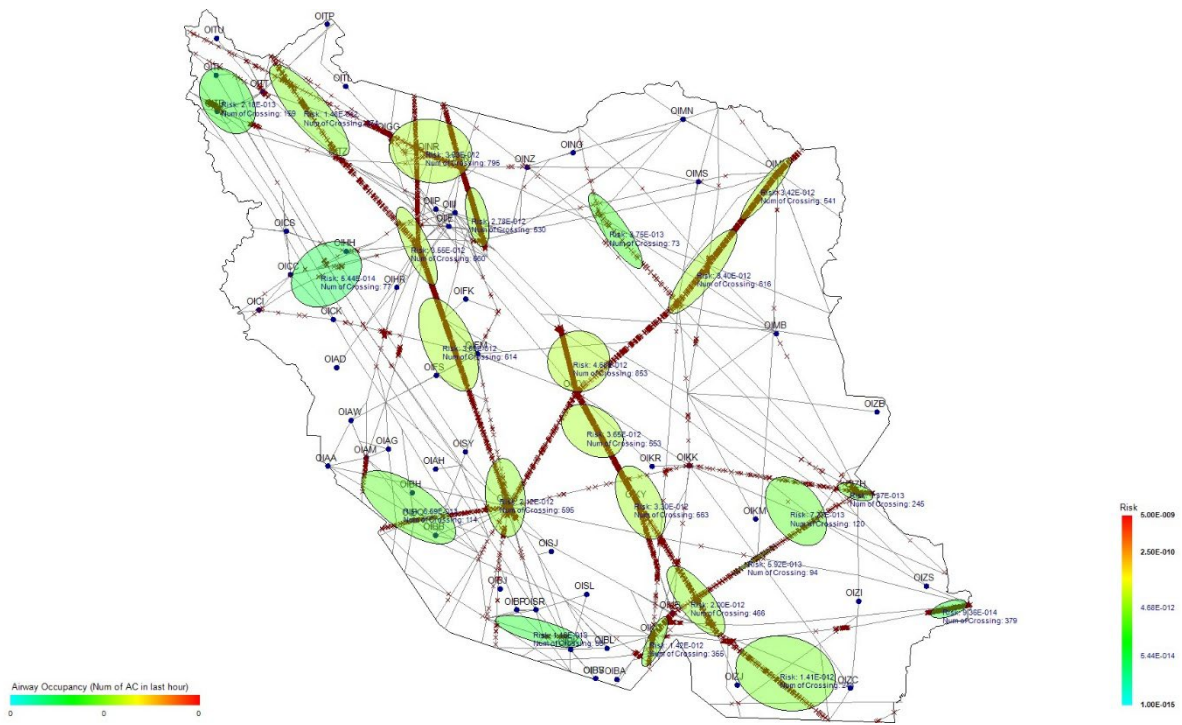


Baghdad FIR Hotspots

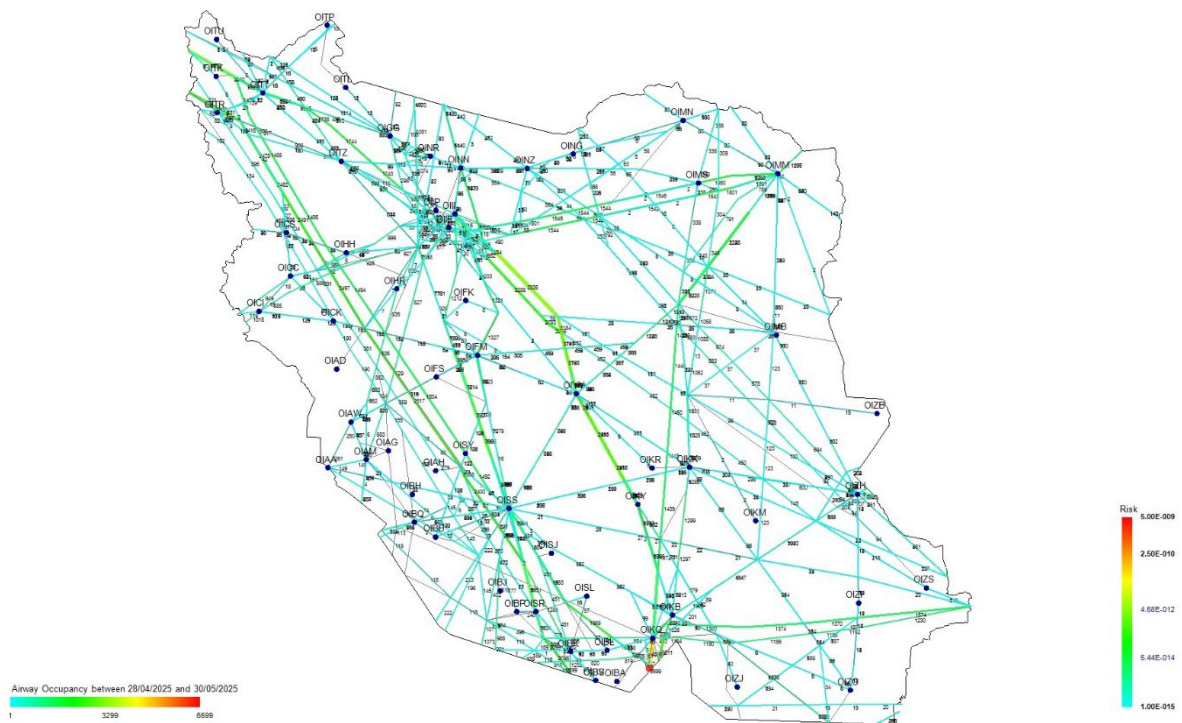


Baghdad FIR Airways Occupancy

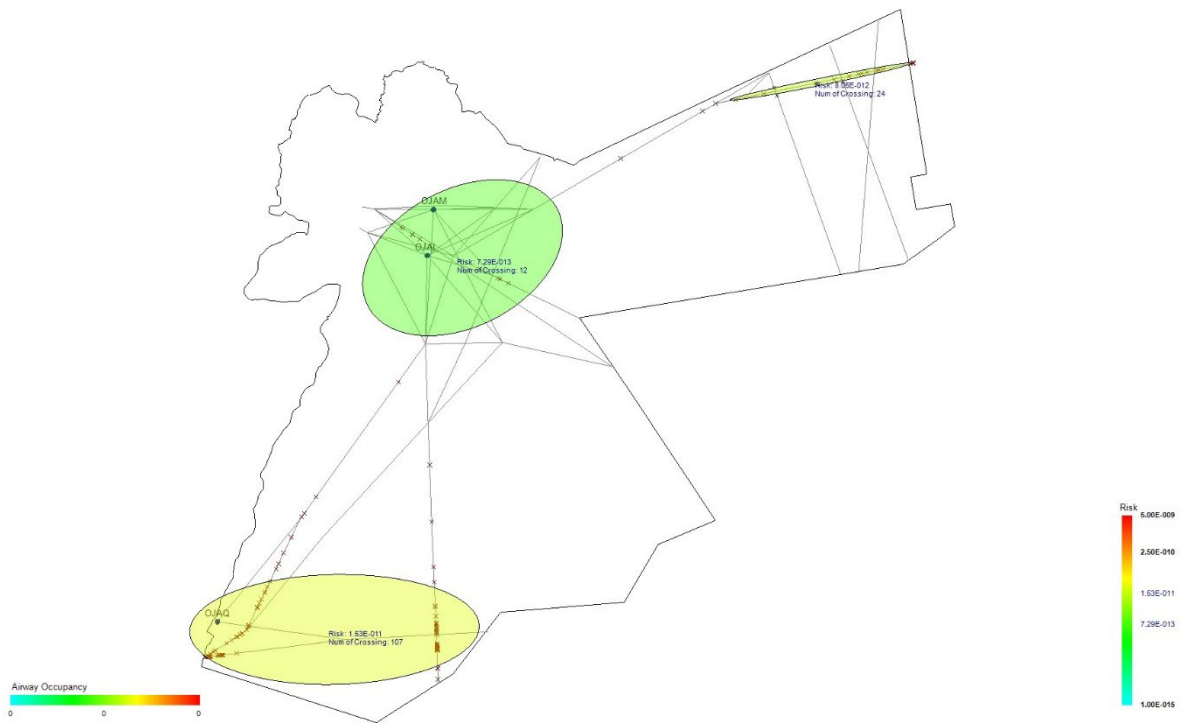
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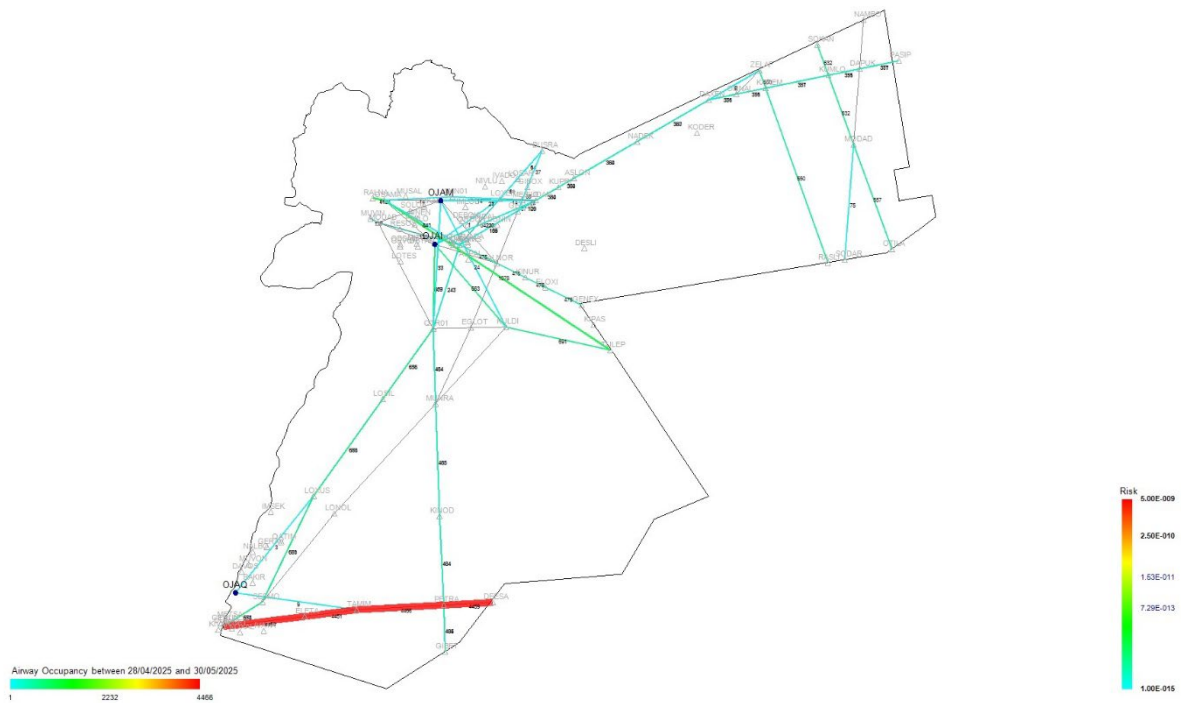
Tehran FIR Hotspots



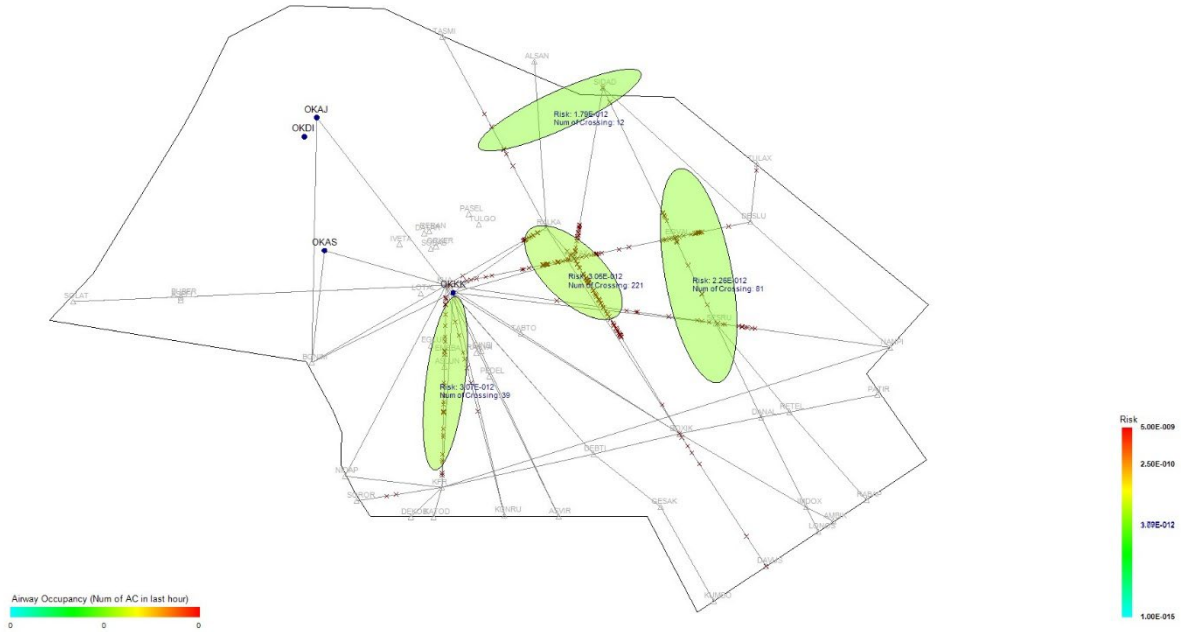
Tehran FIR Airways Occupancy



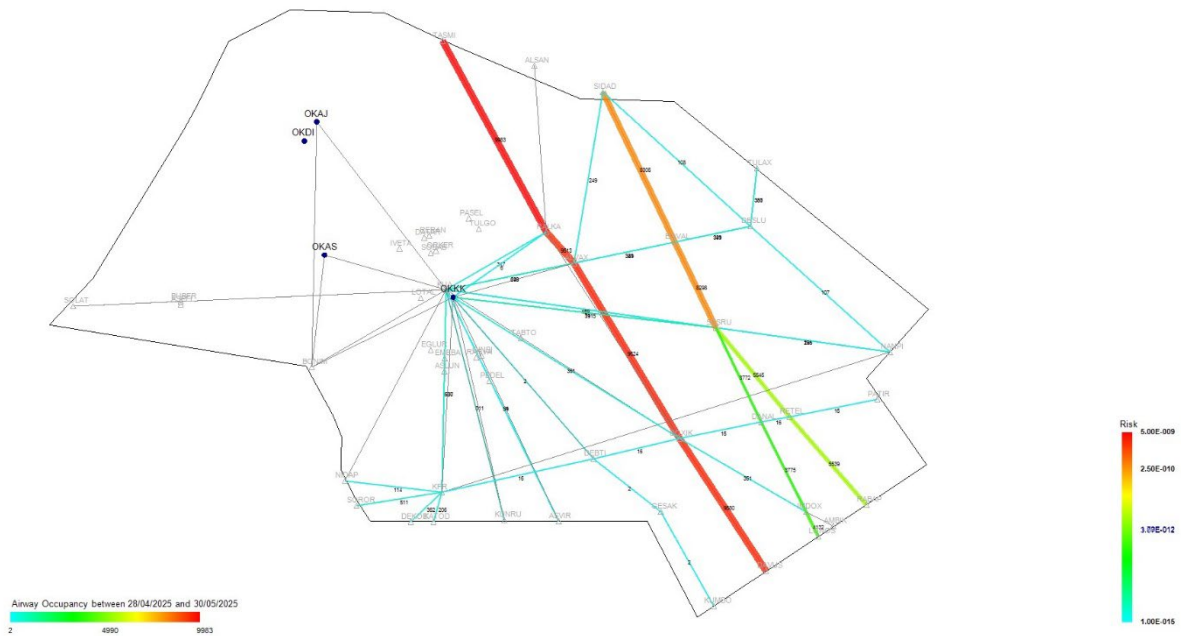
Amman FIR Hotspots



Amman FIR Airways Occupancy



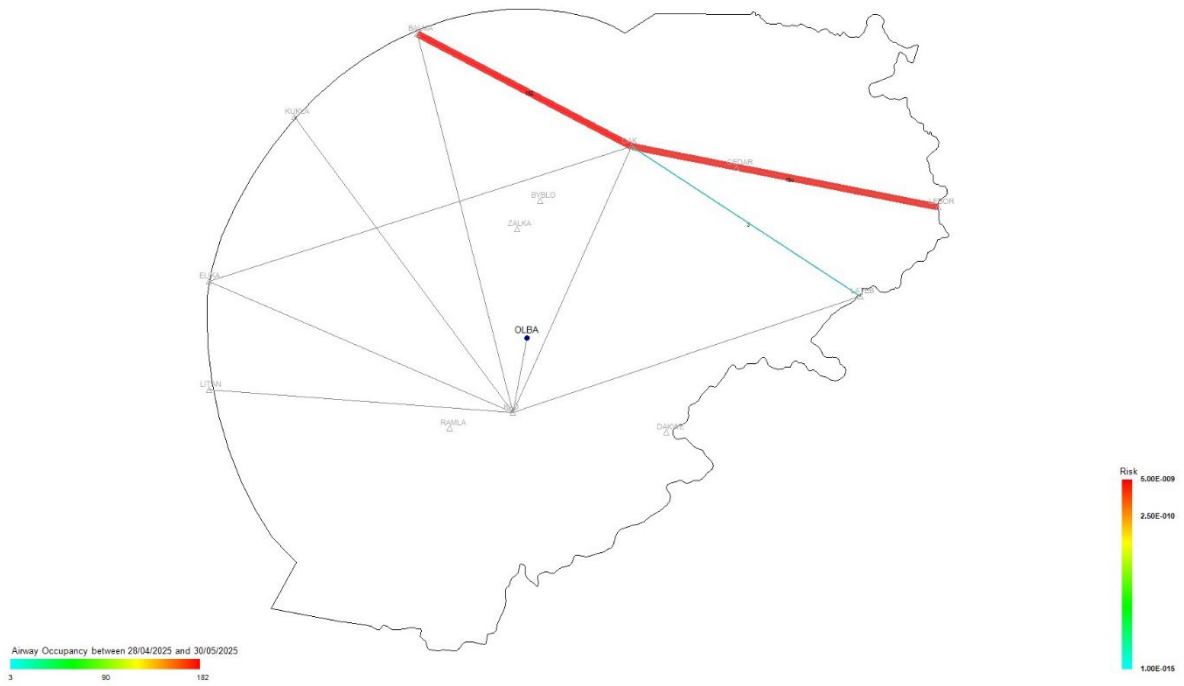
Kuwait FIR Hotspots



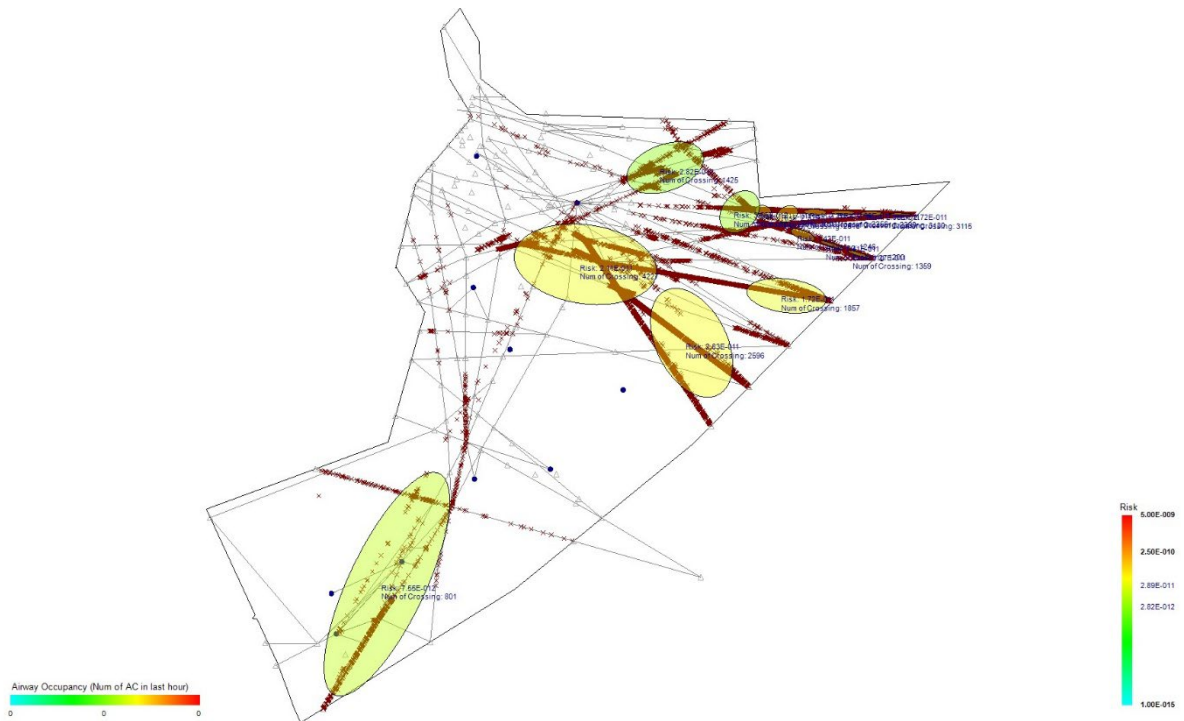
Kuwait FIR Airways Occupancy

No Hotspots Observed Within Beirut FIR

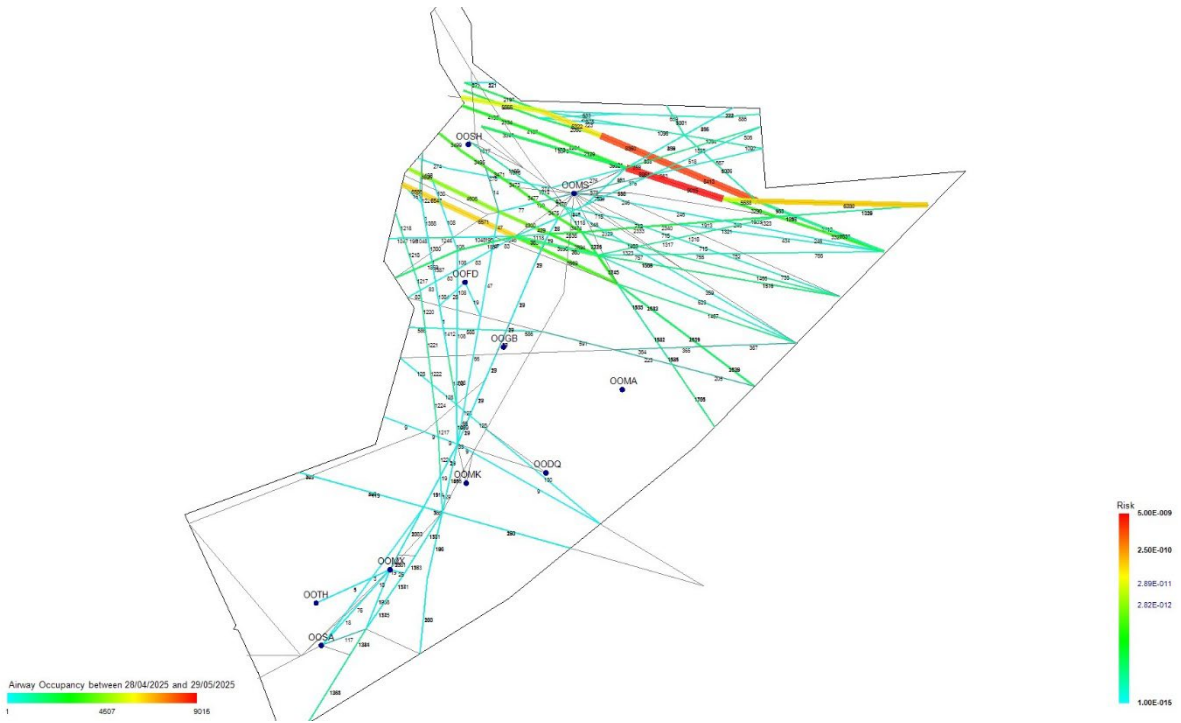
3B-19



Beirut FIR Airways Occupancy

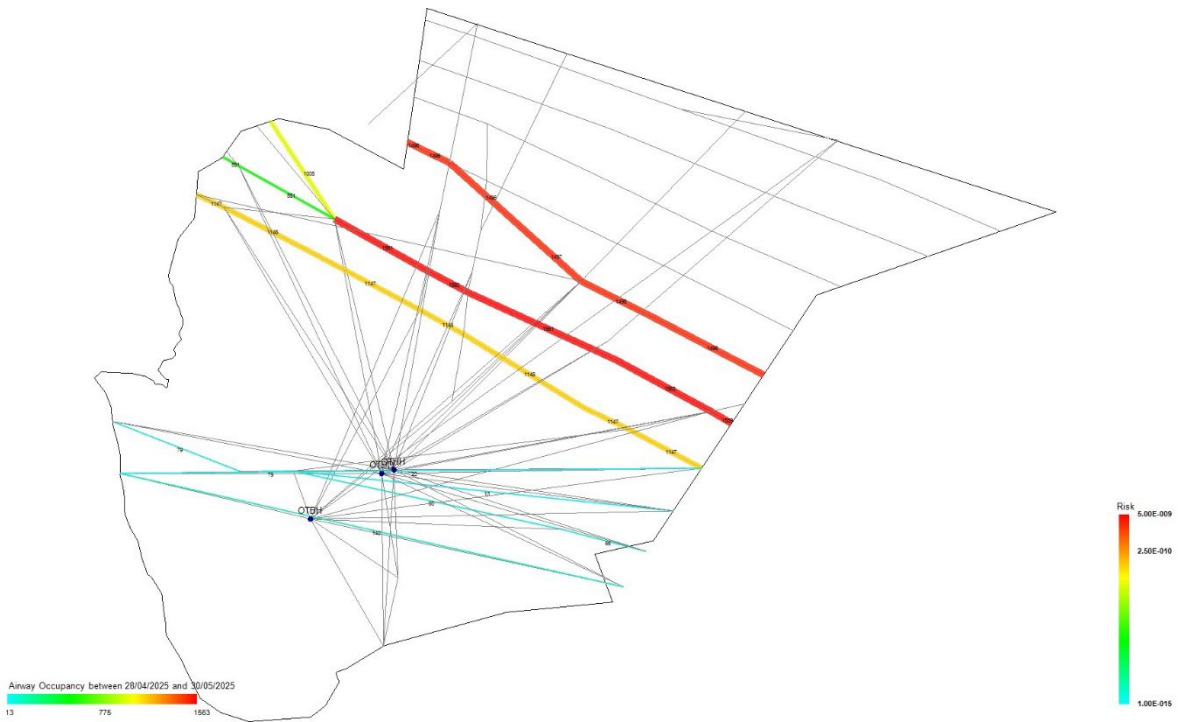


Muscat FIR Hotspots



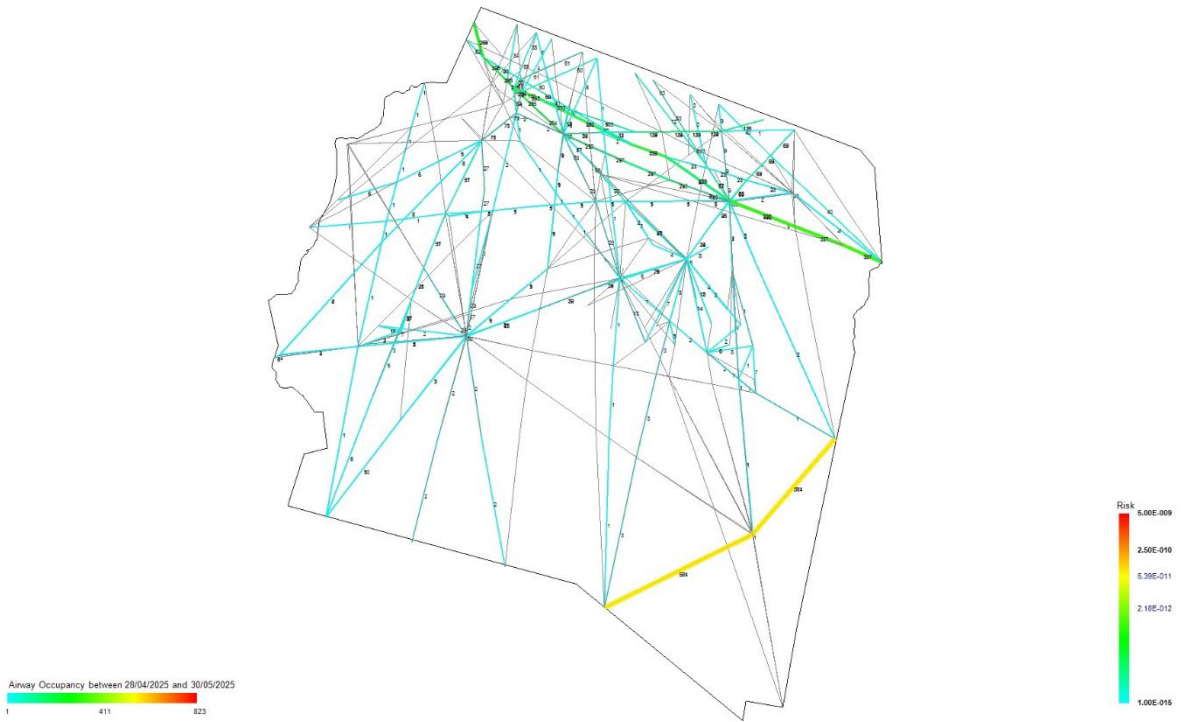
Muscat FIR Airways Occupancy

No Hotspots Observed Within Doha FIR

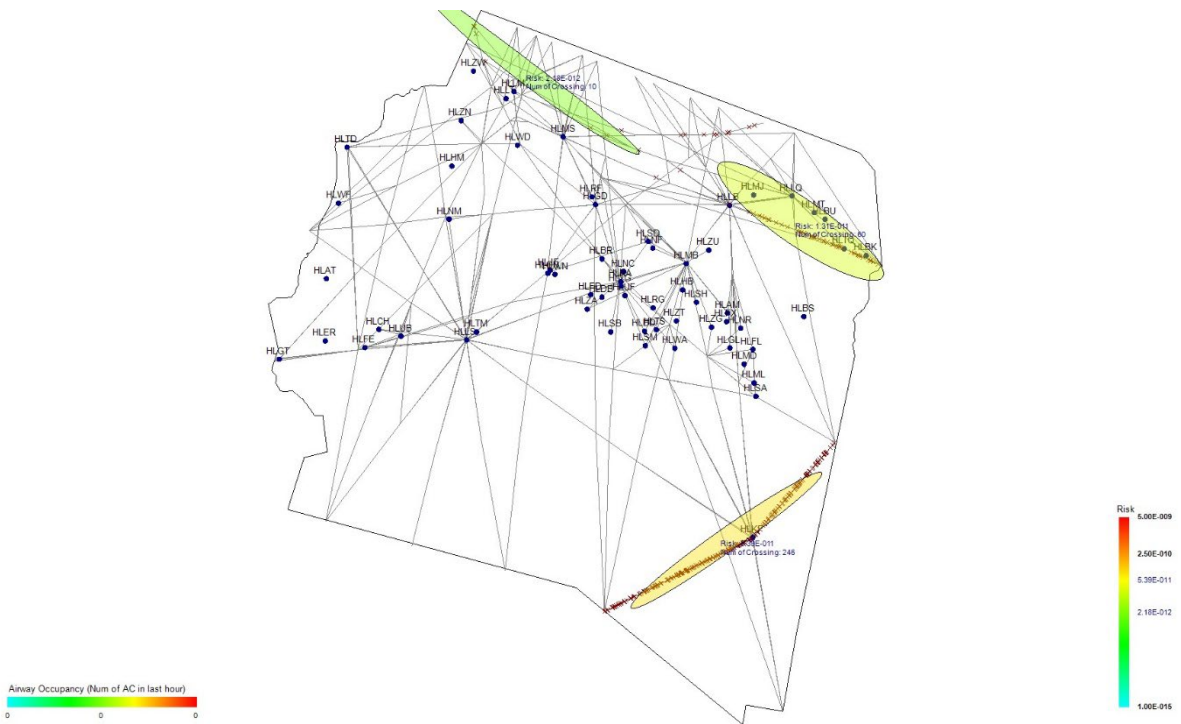


Doha FIR Airways Occupancy

3B-21

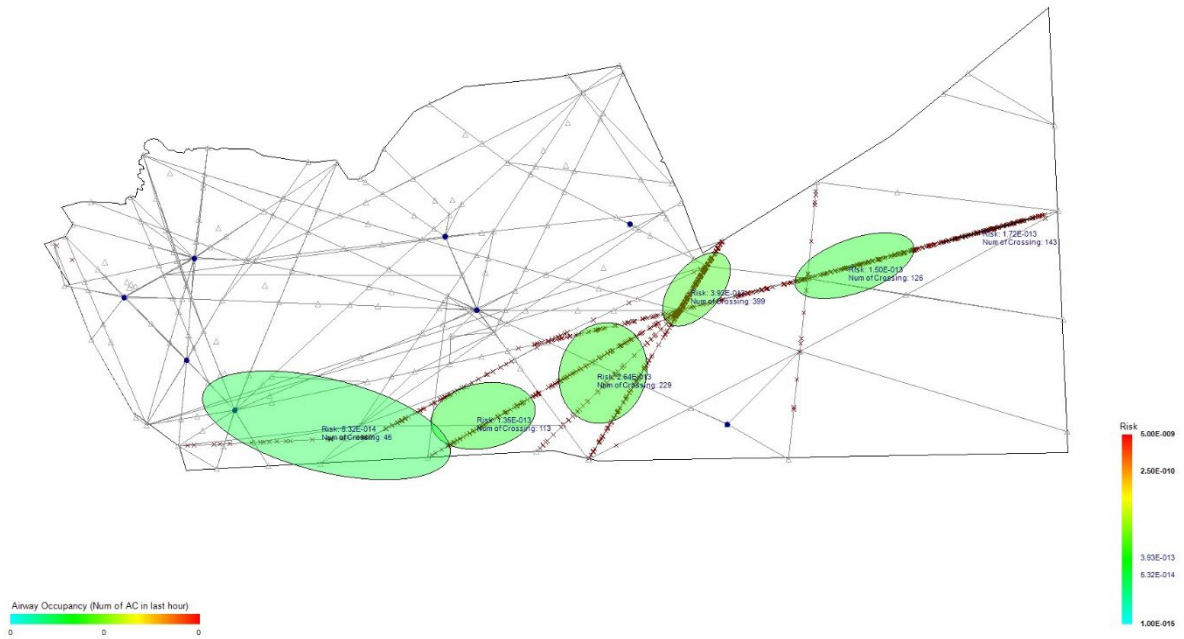


Tripoli FIR Hotspots

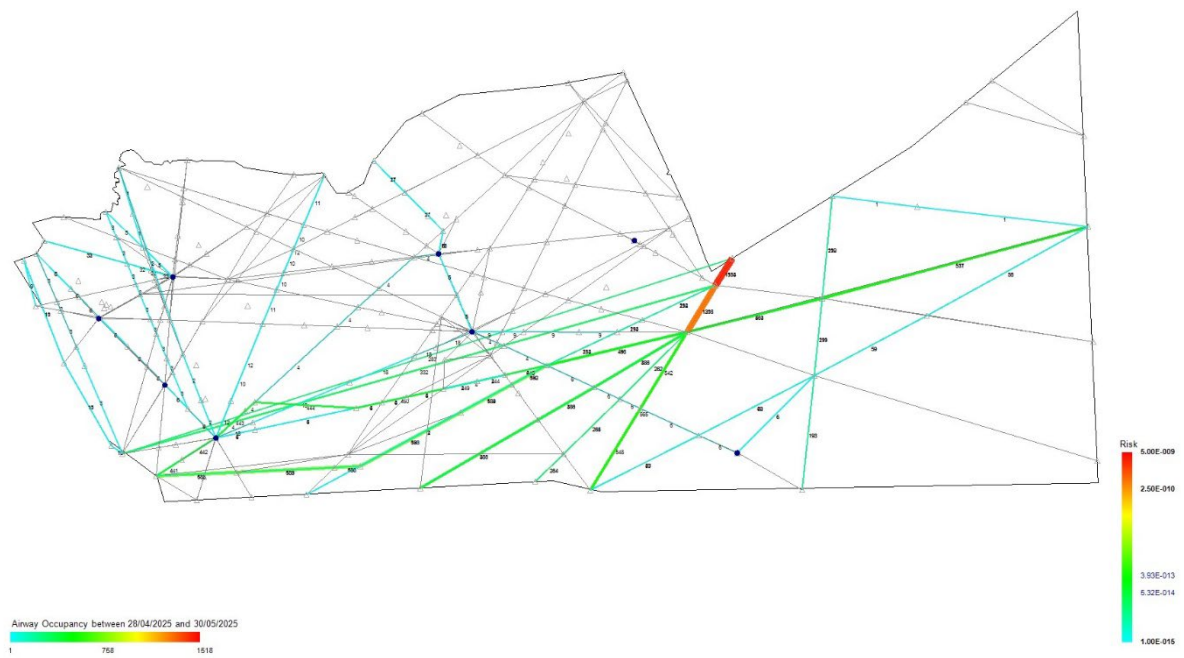


Tripoli FIR Airways Occupancy

3B-23



Sana'a FIR Hotspots



Sana'a FIR Airways Occupancy

TABLE GEN II-1 - HOMOGENEOUS ATM AREAS AND/OR MAJOR TRAFFIC FLOWS IDENTIFIED IN THE MID REGION

Column

- | | | |
|---|--|---|
| 1 | Area of routing (AR) | Sequential number of area of routing |
| 2 | Homogeneous Areas and/or Traffic flows/routing areas | Brief description and/or name |
| 3 | FIRs involved | List of FIRs concerned |
| 4 | Type of area covered | Brief description of type of area, examples:
Oceanic or Continental
High or low density
Oceanic en-route or Continental en-route |
| 5 | Remarks | Homogeneous ATM Area and/or Major Traffic Flow and Region(s) concerned |

Area of routing (AR)	Homogeneous Areas and/or Traffic flows/routing areas	FIRs involved	Type of area covered	Remarks
1	2	3	4	5
AR1	Asia and Europe, Asia and the Middle East, Europe and the Middle East, via the northern Arabian Peninsula and Eastern Mediterranean <u>Gulf and Europe</u>	Amman, Beirut, Emirates, Muscat, <u>Baghdad, Damascus, Jeddah, Tehran</u> Bahrain, <u>Doha,</u> Kuwait,	Continental high density	<u>Major departing and arriving Traffic Flow between Gulf and Europe Region</u> Mainly intraregional and MID to/from ASIA and EUR. Some overflying EUR/ASIA traffic
<u>AR2</u>	<u>Gulf and Central Asia, Gulf and North America and North of Euro</u>	<u>Bahrain, Doha, Emirates, Jeddah, Kuwait, Muscat, Tehran</u>	Continental Medium to high density especially during Hajj.	<u>Mainly departing and arriving traffic to/from Gulf and Central Asia as well as intraregional overflight to North of Europe and America</u>
<u>AR3</u>	<u>Gulf and South of Europe, East of Mediterranean seas and Europe, as well as Gulf and North Africa</u>	<u>Amman, Baghdad, Bahrain, Beirut, Cairo, Damascus, Doha, Emirates, Jeddah, Kuwait, Muscat, Tripoli</u>	Continental high density especially during Hajj.	<u>Mainly regional departure and arrival as well as continental overflight between South of Europe and Gulf. Moreover, during contingency and</u>

Area of routing (AR)	Homogeneous Areas and/or Traffic flows/routing areas	FIRs involved	Type of area covered	Remarks
				<u>closure of AR1 & AR2, this AR works as an alternate</u>
<u>AR4</u>	<u>Gulf and East/Southeast Asia and beyond</u>	<u>Amman, Bahrain, Cairo, Doha, Emirates, Jeddah, Kuwait, Muscat, Tehran</u>	<u>Oceanic and Continental high density especially during Hajj.</u>	<u>Mainly regional departure and arrival as well as continental overflight between Gulf and East/Southeast Asia.</u>
AR2 <u>AR5</u>	Libya, Egypt, Sudan and the southern Arabian Peninsula <u>Gulf to/from Europe, Africa, and East/Southeast Asia and North Africa</u>	Bahrain, Cairo, Doha, Emirates, Jeddah, Khartoum, Muscat, Sana'a, Tripoli	Remote <u>Continental and oceanic low density (but seasonally high density) to Medium density especially during Hajj</u>	Major traffic flow mainly landing and departing the MID region. Some EUR/AFI traffic and North and East of Africa also using this airspace
AR3 <u>AR6</u>	Asia and Europe, Asia and the Middle East, Europe and the Middle East, north of the Gulf	Emirates, Muscat, Teheran	Continental high density	Major traffic flow ASIA/EUR
AR4	Gulf, Asia (Indian subcontinent) to/from North of Europe	Baghdad, Bahrain, Emirates, Kuwait, Muscat	Continental high density	MID to/from Asia and EUR
AR5	Gulf Area to/from Eastern, Central and West Africa	Bahrain, Emirates, Jeddah, Khartoum, Muscat	Continental low density (Seasonal high density)	Traffic flow Intraregional. Seasonal pilgrim flights to/from, East, Central, and West AFI

ANP Volume II, MID Region AIDC/OLDI Applicability Area

(Priority 1 and 2 for Implementation)

ACC	Adjacent ACCs											
Amman	Baghdad (2)	Cairo (1)	Damascus (2)	Jeddah (1)	Riyadh (1)	Tel Aviv (2)						
Baghdad	Amman (2)	Ankara (1)	Damascus (2)	Jeddah (2)	Kuwait (1)	Riyadh (2)	Tehran (2)					
Bahrain	Doha (1)	Emirates (1)	Jeddah (1)	Kuwait (1)	Riyadh (1)	Tehran (1)						
Beirut	Damascus (2)	Tel Aviv (2)	Nicosia (2)									
Cairo	Amman (1)	Athena (1)	Jeddah (1)	Khartoum (2)	Nicosia (1)	Tel Aviv (2)	Tripoli (2)					
Damascus	Amman (2)	Ankara (2)	Baghdad (2)	Beirut (2)	Nicosia (2)	Tel Aviv (2)						
Doha	Bahrain (1)	Emirates (1)	Jeddah (1)	Riyadh (1)	Tehran (1)							
Emiratis	Bahrain (1)	Doha (1)	Jeddah (1)	Muscat (1)	Riyadh (1)	Tehran (1)						
Jeddah	Amman (1)	Asmara (2)	Baghdad (2)	Bahrain (1)	Cairo (1)	Doha (1)	Emirates (1)	Khartoum (2)	Kuwait (1)	Muscat (1)	Riyadh (1)	Sana'a (2)
Riyadh	Amman (1)	Baghdad (2)	Bahrain (1)	Doha (1)	Emirates (1)	Kuwait (1)	Jeddah (1)	Muscat (1)	Sana'a (2)			
Khartoum	Addis (2)	Asmara (2)	Cairo (2)	Jeddah (2)	Juba (2)	N'Djamena (2)	Tripoli (2)					
Kuwait	Baghdad (1)	Bahrain (1)	Jeddah (1)	Riyadh (1)	Tehran (2)							
Muscat	Emirates (1)	Jeddah (1)	Karachi (1)	Mumbai (1)	Riyadh (1)	Sana'a (2)	Tehran (1)					
Sana'a	Addis Ababa (2)	Asmara (2)	Jeddah (2)	Mogadishu (2)	Mumbai (2)	Muscat (2)	Riyadh (2)					
Tehran	Ankara (1)	Ashgabat (2)	Baghdad (2)	Bahrain (1)	Baku (2)	Doha (1)	Emirates (1)	Kabul (2)	Karachi (1)	Kuwait (2)	Muscat (1)	Yerevan (2)
Tripoli	Algiers (2)	Athena (2)	Cairo (2)	Khartoum (2)	Malta (2)	N'Djamena (2)	Niamey (2)	Tunis (2)				

(1) = Priority 1 for implementation based on the following criteria)

(2) = Priority 2 for implementation based on the following criteria)

To determine MID Priority 1 AIDC/OLDI, the subsequent criteria were considered:

- if the traffic exchange rate between two adjacent ACCs has exceeded 30 flights per hour; or
- if two consecutive FIRs implemented longitudinal separation 10 NM or less at common FIR boundary point(s); or
- if two adjacent FIRs implemented cross border Free Route Airspace (FRA); or

- d) *if the number of LHD recorded by MIDRMA related to adjacent ACCs has exceeded 10 reports per month and it lasts for more than 6 months; or*
- e) *if traffic movement at the common FIR boundary significant increased during contingency situations; or*
- f) *where decided by both concerned States.*

**TERMS OF REFERENCE (TOR) OF THE
MIDANPIRG AIRSPACE MANAGEMENT WORKING GROUP
(ASM WG)**

I. TERMS OF REFERENCE

1.1 The Airspace Management Working Group was established by the MIDANPIRG/21 meeting to address the challenges in Airspace Management and provide a forum for the ATM specialists in the Region to work together to improve safety and efficiency, increase airspace capacity to meet future demand requirements; and reduce the environmental impact of increasing air traffic by offering improved ATM operations. Therefore, the **Airspace Management Working Group (ASM WG)** Terms of Reference are as follows:

- a) Address the MID Region Airspace Management challenges:
 - i. conduct a holistic review and perform gap analysis of the MID ATS Routes Network in order to assess the regional capacity, hotspots and constraints;
 - ii. identify requirements and improvements for enhancing safety and achieving an efficient airspace structure within the MID Region;
 - iii. support states on coordinating the identified airspace and ATS route network requirements with relevant stakeholders (International Organizations, airspace user representative organizations and other ICAO Regions);
 - iv. address areas of conflicting traffic highlighted in the MIDRMA Annual Safety Monitoring Report (SMR);
 - v. support States in resolving interface issues with adjacent ICAO Regions;
 - vi. identify the Priority 1 ASBU elements with low level of implementation and support the States to overcome the challenges for the implementation of these elements; and
 - vii. address MID ATS route designators and 5LNCs challenges.
- b) Support the enhancements of MID airspace structure and ATS route network:
 - i. improve connectivity and accessibility (specification, trajectory, spacing, etc.), considering the ability to offer additional routing options, to support operational requests, including contingency situations;
 - ii. foster a harmonized implementation of Performance Based Navigation (PBN) within the enroute environment;
 - iii. coordinate with the MIDRMA and IATA/airspace users to collect and analyse traffic data related to the proposed changes to the ATS Routes Network, as required;
 - iv. develop a working repository for route proposals to be used as a dynamic reference for the establishment / modification of ATS routes; and

- v. support the development, coordination and submission of Proposals for Amendment (PfA) for processing to ensure the continuous and coherent development and update of the MID ANP in the respective subjects.
- c) Endeavour to enhance safety and efficiency; increase capacity and reduce the environmental impact of increasing air traffic through the implementation of improved ATM operations:
 - i. support States to review and update their Letter of Agreement with adjacent FIRs to optimize utilization of the MID airspace in a harmonized manner;
 - ii. develop regional procedure to regulate and harmonize implementation of TOS, RAD and FLAS;
 - iii. foster the implementation of reduced Longitudinal Separation between FIRs;
 - iv. foster the implementation of Civil-Military Cooperation (CMC) and Flexible Use of Airspace (FUA);
 - v. support the planning and harmonized implementation of Free Route Airspace (FRA); and
 - vi. foster the implementation of (FF-ICE).
- d) Support the planning for the operation/integration of new entrants such as Remotely Piloted Aircraft System (RPAS)/Unmanned Traffic Management (UTM) into the MID Region airspace;
- e) Considering global and regional developments related to ATM, identify/propose necessary amendments to the MID Air Navigation Strategy for review by the ATM SG;
- f) Report its activities to the ATM SG; and
- g) Review periodically its Terms of Reference and propose amendments, as necessary.
- h) The ASM AG would review and amend accordingly the action items and timelines based on the developments and progress.

II. COMPOSITION

2.1 The Working Group is composed of:

- a) MIDANPIRG Member States;
- b) concerned International and Regional Organizations; and
- c) other representatives from States from other ICAO Regions; provider States and Industry may be invited on ad hoc basis, as observers, when required.

III. WORKING ARRANGEMENTS

3.1 The Chairperson, in close co-operation with the Secretariat, shall make all necessary arrangements for the most efficient working of the Working Group. The Working Group shall at all times conduct its activities in the most efficient manner possible with a minimum of formality and paperwork (paperless meetings). Permanent contact shall be maintained between the Chairperson, Secretary and Members of the Working Group to advance the work. Best advantage should be taken of modern communications facilities, particularly videoconferencing (Virtual Meetings) and e-mails.

3.2 In person meetings will be conducted once a year and when deemed necessary.

ASM Action Plan

I. List of ASM priority focus areas:

1. Implementation of PBN in Enroute
2. Implementation of reduction of longitudinal separation
3. ATS route network (including establishment of ATS routes, designators and 5LNCs)
4. ASM improvements (CMC and FUA, FRA, RAD, TOS, FLAS & LoA)
5. RPAS/UTM
6. FF-ICE implementation
7. Others related tasks

II. List of Action Items and implementation Status (as of 30 June 2025)

Focus area number	Action		Target date	Deliverable	Champion	Reference	Status / RMK
	No.	Description					
1	1.1	Publish implementation of RNAV 5 in their FIRs		RNAV 5 routes should be published in AIP ENR 3.2.	Lebanon	MIDANPIRG Conclusion 12/9	
					Libya		
					Syria		
	1.2	Implement RNAV 5 in the level band FL160 - FL460		Update State AIP, ENR 3.3 to indicate implementation of the RNAV 5 in the level band FL160 - FL460 (inclusive).	Egypt		On going
					Iran		
					Lebanon		
					Libya		
					Syria		
					Sudan		
	1.3	Publish RNAV routes in relevant part in the AIP		All RNAV routes either defined by RNAV designator or non-RNAV designator publish in ENR 3.2	Egypt		
			Kuwait		AIP Amend published Task completed		
			Yemen		On going		
	RNAV5 to RNAV1 within Baghdad and Kuwait FIR		3 parallel RNAV1 routes	Kuwait			
2	2.1	Coordinate with neighboring States to reduce surveillance longitudinal separation down to 10 NM, or non-surveillance to 30NM.		Detailed implementation plan	Iraq – Turkiye	MIDANPIRG Conclusion 13/5	
					Jordan		
					Kuwait		

Focus area number	Action		Target date	Deliverable	Champion	Reference	Status / RMK
	No.	Description					
					Libya – Chad		
					Oman – Pakistan & India		-----20NM, ...
					Yemen – Somalia		Not feasible
					Qatar - Iran		
3	3.1	Remove prefix “U” from ATS route designators		Revise AIP, ENR 3 to remove prefix “U”	Iraq (UL602, UM860, UP975, etc.)	MSG Conclusion 6/9	On going targeting Q2/2025
					Jordan (UM690, UR785, UB544, etc.)		AIRAC published Task completed
					Lebanon (UM425, UL620, UN438, etc.)		
					Oman (UB424, UL425, UB535, etc.)		AIRAC published Task completed
	3.2	Change ATS route designators		Revise AIP, ENR 3 to change the required ATS route designators in accordance with ANP volume II.	Bahrain (T557 to L557, Y604 to L704, Y856 to M556, T308 to M708, Z622 to M722, T872 to N572, T602 to N702, T319 to P319, T430 to P550, T444 to P700, T934 to P713)	Approved PfAs MID.II.2201-ATM & MID.II.2302-ATM	On going publication 12 Jun
					Oman (L695, M303, M681, M877, N430, P304, P316, P513, R402 to non-regional T507 to L559, T980 to L700, Q620 to M700, Z515 to M717, T970 to N570, Q978 to N718) Z855 to P558		AIP Amend published Task completed
				Qatar (Y604 to L704, T665 to N700, T430 to P550, T444 to P700)		Planning to change: T308 M708 T872 N872 T934 P713 Y856 M556	

Focus area number	Action		Target date	Deliverable	Champion	Reference	Status / RMK
	No.	Description					
							Z622 M722
					Saudi Arabia (G674, G799, M309 to non-regional H732 to M553, H741 to M320, J735 to P703, J749 to N709, J852 to M702, J874 to N704, T136 to L716, Y415 to M705, Y511 to M711, Z515 to M717, Q332 to N323, V13 to N703, J874 to N704, Y517 to N707, J749 to N709, T513 to N713, V975 to P705, Q510 to P710, T100 to P711, Q212 to P712, Q21 to P721, Q143 to P723, Q615 to P753, Q624 to P752)		On going, targeting Q4 2025.
					UAE (T665 to N700, Q415 to N715)		On going
					Yemen (L566 to Y101, P552 to Y103, R799 to Y105, Z515 to M717 and establish LADLI-PUTSO)		
		MID ATS Route PfA and Optimization of MID Region ATS Route Designator		develop plan and for review before processing the required PfA retain the designator	All MID States		

Focus area number	Action		Target date	Deliverable	Champion	Reference	Status / RMK
	No.	Description					
4	4.1	Continuation of FRA volume between UAE and Qatar		Detailed implementation plan	Qatar and UAE	ASM WG/1	On going, targeting Q4/2025
	4.2	Explore the feasibility of Development of Regional RAD/routing concept		RAD portal	Oman and Saudi Arabia. Other interested States	ASM WG/1	Oman: AIP Amend published. Saudi Arabia: On going targeting Saudi Arabia and Oman will provide PPT WG/3.
	4.3	Regional cooperation of optimization of major traffic flows		- Identification of the major traffic flow - Optimization of the network	Oman and MID States	ATM SG/10 WP/22 by Oman	On going
6	6.1	Preparation for FF-ICE implementation		- ICAO APAC/MID ATFM and FF-ICE Seminar 2025 (Dubai, UAE, 23 – 26 Feb 2025)			Conducted
	6.2	AIDC/OLDI applicability area (FF-ICE enabler)		Develop draft FF-ICE (B0/1) applicability area (based on operational needs)			
7	7.1	MID Region ATM Monitoring Dashboard		Support the development of the ATM Dashboard (offered by GACA/SANS)	GACA/SANS	ATM SG/9-10	On going
	7.2	Air Navigation Plan (Vol. II): Homogenous Areas and Major Traffic Flow (Table GEN II-1)		review and update Table GEN II-1 for review before processing the required PfA			

Development of State National ATFM

(Implemented or Not implemented)

MIDANPIRG Conclusion 21/19 item a) based on the guidelines provided in ICAO MID Doc 014: ATFM Plan (V2.0), MID States develop their respective ATFM implementation plan and agreements with adjacent FIRs and share them with ICAO MID

State	National CMC Plan	Remarks
Bahrain	No update	
Egypt	No update	
Iran	No update	
Iraq	No update	
Jordan	No update	
Kuwait	No update	
Lebanon	No update	
Libya	No update	
Oman	No update	
Qatar	No update	
Saudi Arabia	No update	
Sudan	No update	
Syria	No update	
UAE	No update	
Yemen	No update	

Longitudinal Separation Minima and requirements in non-surveillance environments

Type of longitudinal separation	Minima	Requirements			
Based on Time	15 minutes	No NAVAID to permit frequent determination of position and speed			Communication: voice reports, CPDLC or ADS-C
Based on Time	10 minutes	NAVAID permits frequent determination of position and speed			Communication: voice reports, CPDLC or ADS-C
Based on Time	5 minutes	NAVAID permits frequent determination of position and speed	preceding ACFT maintain TAS 20 ⁺ kt faster than succeeding ACFT	Communication: voice reports, CPDLC or ADS-C	
Based on Time	3 minutes	NAVAID permits frequent determination of position and speed	preceding ACFT maintain TAS 40 ⁺ kt or faster than succeeding ACFT	Communication: voice reports, CPDLC or ADS-C	
Mach Number Technique Based on Time	10 minutes	True Mach number approved by ATC			Communication: voice reports, CPDLC or ADS-C
Mach Number Technique Based on Time	9 to 5 minutes	Mach number difference (0.02 to 0.06) as explained in para 5.4.2.4.3			Communication: voice reports, CPDLC or ADS-C
Mach Number Technique Based on Distance Using RNAV	80 NM	Separation established & maintain 80 ⁺ NM between ACFT positions by assigning Mach number	RNAV-equipped aircraft	Operating on designated RNAV routes or on ATS routes defined by VOR	Direct controller-pilot communications
Based on Distance Using RNAV where RNP 10	50 NM	Separation established & maintain 50 ⁺ NM between ACFT positions by using speed control techniques, including assigning Mach number	This separation was developed in accordance with a collision risk analysis, so implementation requires safety risk assessments. Refer para 5.4.2.6.3.1 and notes	Distance verification at least every 24 minutes as well as procedure in 5.4.2.6.3.2	Direct controller-pilot communications shall be voice or CPDLC
Performance-Based Longitudinal Separation	50 NM	RNP 10	RCP 240	RSP 180	Max ADS-C periodic reporting interval 27 minutes considering para procedures in 5.4.2.9.6 & 5.4.2.9.7
Performance-Based Longitudinal Separation	50 NM	RNP 4	RCP 240	RSP 180	Max ADS-C periodic reporting interval 32 minutes considering para procedures in 5.4.2.9.6 & 5.4.2.9.7
Performance-Based Longitudinal Separation	30 NM	RNP 2 or 4	RCP 240	RSP 180	Max ADS-C periodic reporting interval 12 minutes considering para procedures in 5.4.2.9.6 & 5.4.2.9.7
Performance-Based Longitudinal Separation	20 NM	RNP 2 or 4	RCP 240	RSP 180	Max ADS-C periodic reporting interval 3.2 minutes considering para procedures in 5.4.2.9.6 & 5.4.2.9.7
Performance-Based Longitudinal Separation	5 minutes	RNP 2 or 4 or 10	RCP 240	RSP 180	Max ADS-C periodic reporting interval 14 minutes considering para procedures in 5.4.2.9.6 & 5.4.2.9.7
Based on Distance Using DME and/or GNSS	20 NM	ACFT positions report by reference to DME in conjunction with other appropriate navigation aids and/or GNSS			Direct controller-pilot VHF voice communication and frequent intervals to ensure that the minimum will not be infringed
Based on Distance Using DME and/or GNSS	10 NM	ACFT positions report by reference to DME in conjunction with other appropriate navigation aids and/or GNSS as well as the leading ACFT maintains a TAS 20 ⁺ kt faster than the succeeding ACFT			Direct controller-pilot VHF voice communication and frequent intervals to ensure that the minimum will not be infringed

Current status of longitudinal separation at common FIR boundaries

Bahrain	Iran										Kuwait			Qatar		Saudi Arabia											
Separation	ROTOX	OBTAR	KUVER	ALSER	KUMBO	DAVUS	LONOS	RABAP	AMBIK	TULUB	LUBET	DAROR	METLA	ULADA	ROTEL	LADNA	NARMI	DEMTA									
No Traffic per year	20	20	20	20	10	20	10	10	10	8	8	10	10	10	10	10	10	10									
Egypt	Cyprus				Greece					Jordan	Libya			Saudi Arabia				Sudan									
Separation	RASDA	LAKTO	PASOS	SALUN	METRU	TANSA	PAXIS	ANTAR	KUMBI	ULINA	LOSUL	DITAR	KITOT	PASAM	IMRAD	GIBAL	DEDLI	ALEBA	ENABU	ATMUL	NUBAR	SISID					
No Traffic per year	20	20	20	20	20	20	20	20	20	15	80	80	20	15	15	40	40	80	80	80	80	80					
Iran	Afghanistan			Armania		Azerbaijan					Iraq			Bahrain			Kuwait		Oman								
Separation	PAMTU	RANRU	SOKAM	KAMAR	MAGRI	BATEV	ULDUS	LALDA	PARSU	DULAV	PAXAT	RAGET	BOXIX	ROTOX	OBTAR	KUVER	ALSER	TULAX	NANPI	PATIR	DENDA	IMLOT	MESPO	ULDUN	IVIVA		
No Traffic per year	120	120	120	120	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	50	50	50	20	20	
Iran	Pakistan					Qatar				Turkey				Turkmenistan				UAE									
Separation	PIRAN	KEBUD	DERBO	ASVIB	EGRON	METBI	DASTU	MIDSI	RAGAS	ELIDU	AGINA	DASIS	TESVA	BONAM	ALRAM	LUMOM	GIRUN	RIKOP	ORPAB	NAZAR	OTRUZ	DEBER	GABKO	PATAT	ORSAR	SIR	DAPER
No Traffic per year	50	50	50	50	50	50	20	10	20	20	20	20	20	20	20	20	50	50	50	50	50	50	20	20	10	20	20
Iraq	Iran		Jordan	Kuwait		Saudi Arabia			Syria		Turkey																
Separation	PAXAT	RAGET	BOXIX	PASIP	SIDAD	TASMI	MURIB	MODIK	SIDNA	ELEXI	NINVA	KABAN	RATOV														
No Traffic per year	20	20	20	80	10	20	40	80	80	80	20	20	20														
Jordan	Egypt	Iraq	Israel		Saudi Arabia					Syria																	
Separation	ULINA	PASIP	OSAMA	MOUAB	TRF	DEESA	GIBET	TULEP	GENEX	OTILA	BUSRA	ZELAF	SOKAN	NAMBO	KAMEL	TAN											
No Traffic per year	15	80	10	10	10	10	10	10	10	10	80	80	80	80	80	80											
Kuwait	Bahrain			Iran			Iraq		Saudi Arabia																		
Separation	KUMBO	DAVUS	LONOS	RABAP	AMBIK	TULAX	NANPI	PATIR	SIDAD	TASMI	BOSID	GOVAL	DERKO	COPPI	RAS	KOBOK											
No Traffic per year	10	20	10	10	10	20	20	20	10	20	10	10	10	20	10	20											
Lebanon	Cyprus				Syria																						
Separation	LITAN	ELIKA	DIRRE	KUKLA	BALMA	LEBOR	LATEB																				
No Traffic per year	30	30	30	30	30	80	80																				
Libya	Algeria		Chad			Egypt				Malta				Sudan				Tunis									
Separation	IMN	DEKTU	TUMMO	GARIN	TONBA	LOSUL	DITAR	ABRAM	SARKI	VARIG	LUMED	LOTIN	ELIMO	INDOT	OLMAX	BONAR	EKLIS	RASNO	ORNAT	GASRI	TANLI	FARES					
No Traffic per year	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80				
Oman	India					Iran				Pakistan			Saudi Arabia														
Separation	RASKI	PARAR	TOTOX	REXOD	LOTAV	KITAL	ASPUX	DENDA	IMLOT	MESPO	ULDUN	IVIVA	APELO	TAPDO	ALPOR	MIDGU	TOKRA	DAPOL	SITOL	IMDAM	GOBRO						
No Traffic per year	50	50	50	50	50	50	50	50	50	50	20	20	40	40	40	20	20	20	20	20	20	20					
Oman	UAE								Yemen																		
Separation	LALDO	GOMTA	TONVO	MENSA	PASOV	SOLUD	TAPRA	TARDI	MUSAP	ITRUX	LABRI	RETAS	SODEX	MEMTU	EGPEP	TONVO	LUDID	KIVEL	IMKAD	KAPET	PUTRA	SABEL					
No Traffic per year	8	8	8	8	8	8	8	8	8	8	8	8	8	8	10	10	8	80	80	80	80	80					
Qatar	Bahrain		Iran			Saudi Arabia					UAE																
Separation	TULUB	LUBET	DASTU	MIDSI	RAGAS	ELIDU	ULIKA	ORLEK	LADBO	DENSI	BUNDU	KUPRO	TOSNA	OVONA	TOVOX	ALPOB	TUMAK	ORMID	ASTOG	NALPO	OBNET						
No Traffic per year	8	8	20	10	20	20	10	10	10	10	8	8	8	8	10	8	8	8	8	8	8	8					

Action Plan for implementation of Project 30/10

Priority factors:

- a) if a common FIR boundary point in non-surveillance environment (at least on one side) is subject to longitudinal separation of 10 minutes (equivalent to 80 NM) or greater; or
- b) if the large longitudinal separation over common FIR point imposes additional workload to ATCOs and flight crew which may have an impact on safety of traffic operation; or
- c) if the common FIR point carries the main flows in the MID region and/or at interface with adjacent region(s) in accordance with MIDRMA report; or
- d) if the common FIR boundary point is utilized for unidirectional operation and amount of movement reaches 90,000 or more per year, or
- e) if the common FIR boundary point is utilized for bidirectional operation and amount of movement reaches 50,000 or more per year, or
- f) if traffic movement at the common FIR boundary point significantly increases during contingency situations. or
- g) where decided by both concerned States.

Main action	Sub action		Target date	Deliverable	Champion	Reference	Status / RMK
	No.	Description					
Collection of data and Gap analysis	1.1	Develop template to collect data and information from States based on LoAs		Template for collection of data	ICAO MID	MIDANPIRG Conclusion 22/10	
	1.2	Follow up with States to submit required data and share with MID office		State Letter to MID States	ICAO MID		
	1.3	Consolidate States input and conduct Gap analysis		Draft Gap Analysis	MID States and ICAO MID		
	1.4	Prepare and present Gap analysis report to ATM SG for decision		Gap Analysis report	ICAO MID		
Prioritization of the project	2.1	Develop draft priority criteria		Draft list of priority criteria	ICAO MID	MIDANPIRG Conclusion 22/10	
	2.2	Review and approve priority criteria		list of priority criteria	ATM SG		
	2.3	Prioritize common FIR boundary points based on approved criteria in two phases		list of priority common FIR boundary points in two phases	ICAO MID		

Main action	Sub action		Target date	Deliverable	Champion	Reference	Status / RMK
	No.	Description					
Development of Roadmap	3.1	Develop comprehensive list of actions for each common FIR boundary point to identify requirements related to performance improvement area, target, timeline, safety assessment, training, amendment of Letter of Agreement, set effective date etc.		list of detailed actions for each common FIR boundary point	Concern States for each FIR boundary point. ICAO MID to facilitate coordination between States as well as adjacent region(s), if requested	MIDANPIRG Conclusion 22/10 MIDANPIRG Conclusion 22/11	
	3.2	Consolidate actions provided by States in coordinated manner to develop Draft Roadmap		Draft Roadmap	States and ICAO MID	MIDANPIRG Conclusion 22/10	
	3.3	Review Draft Roadmap by ATM SG		Mature Draft Roadmap	ATM SG	MIDANPIRG Conclusion 22/10	
	3.4	Present Mature Draft Roadmap to MIDANPIRG for review and endorsement		Approved Project Roadmap	MIDANPIRG	MIDANPIRG Conclusion 22/10	
Implementation of Phase One	4.1	Based on roadmap, focus on priority 1 common FIR boundary points for implementation of required actions and provide periodic feedback and progress report to ICAO MID		Progress report by States	MID States	Roadmap	
	4.2	Based on the feedback and request from States, provide required technical assistance and support.		ICAO Implementation Support initiative(s)	ICAO MID	Roadmap	
	4.3	Provide consolidated report as well as operational impact analysis to ATM SG and MIDANPIRG until successful implementation of Phase One.		Consolidated progress report with impact analysis	ICAO MID	Roadmap	

Main action	Sub action		Target date	Deliverable	Champion	Reference	Status / RMK
	No.	Description					
Implementation of Phase Two	5.1	Based on roadmap, focus on priority 2 common FIR boundary points for implementation of required actions and provide periodic feedback and progress report to ICAO MID		Progress report by States	MID States	Roadmap	
	5.2	Based on the feedback and request from States, provide required technical assistance and support.		ICAO Implementation Support initiative(s)	ICAO MID	Roadmap	
	5.3	Provide consolidated report as well as operational impact analysis to ATM SG and MIDANPIRG until successful implementation of Phase Two.		Consolidated progress report with impact analysis	ICAO MID	Roadmap	

Development of State National CMC and Progress of related ASBU Element

(Implemented or Not implemented)

State	National CMC Plan	FRT0 B0/2	Remarks
Bahrain	No update		
Egypt	No update		
Iran	No update	NA	For year 2025, Iran was added to applicability area
Iraq	No update	NA	For year 2025, Iraq was added to applicability area
Jordan	No update		
Kuwait	No update	NA	For year 2025, Kuwait was added to applicability area
Lebanon	No update	NA	
Libya	No update	NA	
Oman	No update	NA	For year 2025, Oman was added to applicability area
Qatar	No update		
Saudi Arabia	No update		
Sudan	No update		
Syria	No update	NA	
UAE	No update		
Yemen	No update	NA	

**Outcomes of the
ICAO APAC/MID ATFM and FF-ICE Seminar 2025
Dubai, UAE, 23 – 26 February 2025**

1. The Seminar was hosted by the General Civil Aviation Authority (GCAA) of the United Arab Emirates (UAE) in Dubai from 23 to 26 February 2025 and attended by 154 participants from APAC and MID States and international organizations.
2. The Seminar provided comprehensive background information on the ATFM and FF-ICE, including the requirements and the prerequisites, services and planning phases. In addition, the Seminar provided a forum for sharing experiences, lessons learned and perspectives from the States/ANSPs and airspace users with a highlight on cross-border solutions.
3. The Seminar was apprised of the ongoing work concerning the amendments of the ICAO provisions and guidance material related to ATFM and the cessation of FPL 2012.
4. The Seminar recalled the benefits of trajectory-based operations (TBO) and relationships between its key enablers (ATFM, SWIM, FF-ICE, Data Link).
5. The Seminar noted the importance of optimizing the airspace to enhance efficiency and increase capacity through the implementation of more efficient longitudinal separation, enhanced civil-military cooperation and flexible use of airspace, free route airspace, to meet growing air traffic demand.
6. The Seminar acknowledged that the level of preparedness to implement ATFM and FF-ICE would differ across various States and ICAO Regions. The Seminar stressed the importance of a well-prepared and coordinated implementation of these initiatives in order to achieve more substantial and immediate benefits on regional and global levels.
7. There is a strong need to expand the training and knowledge sharing among all stakeholders to support the planning and implementation of ATFM and FF-ICE.
8. The Seminar reminded of the critical importance of engaging all stakeholders at an early stage in planning the implementation of ATFM and FF-ICE.
9. The Seminar recalled the requirement of the PANS-ATM concerning the use of information services for the implementation of FF-ICE.
10. The Seminar recalled the importance of States taking necessary measures to support and foster the implementation of ATFM at the national level, which is essential for any sub-regional and regional solutions. It was highlighted that promulgating necessary ATFM civil aviation regulations and the development of a National ATFM Concept of Operations, among others, are key elements for the establishment of the ATFM Service.
11. The Seminar noted that the main enabler for effective ATFM service is strategic and operational capacity determination, accordingly, States must take necessary measures to determine these capacities.
12. The Seminar noted that the majority of the States indicated that the target date for the cessation of the ICAO 2012 Flight Plan could be met between 2032 – 2034.
13. Active participation and contributions in regional ATFM and FF-ICE meetings are essential to ensure harmonized procedures.
14. The Seminar observed that there is a need to establish a regional target date to terminate the mixed-mode operations.

15. The Seminar noted the necessity for a broader work programme to enhance the planning and synchronization of the development and execution of all pertinent TBO enablers, particularly the implementation of FF-ICE and ATFM.
16. The Seminar noted that the APAC FF-ICE Ad Hoc Group and MID ASM Working Group would draft the FF-ICE regional transition plan, for their respective region, for further review by the ATM SGs and endorsement by APANPIRG and MIDANPIRG.
17. The Seminar noted the benefits of integrating A-CDM into ATFM implementation.
18. ATFM post-operations analysis to be conducted as appropriate and data are shared to identify bottlenecks and areas for improvement.
19. The Seminar received with appreciation an offer from CANSO to further support the training and knowledge sharing on ATFM implementation.
20. Participants appreciated the value of joint events and invited ICAO to organize more joint events to support inter-regional cooperation and harmonization.



MID Doc 002

INTERNATIONAL CIVIL AVIATION ORGANIZATION

**MIDDLE EAST AIR NAVIGATION PLANNING
AND IMPLEMENTATION REGIONAL GROUP
(MIDANPIRG)**

**MID REGION
AIR NAVIGATION STRATEGY**

EDITION XXXX

The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of ICAO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontier or boundaries.

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AIR NAVIGATION PRIORITIES AND MONITORING OF THE STATUS OF IMPLEMENTATION

1. Introduction

1.1 As traffic volume increases throughout the world, the demands on air navigation service providers in a given airspace increase, and air traffic management becomes more complex.

1.2 It is foreseen that the implementation of the components of the ATM operational concept will provide sufficient capacity to meet the growing demand, generating additional benefits in terms of more efficient flights and higher levels of safety. Nevertheless, the potential of new technologies to significantly reduce the cost of services will require the establishment of clear operational requirements.

1.3 Taking into account the benefits of the ATM operational concept, it is necessary to make many timely decisions for its implementation. An unprecedented cooperation and harmonization will be required at both global and regional level.

1.4 ICAO introduced the Aviation System Block Upgrades (ASBU) framework as a systemic manner to achieve a harmonized implementation of the air navigation services. An ASBU designates a set of improvements that can be implemented globally from a defined point in time to enhance the performance of the ATM system.

1.5 In accordance, with the Resolutions of the 40th Session of the ICAO Assembly, particularly Resolution A40-1 "ICAO global planning for safety and air navigation", the ICAO Assembly urged States and PIRGs to utilize the guidance provided in the GANP for planning and implementation activities which establish priorities, targets and indicators consistent with globally-harmonized objectives, taking into account operational needs. In response to this, the MID Region developed the MID Region Air Navigation Strategy – Part 1, which is aligned with the GANP and ASBU Framework.

1.6 Stakeholders including service providers, regulators, airspace users and manufacturers are facing increased levels of interaction as new, modernized ATM operations are implemented. The highly integrated nature of capabilities covered by the block upgrades requires a significant level of coordination and cooperation among all stakeholders. Working together is essential for achieving global harmonization and interoperability.

2. Strategic Air Navigation Capacity and Efficiency Objective

2.1 The Strategic Objective related to Air Navigation Capacity and Efficiency is to realize sound and economically-viable civil aviation system in the MID Region that continuously increases in capacity and improves in efficiency with enhanced safety while minimizing the adverse environmental effects of civil aviation activities.

3. MID Air Navigation Objectives

3.1 The MID Region air navigation objectives are set in line with the global air navigation objectives and address specific air navigation operational improvements identified within the framework of the Middle East Regional Planning and Implementation Group (MIDANPIRG).

3.2 Blocks '0' and '1' feature Elements are characterized by operational improvements, which have already been developed and implemented in many parts of the world. The MID Region priority 1 Block 0 & 1 Elements are reflected in **Table 1** below.

3.3 The MID Region Air Navigation Strategy aims to maintain regional harmonisation. The States should develop their National Air Navigation Plan (NANP), including action plans for the implementation of relevant priority 1 ASBU Elements and other ASBU elements or non ASBU solutions based on the States' operational requirements and cost benefits analysis.

3.4 The implementation of the ASBU Block 0 Elements in the MID Region started before 2013 and is continuing. For the short and medium term, the MID Region priorities include identified ASBU Elements from Block 0 and Block 1.

4. MID Region ASBU Threads/Elements Prioritization and Monitoring

4.1 On the basis of operational requirements and taking into consideration the associated benefits, **Table 1** below shows the priority associated for each ASBU element from Block 0 and Block 1, as well as the MIDANPIRG subsidiary bodies that will be monitoring and supporting the implementation of these Threads/Elements:

Priority 1 ASBU Element: Elements that have the highest contribution to the improvement of air navigation safety and/or efficiency in the MID Region. These Elements should be implemented where applicable and will be used for the purpose of regional air navigation monitoring and reporting.

Priority 2 ASBU Element: Elements recommended for implementation based on identified operational needs and benefits by States.

Priority 1 Thread: Any Thread with at least one priority 1 element

Table 1. MID REGION ASBU THREADS & ELEMENTS (BLOCK 0 & 1) PRIORITIZATION AND MONITORING

Thread	Element code	Title	Priority	Start Date	Monitoring		Remarks
					Main	Supporting	
Information Threads							
DAIM							
DAIM	B1/1	Provision of quality-assured aeronautical data and information	1	2021	AIM SG and AIMDP TF	RANP/ NANP TF	
	B1/2	Provision of digital Aeronautical Information Publication (AIP) data sets	1	2025	AIM SG and AIMDP TF	RANP/ NANP TF	
	B1/3	Provision of digital terrain data sets	1	2021	AIM SG and AIMDP TF	RANP/ NANP TF	
	B1/4	Provision of digital obstacle data sets	1	2021	AIM SG and AIMDP TF	RANP/ NANP TF	
	B1/5	Provision of digital aerodrome mapping data sets	2				
	B1/6	Provision of digital instrument flight procedure data sets	2				
	B1/7	NOTAM improvements	2				
AMET							
AMET	B0/1	Meteorological observations products	1	2014	MET SG	RANP/ NANP TF	
	B0/2	Meteorological forecast and warning products	1	2014	MET SG	RANP/ NANP TF	

Thread	Element code	Title	Priority	Start Date	Monitoring		Remarks
					Main	Supporting	
	B0/3	Climatological and historical meteorological products	1	2014	MET SG	RANP/ NANP TF	
	B0/4	Dissemination of meteorological products	1	2014	MET SG	CNS SG RANP/ NANP TF	
	B1/1	Meteorological observations information	2				
	B1/2	Meteorological forecast and warning information	2				
	B1/3	Climatological and historical meteorological information	2				
	B1/4	Dissemination of meteorological information	2				
FICE							
FICE	B0/1	Automated basic inter facility data exchange (AIDC)	1	2014	CNS SG ATM SG	RANP/ NANP TF	
<i>Operational Threads</i>							
APTA							
APTA	B0/1	PBN Approaches (with basic capabilities)	1	2014	PBN SG	ATM SG AIM SG CNS SG RANP/ NANP TF	
	B0/2	PBN SID and STAR procedures (with basic capabilities)	1	2014	PBN SG	ATM SG AIM SG RANP/ NANP TF	
	B0/3	SBAS/GBAS CAT I precision approach procedures	2				
	B0/4	CDO (Basic)	1	2014	PBN SG	ATM SG RANP/ NANP TF	
	B0/5	CCO (Basic)	1	2014	PBN SG	ATM SG RANP/ NANP TF	
	B0/6	PBN Helicopter Point in Space (PinS) Operations	2				
	B0/7	Performance based aerodrome operating minima – Advanced aircraft	1	2021	PBN SG	AIM SG CNS SG ASPIG RANP/ NANP TF	

Thread	Element code	Title	Priority	Start Date	Monitoring		Remarks
					Main	Supporting	
	B0/8	Performance based aerodrome operating minima – Basic aircraft	2				
	B1/1	PBN Approaches (with advanced capabilities)	2				
	B1/2	PBN SID and STAR procedures (with advanced capabilities)	2				
	B1/4	CDO (Advanced)	2				
	B1/5	CCO (Advanced)	2				
FRTO							
FRTO	B0/1	Direct routing (DCT)	1	2026	ATM SG and ASM WG	RANP/ NANP TF	
	B0/2	Airspace planning and Flexible Use of Airspace (FUA)	1	2014	ATM SG and ASM WG	RANP/ NANP TF	
	B0/3	Pre-validated and coordinated ATS routes to support flight and flow	1	2027	ATM SG and ASM WG	RANP/ NANP TF	
	B0/4	Basic conflict detection and conformance monitoring	1	2014	ATM SG	CNS SG RANP/ NANP TF	
	B1/1	Free Route Airspace (FRA)	1	2028	ATM SG and ASM WG	RANP/ NANP TF	
	B1/2	Required Navigation Performance (RNP) routes	2				
	B1/3	Advanced Flexible Use of Airspace (FUA) and management of real time airspace data	2				
	B1/4	Dynamic sectorization	1	2028	ATM SG and ASM WG	RANP/ NANP TF	
	B1/5	Enhanced Conflict Detection Tools and Conformance Monitoring	2				
	B1/6	Multi-Sector Planning	2				
B1/7	Trajectory Options Set (TOS)	2					
NOPS							
NOPS	B0/1	Initial integration of collaborative airspace management with air traffic flow management	1	2015	ATM SG ATFM TF	RANP/ NANP TF	

Thread	Element code	Title	Priority	Start Date	Monitoring		Remarks
					Main	Supporting	
	B0/2	Collaborative Network Flight Updates	2				
	B0/3	Network Operation Planning basic features	2				
	B0/4	Initial Airport/ATFM slots and A-CDM Network Interface	2				
	B0/5	Dynamic ATFM slot allocation	2				
	B1/1	Short Term ATFM measures	2				
	B1/2	Enhanced Network Operations Planning	2				
	B1/3	Enhanced integration of Airport operations planning with network operations planning	2				
	B1/4	Dynamic Traffic Complexity Management	2				
	B1/5	Full integration of airspace management with air traffic flow management	2				
	B1/6	Initial Dynamic Airspace configurations	1	2028	ATM SG and ASM WG	RANP/ NANP TF	
	B1/7	Enhanced ATFM slot swapping	2				
	B1/8	Extended Arrival Management supported by the ATM Network function	2				
	B1/9	Target Times for ATFM purposes	2				
	B1/10	Collaborative Trajectory Options Program (CTOP)	2				
ACAS							
ACAS	B1/1	ACAS Improvements	1	2014	ATM SG CNS SG	RANP/ NANP TF	
SNET							
SNET	B0/1	Short Term Conflict Alert (STCA)	1	2017	ATM SG	CNS SG RANP/ NANP TF	
	B0/2	Minimum Safe Altitude Warning (MSAW)	1	2017	ATM SG	CNS SG RANP/ NANP TF	
	B0/3	Area Proximity Warning (APW)	1	2020	ATM SG	CNS SG RANP/ NANP TF	
	B0/4	Approach Path Monitoring (APM)	2				

Thread	Element code	Title	Priority	Start Date	Monitoring		Remarks
					Main	Supporting	
	B1/1	Enhanced STCA with aircraft parameters	2				
	B1/2	Enhanced STCA in complex TMA	2				
GADS							
GADS	B1/1	Aircraft Tracking	2				
	B1/2	Operational Control Directory	1	2021	ATM SG	RANP/ NANP TF	
RSEQ							
RSEQ	B0/1	Arrival Management	1	2021	ATM SG ATFM TF	CNS SG ASPIG RANP/ NANP TF	
	B0/2	Departure Management	2				
	B0/3	Point merge	2				
	B1/1	Extended arrival metering	2				
SURF							
SURF	B0/1	Basic ATCO tools to manage traffic during ground operations	1	2014	ASPIG	ATM SG CNS SG RANP/ NANP TF	
	B0/2	Comprehensive situational awareness of surface operations	1	2014	ASPIG	ATM SG CNS SG RANP/ NANP TF	
	B0/3	Initial ATCO alerting service for surface operations	1	2021	ASPIG	ATM SG CNS SG RANP/ NANP TF	
	B1/1	Advanced features using visual aids to support traffic management during ground operations	2				
	B1/2	Comprehensive pilot situational awareness on the airport surface	2				
	B1/3	Enhanced ATCO alerting service for surface operations	2				
	B1/4	Routing service to support ATCO surface operations management	2				
	B1/5	Enhanced vision systems for taxi operations	2				
ACDM							
ACDM	B0/1	Airport CDM Information Sharing (ACIS)	1	2014	ASPIG	CNS SG, AIM SG, ATM SG,	

Thread	Element code	Title	Priority	Start Date	Monitoring		Remarks
					Main	Supporting	
						RANP/ NANP TF	
	B0/2	Integration with ATM Network function	1	2014	ASPIG	CNS SG, AIM SG, ATM SG, RANP/ NANP TF	
CSEP	B1/1	Basic airborne situational awareness during flight operations (AIRB)	2				
	B1/2	Visual Separation on Approach (VSA)	2				
	B1/3	Performance Based Longitudinal Separation Minima	2				
	B1/4	Performance Based Lateral Separation Minima	2				
DATS	B1/1	Remotely Operated Aerodrome Air Traffic Services	2				
OPFL	B0/1	In Trail Procedure (ITP)	2				
	B1/1	Climb and Descend Procedure (CDP)	2				
TBO	B0/1	Introduction of time-based management within a flow centric approach	2				
	B1/1	Initial Integration of time-based decision making processes	2				
Technology Threads							
ASUR							
ASUR	B0/1	Automatic Dependent Surveillance – Broadcast (ADS-B)	1	2021	CNS SG	ATM SG, ASPIG, RANP/ NANP TF	
	B0/2	Multilateration cooperative surveillance systems (MLAT)	1	2021	CNS SG	ATM SG, ASPIG, RANP/NA NP TF	
	B0/3	Cooperative Surveillance Radar Downlink of Aircraft Parameters (SSR-DAPS)	1	2021	CNS SG	ATM SG, ASPIG, RANP/ NANP TF	
	B1/1	Reception of aircraft ADS-B signals from space (SB ADS-B)	2				
NAVS							
NAVS	B0/1	Ground Based Augmentation Systems (GBAS)	2				

Thread	Element code	Title	Priority	Start Date	Monitoring		Remarks
					Main	Supporting	
	B0/2	Satellite Based Augmentation Systems (SBAS)	2				
	B0/3	Aircraft Based Augmentation Systems (ABAS)	1	2021	CNS SG	PBN SG, ATM SG, AIM SG, RANP/ NANP TF	
	B0/4	Navigation Minimal Operating Networks (Nav. MON)	1	2021	CNS SG	PBN SG, RANP/ NANP TF	
	B1/1	Extended GBAS	2				
COMI							
COMI	B0/1	Aircraft Communication Addressing and Reporting System (ACARS)	2				
	B0/2	Aeronautical Telecommunication Network/Open System Interconnection (ATN/OSI)	2				
	B0/3	VHF Data Link (VDL) Mode 0/A	2				
	B0/4	VHF Data Link (VDL) Mode 2 Basic	2				
	B0/5	Satellite communications (SATCOM) Class C Data	2				
	B0/6	High Frequency Data Link (HFDL)	2				
	B0/7	AMHS	1	2014	CNS SG	RANP/ NANP TF	
	B1/1	Ground-Ground Aeronautical Telecommunication Network/Internet Protocol Suite (ATN/IPS)	1	2021	CNS SG	RANP/ NANP TF	
	B1/2	VHF Data Link (VDL) Mode 2 Multi-Frequency	2				
	B1/3	SATCOM Class B Voice and Data	2				
B1/4	Aeronautical Mobile Airport Communication System (AeroMACS) Ground-Ground	2					
COMS							

Thread	Element code	Title	Priority	Start Date	Monitoring		Remarks
					Main	Supporting	
COMS	B0/1	CPDLC (FANS 1/A & ATN B1) for domestic and procedural airspace	2				
	B0/2	ADS-C (FANS 1/A) for procedural airspace	2				
	B1/1	PBCS approved CPDLC (FANS 1/A+) for domestic and procedural airspace	2				
	B1/2	PBCS approved ADS-C (FANS 1/A+) for procedural airspace	2				
	B1/3	SATVOICE (incl. routine communications) for procedural airspace	2				

5. Implementation and Monitoring of the priority 1 ASBU Elements

5.1 The monitoring of air navigation performance and its enhancement is achieved, inter-alia, through identification of relevant air navigation Metrics and Indicators as well as the adoption and attainment of air navigation system Targets. The monitoring of the priority 1 ASBU Threads/Elements is carried out through the MID eANP Volume III.

5.2 MIDANPIRG through its activities under the various subsidiary bodies will continue to update and monitor the implementation of the ASBU Threads and elements to achieve the air navigation targets.

5.3 The priority 1 Threads/Elements along with the associated elements, applicability, performance Indicators, supporting Metrics, and performance Targets are shown in the **Table 2** below.

Note: Further details on the ASBU elements objectives, description, implementation requirements and performance impact assessment can be found on the ICAO GANP Portal <https://www4.icao.int/ganpportal/ASBU>

6. Governance

6.1 Progress report on the status of implementation of the different priority 1 Threads/Elements should be developed by MIDANPIRG Subsidiary bodies. A consolidated MID Air Navigation Report showing the status of implementation of the different priority 1 ASBU Elements by Thread will be developed by the RANP/NANP TF on annual basis and presented to MIDANPIRG for endorsement.

6.2 The MIDANPIRG will be the governing body responsible for the review and update of the MID Region Air Navigation Strategy.

6.3 The MID Region Air Navigation Strategy will guide the work of MIDANPIRG and its subsidiary bodies and all its member States and partners.

6.4 Progress on the implementation of the MID Region Air Navigation Strategy and the achievement of the agreed air navigation targets will be reported to the ICAO Air Navigation Commission (ANC), through the review of the MIDANPIRG Reports, MID Air Navigation Reports, etc.; and to the stakeholders in the Region within the framework of MIDANPIRG.

**Table 2. MONITORING THE IMPLEMENTATION OF THE PRIORITY 1 ASBU
THREADS/ELEMENTS (Block 0 & 1) IN THE MID REGION**

Element		Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
<i>Information Threads</i>							
DAIM							
DAIM B1/1	Provision of quality-assured aeronautical data and information	All States	Indicator*: Regional average implementation status of DAIM B1/1 (provision of quality-assured aeronautical data and information). Supporting Metrics: 1. Number of States that have migrated to AIM automated data-centric environment based on (AIXM V5.1+) 2. Number of States Implementing Quality Assurance and Quality Control (QA/QC) Processes 3. Number of States that have established formal arrangements with at least 50% of their AIS data originators.	(2023) 53%	80%	Dec 2024	N/A
DAIM B1/2	Provision of digital Aeronautical Information Publication (AIP) data sets	Egypt, Jordan, Oman, Qatar, Saudi Arabia and UAE	Indicator*: Regional average implementation status of DAIM B1/2 (Provision of digital Aeronautical Information Publication (AIP) data set). Supporting Metrics: Number of States that provide digital Aeronautical Information Publication (AIP) data sets	15%	75%	Dec 2027	N/A
DAIM B1/3	Provision of digital terrain data sets	All States	Indicator*: Regional average implementation status of DAIM B1/3 (Provision of Terrain digital datasets). Supporting Metric: Number of States that provide required Terrain digital datasets.	(2022) 35%	60%	Dec 2024	N/A
DAIM B1/4	Provision of digital obstacle data sets	All States	Indicator*: Regional average implementation status of DAIM B1/4(Provision of obstacle digital datasets).	(2022) 35%	60 %	Dec 2024	N/A

Element		Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
			Supporting Metric: Number of States that provide required obstacle digital datasets.				
AMET							
AMET B0/1	Meteorological observations products	All states	Indicator*: Regional average implementation status of B0/1 (Meteorological observations products). Supporting Metrics: Number of States that provide the following Meteorological observations products, as required: <ul style="list-style-type: none"> 1. Automatic Weather Observation System (AWOS) information (including real-time exchange of wind and RVR data) 2. Local reports (MET REPORT/SPECIAL) 3. Aerodrome reports (METAR/SPECI) 4. Lightning Information 5. Ground-based weather radar information. 6. Meteorological satellite imagery 7. Aircraft meteorological report (ie. ADS-B, AIREP, etc.) 8. Vertical wind and temperature profiles 9. Wind shear alerts 	(2022) 65%	80%	Dec 2021	N/A
AMET B0/2	Meteorological forecast and warning products	All states	Indicator*: Regional average implementation status of B0/2 (Meteorological forecasts and warning products) Supporting Metrics: Number of States that provides the following Meteorological forecast and warning products, as required: <ul style="list-style-type: none"> 1. World Area Forecast System (WAFS) gridded products. 2. Significant Weather (SIGWX) 3. Aerodrome Forecast (TAF) 4. Trend Forecast (TREND) 	(2022) 60%	90%	Dec 2021	N/A

Element		Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
			5. Take-off Forecast 6. SIGMET 7. Aerodrome Warning 8. Wind Shear Warning				
AMET B0/3	Climatological and historical meteorological products	All states	Indicator: % of States that provide Climatological and historical meteorological products, as required. Supporting Metric: Number of States that provide Climatological and historical meteorological products, as required.	(2022) 60%	85%	Dec 2021	N/A
AMET B0/4	Dissemination of meteorological products	All states	Indicator: % of States disseminating Meteorological products using a variety of formats and means (TAC, Gridded, Graphical, BUFR code, IWXXM) Supporting Metric: Number of States disseminating Meteorological products using a variety of formats and means (TAC, Gridded, Graphical, BUFR code, IWXXM)	(2022) 60%	85%	Dec 2021	N/A
FICE							
FICE B0/1	Automated basic inter facility data exchange (AIDC)	According to the MID Region AIDC/OLDI Priority 1 Applicability Area	Indicator*: % of priority 1 AIDC/OLDI Interconnection have been implemented. Supporting metric: Number of AIDC/OLDI interconnections implemented between adjacent ACCs.	(2023) 26%	70%	Dec 2026	N/A
Operational Threads							
APTA							
APTA B0/1	PBN Approaches (with basic capabilities)	All RWYs ENDS at International Aerodromes	Indicator: % of Runway ends at international aerodromes served by PBN approach procedures with basic functionalities - down to LNAV or LNAV/VNAV minima. Supporting metric: Number of Runways ends at international aerodromes served by PBN approach procedures with basic functionalities - down to	(2017) 46.7%	100%	Dec 2018	Capacity/ KPI 10

Element		Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
			LNAV or LNAV/VNAV minima.				
APTA B0/2	PBN SID and STAR procedures (with basic capabilities)	All RWYs ENDS at International Aerodromes	Indicator: % of Runway ends at international aerodromes provided with PBN SID and STAR (basic capabilities). Supporting Metric: Number of Runway ends at international aerodromes provided with PBN SID and STAR (basic capabilities).	(2022) 55%	70%	Dec 2022	Efficiency Capacity/ KPI 10 KPI 11 KPI 17 KPI 19/
APTA B0/4	CDO (Basic)	OBBI, OIIE, OIKB, OIFM, OJAI, OLBA, OOMS, OTHH, OTBD, OEJN, OEMA, OEDF, OERK, HSSK, HSPN, OMAA, OMAL, OMAD, OMDW, OMDB, OMSJ, OMRK and OMFJ	Indicator*: % of International Aerodromes with CDO implemented and published as required. Supporting Metric: Number of International Aerodromes with CDO implemented and published as required. *As per the applicability area	(2022) 65%	100%	Dec 2022	Efficiency/ KPI 19
APTA B0/5	CCO (Basic)	OBBI, OIIE, OIKB, OIFM, OJAI, OLBA, OOMS, OTHH, OTBD, OEJN, OEMA, OEDF, OERK, HSSK, HSPN, OMAA, OMAL, OMAD, OMDW, OMDB, OMSJ, OMRK and OMFJ	Indicator*: % of International Aerodromes with CCO implemented and published as required. Supporting Metric: Number of International Aerodromes with CCO implemented and published as required. *As per the applicability area	(2022) 65%	100%	Dec 2022	Efficiency/ KPI 17
APTA B0/7	Performance based aerodrome operating minima – Advanced aircraft	All States	Indicator: % of States authorizing Performance-based Aerodrome Operating Minima for Air operators operating Advanced aircraft. Supporting Metric: Number of States 1- having provisions for operational credits to enable lower minima based on advanced aircraft capabilities. (Reference: Annex 6 Part I para. 4.2.8.2.1) 2- Number of States Putting in place an approval process for the operational credit to Aircraft operator conducting PBAOM	(2022) 50%	80%	Dec 2025	Capacity/ KPI 10

Element		Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
			operations for low visibility operations (Reference: Doc 9365 (AWO Manual)), as applicable.				
FRTO							
FRTO B0/1	Direct routing (DCT)	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Sudan, UAE	Indicator*: % of ACCs using and implementing appropriate means (procedures and tools (automation)) to support implementation of Direct routing to improve efficiency of Airspace. Supporting metric: Number of ACCs using and implementing appropriate means (procedures and tools (automation)) to support implementation of Direct routing to improve efficiency of Airspace. * As per the applicability area	30% (2024)	80%	Dec 2028	Efficiency KPI 04
FRTO B0/2	Airspace planning and Flexible Use of Airspace (FUA)	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Oman, Qatar, Saudi Arabia (2 ACCs), Sudan, UAE	Indicator*: % of ACCs using and implementing appropriate means (procedures and tools (automation)) to support Airspace planning and FUA and improve data exchange between Civil and Military to improve efficiency of Airspace. Supporting metric: Number of ACCs using and implementing appropriate means (procedures and tools (automation)) to support Airspace planning and FUA and improve data exchange between Civil and Military to improve efficiency of Airspace. * As per the applicability area	(2022) 63%	70%	Dec 2022	Efficiency Access and equity/ KPI 04 KPI 05 KPI 17 KPI 18/ KPI 19
FRTO B0/3	Pre-validated and coordinated ATS routes to support flight and flow	Bahrain, Egypt, Iran, Iraq, Jordan, Oman, Qatar, Saudi Arabia, UAE	Indicator*: % of ACCs using Playbook routes that ATC can utilize to fit a particular set of circumstances, when the preferred routes are not available to improve capacity and flexibility of Airspace. Supporting metric: Number of ACCs using Playbook routes that ATC can utilize to fit a particular set of circumstances, when the preferred routes are not	10% (2024)	50%	Dec 2028	Capacity Flexibility

Element		Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
			available to improve capacity and flexibility of Airspace. * As per the applicability area				
FRTO B0/4	Basic conflict detection and conformance monitoring	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia (2 ACCs), Sudan, UAE	Indicator*: % States that implemented MTCD and MONA, for ACCs, as required. Supporting metric: The number of States that implemented MTCD and MONA for ACCs, as required. * As per the applicability area	(2022) 63%	100%	Dec 2022	Capacity/ KPI 06 Safety/ KPI 20 KPI 23
FRTO B1/1	Free Route Airspace (FRA)	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Sudan, UAE	Indicator*: % of ACCs using and implementing appropriate means (procedures and tools (automation)) to support implementation of Free Route Airspace to improve efficiency of Airspace. Supporting metric: Number of ACCs using and implementing appropriate means (procedures and tools (automation)) to support implementation of Free Route Airspace to improve efficiency of Airspace. * As per the applicability area	20% (2024)	80%	Dec 2028	Efficiency KPI 04
FRTO B1/4	Dynamic sectorization	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Oman, Qatar, Saudi Arabia, Sudan, UAE	Indicator*: % of ACCs using and implementing appropriate means (procedures and tools (automation)) to real-time support supervisor to select the most appropriate sector configuration (change of the ATC sector shapes by adding/removing the elementary sectors based on traffic demand and complexity). Supporting metric: Number of ACCs using and implementing appropriate means (procedures and tools (automation)) to real-time support supervisor to select the most appropriate sector configuration (change of the ATC sector shapes by adding/removing the elementary sectors based on traffic demand and complexity).	20% (2024)	60%	Dec 2028	Capacity

Element		Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
			* As per the applicability area				
NOPS							
NOPS B0/1	Initial integration of collaborative airspace management with air traffic flow management	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Sudan, UAE	Indicator*: % of States implementing ASM/ATFM techniques, procedures and tools for the initial establishment of an integrated collaborative airspace management and air traffic flow and capacity management process. Supporting metric: number of States implementing ASM/ATFM techniques, procedures and tools for the initial establishment of an integrated collaborative airspace management and air traffic flow and capacity management process. * As per the applicability area	(2022) 42%	70%	Dec 2022	Efficiency Capacity/ KPI 04 KPI 05 KPI 17 KPI 18 KPI 19/
NOPS B1/6	Initial Dynamic Airspace configurations	Bahrain, Oman, Qatar, Saudi Arabia, UAE	Indicator*: % of ACCs using and implementing appropriate means (procedures and tools (automation)) to support ASM solutions and initial dynamic airspace configurations for ATFM planning, synchronisation of traffic flows and demand/capacity balancing. Supporting metric: Number of ACCs using and implementing appropriate means (procedures and tools (automation)) to support ASM solutions and initial dynamic airspace configurations for ATFM planning, synchronisation of traffic flows and demand/capacity balancing. * As per the applicability area	10% (2024)	50%	Dec 2028	Capacity
ACAS							
ACAS B1/1	ACAS Improvements Operational	All States	Indicator: % of States requiring carriage of ACAS (TCAS v 7.1) for aircraft with a max certificated take-off mass greater than 5.7 tons Supporting metric: Number of States requiring carriage of ACAS (TCAS v 7.1) for	(2022) 87%	100%	Dec 2024	Safety/ KPI 20 KPI 23

Element		Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
			aircraft with a max certificated take-off mass greater than 5.7 tons				
SNET							
SNET B0/1	Short Term Conflict Alert (STCA)	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Sudan, UAE	Indicator*: % of ACCs that have implemented Short-term conflict alert (STCA) Supporting metric: number of States that have implemented Short-term conflict alert (STCA) * As per the applicability area	(2018) 100%	100%	Dec 2018	Safety/ KPI 20 KPI 23
SNET B0/2	Minimum Safe Altitude Warning (MSAW)	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Sudan, UAE	Indicator*: % of ACCs that have implemented Minimum safe altitude warning (MSAW) Supporting metric: number of States that have implemented Minimum safe altitude warning (MSAW) * As per the applicability area	(2018) 100%	100%	Dec 2018	Safety/ KPI 20
SNET B0/3	Area Proximity Warning (APW)	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Sudan, UAE	Indicator*: % of ACCs that have implemented Area Proximity Warning (APW) for ACCs, as required. Supporting metric: number of States that have Implemented Area Proximity Warning (APW) for ACCs, as required. * As per the applicability area	(2022) 67%	100%	Dec 2022	Safety/ KPI 20
GADS							
GADS B1/2	Operational Control Directory	All States	Indicator: % of States that provided GADSS Point of Contact (PoC) information Supporting Metric: Number of States that provided GADSS Point of Contact (PoC) information.	(2022) 73%	100%	Dec 2022	N/A
RSEQ							
RSEQ B0/1	Arrival Management	OBBI, HECA, HEBA, HELX, HESN, HESH, OTBD, OTHH, OEJN, OEDF, OEMA, OERK OMDB, OMAA	Indicator*: % of Aerodromes that have implemented arrival manager (AMAN), where required/applicable. Supporting Metric: Number of Aerodrome that have implemented arrival manager (AMAN), where required/applicable.	(2022) 36%	80%	Dec 2024	Capacity Efficiency/ KPI 08 KPI 10 KPI 11 KPI 14/

Element		Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
			* As per the applicability area				
SURF							
SURF-B0/1	Basic ATCO tools to manage traffic during ground operations	All International Aerodromes	Indicator: % of Aerodromes having implemented Basic ATCO tools to manage traffic during ground operations Supporting metric: Number of Aerodromes having implemented Basic ATCO tools to manage traffic during ground operations	(2022) 90%	100%	Dec 2022	Efficiency/ KPI 02 KPI 13 Safety/ KPI 20 KPI 21
SURF-B0/2	Comprehensive situational awareness of surface operations	OBBI, HECA, OIII, OOMS, OTBD, OTHH, OEDF, OEJN, OERK, OEMA, OMDB, OMAA.	Indicator*: % of Airports having implemented the surveillance service of A-SMGCS Supporting metric: Number of Airports having implemented the surveillance service of A-SMGCS * As per the applicability area	(2022) 61%	80%	Dec 2022	Safety/ KPI 20 KPI 21
SURF-B0/3	Initial ATCO alerting service for surface operations	OBBI, HECA, OIII, OOMS, OTBD, OTHH, OEDF, OEJN, OERK, OEMA, OMDB, OMAA.	Indicator*: % of Airports having implemented the A-SMGCS alerting service. Supporting metric: Number of Airports having implemented the A-SMGCS alerting service. * As per the applicability area	(2022) 74%	80%	Dec 2022	Safety/ KPI 20
ACDM							
ACDM B0/1	Airport CDM Information Sharing (ACIS)	HECA, OBBI, OIII, OKKK, OOMS, OTHH, OEJN, OERK, OMDB, OMAA	Indicator*: % of Airports having implemented ACIS. Supporting metric: number of Airports having implemented ACIS. * As per the applicability area	(2022) 75%	90%	Dec 2024	N/A
ACDM B0/2	Integration with ATM Network function	HECA, OBBI, OIII, OKKK, OOMS, OTHH, OEJN, OERK, OMDB, OMAA.	Indicator*: % of Airports having integrated ACDM with the ATM Network function. Supporting metric: Number of Airports having integrated ACDM with the ATM Network function * As per the applicability area	(2022) 25%	50%	Dec 2024	N/A

Element	Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI	
Technology Threads							
ASUR							
ASUR B0/1	Automatic Dependent Surveillance – Broadcast (ADS-B)	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, , Sudan, UAE	Indicator*: % of ACCs that have implemented ADS-B to improve surveillance coverage/capabilities for provision of ATS. Supporting Metric: Number of States that have implemented ADS-B to improve surveillance coverage/capabilities for provision of ATS. * As per the applicability area	(2022) 60%	80%	Dec 2022	N/A
ASUR B0/2	Multilateration cooperative surveillance systems (MLAT)	Bahrain, , Kuwait, Oman, Qatar, Saudi Arabia, UAE	Indicator*: % of ACCs that have implemented Multi-lateration (M-LAT) for provision of ATS. Supporting Metric: Number of States that have implemented Multi-lateration (M-LAT) for provision of ATS. Indicator*: % of States that have implemented ADS-B to improve surveillance coverage/capabilities for provision of ATS. Supporting Metric: Number of States that have implemented ADS-B to improve surveillance coverage/capabilities for provision of ATS. * As per the applicability area	(2022) 63%	80%	Dec 2022	N/A
ASUR B0/3	Cooperative Surveillance Radar Downlink of Aircraft Parameters (SSR-DAPS)	Bahrain, Egypt, Iran, Iraq, Kuwait, Lebanon, Jordan, Oman, Qatar, Saudi Arabia, Sudan and UAE	Indicator*: % of ACCs that have implemented Downlink of Aircraft Parameters (SSR-DAPS) Supporting Metric: Number of States that have implemented Downlink of Aircraft Parameters (SSR-DAPS) * As per the applicability area	(2022) 83%	90%	Dec 2023	N/A
NAVS							
NAVS B0/3	Aircraft Based Augmentation Systems (ABAS)	All States	Indicator: % of States requiring Aircraft Based Augmentation System (ABAS) equipage for aircraft with a max certificated take-	(2022) 40%	70%	Dec 2022	N/A

Element		Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
			off mass greater than 5,700 Kg to enable PBN Operations Supporting metric: Number of States requiring Aircraft Based Augmentation System (ABAS) equipage for aircraft with a max certificated take-off mass greater than 5,700 Kg to enable PBN Operations				
NAVS B0/4	Navigation Minimal Operating Networks (Nav. MON)	All States	Indicator: % of States that have developed a plan of rationalized conventional NAVAIDS network to ensure the necessary levels of resilience for navigation Supporting metric: Number of States that have developed a plan of rationalized conventional NAVAIDS network to ensure the necessary levels of resilience for navigation.	(2022) 47%	70%	Dec 2022	N/A
COMI							
COMI B0/7	ATS Message Handling System (AMHS)	All States	Indicator: % of States that have established AMHS interconnections with adjacent COM Centres Supporting metric: Number of States that have established AMHS interconnections with adjacent COM Centres	(2022) 73%	90%	Dec 2022	N/A
COMI B1/1	Ground-Ground Aeronautical Telecommunication Network/Internet Protocol Suite (ATN/IPS)	All States	Indicator: % of States that have established National IP Network for voice and data communication Supporting metric: Number of States that have established National IP Network for voice and data communication	(2022) 60%	80%	Dec 2022	N/A

Threads Category	Threads	Elements	ASBU Element name	Priority	Regional Target	Applicability area	Implemented by
Operational	APTA	B0/3	SBAS/GBAS CAT I precision approach procedures	2			Qatar
	APTA	B0/6	PBN Helicopter Point in Space (PinS) Operations	2			
	APTA	B0/8	Performance based aerodrome operating minima – Basic aircraft	2			
	FRTO	B0/1	Direct routing (DCT)	2			Qatar
	FRTO	B0/3	Pre-validated and coordinated ATS routes to support flight and flow	2			
	NOPS	B0/2	Collaborative Network Flight Updates	2			
	NOPS	B0/3	Network Operation Planning basic features	2			Qatar
	NOPS	B0/4	Initial Airport/ATFM slots and A-CDM Network Interface	2			Qatar
	NOPS	B0/5	Dynamic ATFM slot allocation	2			
	SNET	B0/4	Approach Path Monitoring (APM)	2			Qatar
	RSEQ	B0/2	Departure Management	2			Qatar
	RSEQ	B0/3	Point merge	2			
	OPFL	B0/1	In Trail Procedure (ITP)	2			
	TBO	B0/1	Introduction of time-based management within a flow centric approach.	2			
Technical	NAVS	B0/1	Ground Based Augmentation Systems (GBAS)	2			Qatar
	NAVS	B0/2	Satellite Based Augmentation Systems (SBAS)	2			
	COMI	B0/1	Aircraft Communication Addressing and Reporting System (ACARS)	2			Qatar
	COMI	B0/2	Aeronautical Telecommunication Network/Open System Interconnection (ATN/OSI)	2			Qatar
	COMI	B0/3	VHF Data Link (VDL) Mode 0/A	2			Qatar
	COMI	B0/4	VHF Data Link (VDL) Mode 2 Basic	2			Qatar
	COMI	B0/5	Satellite communications (SATCOM) Class C Data	2			
	COMI	B0/6	High Frequency Data Link (HFDL)	2			
	COMS	B0/1	CPDLC (FANS 1/A & ATN B1) for domestic and procedural airspace	2			
	COMS	B0/2	ADS-C (FANS 1/A) for procedural airspace	2			

Threads Category	Threads	Elements	ASBU Element name	Priority	Regional Target	Applicability area	Implemented by
Information	DAIM	B1/2	Provision of digital Aeronautical Information Publication (AIP) data sets	2			Qatar
	DAIM	B1/5	Provision of digital aerodrome mapping data sets	2			
	DAIM	B1/6	Provision of digital instrument flight procedure data sets	2			
	DAIM	B1/7	NOTAM improvements	2			Qatar
	AMET	B1/1	Meteorological observations information	2			Qatar
	AMET	B1/2	Meteorological forecast and warning information	2			Qatar
	AMET	B1/3	Climatological and historical meteorological information	2			Qatar
AMET	B1/4	Dissemination of meteorological information	2			Qatar	
	APTA	B1/1	PBN Approaches (with advanced capabilities)	2			Qatar
	APTA	B1/2	PBN SID and STAR procedures (with advanced capabilities)	2			Qatar
	APTA	B1/4	CDO (Advanced)	2			
	APTA	B1/5	CCO (Advanced)	2			
	FRTO	B1/1	Free Route Airspace (FRA)	2			UAE, Qatar, Saudi Arabia
	FRTO	B1/2	Required Navigation Performance (RNP) routes	2			
	FRTO	B1/3	Advanced Flexible Use of Airspace (FUA) and management of real time airspace data	2			
	FRTO	B1/4	Dynamic sectorization	2			
	FRTO	B1/5	Enhanced Conflict Detection Tools and Conformance Monitoring	2			
	FRTO	B1/6	Multi-Sector Planning	2			Qatar
	FRTO	B1/7	Trajectory Options Set (TOS)	2			
	NOPS	B1/1	Short Term ATFM measures	2			Qatar
	NOPS	B1/2	Enhanced Network Operations Planning	2			
	NOPS	B1/3	Enhanced integration of Airport operations planning with network operations planning	2			
	NOPS	B1/4	Dynamic Traffic Complexity	2			
	NOPS	B1/5	Full integration of airspace management with air traffic flow management	2			Qatar
	NOPS	B1/6	Initial Dynamic Airspace configurations	2			
NOPS	B1/7	Enhanced ATFM slot swapping	2				
NOPS	B1/8	Extended Arrival Management supported by the ATM Network function	2				

Operational	NOPS	B1/9	Target Times for ATFM purposes	2				
	NOPS	B1/10	Collaborative Trajectory Options Program (CTOP)	2				
	SNET	B1/1	Enhanced STCA with aircraft parameters	2			Qatar	
	SNET	B1/2	Enhanced STCA in complex TMAs	2			Qatar	
	GADS	B1/1	Aircraft Tracking	2				
	RSEQ	B1/1	Extended arrival metering	2			Qatar	
	SURF	B1/1	Advanced features using visual aids to support traffic management during ground operations	2			Qatar	
	SURF	B1/2	Comprehensive pilot situational awareness on the airport surface	2				
	SURF	B1/3	Enhanced ATCO alerting service for surface operations	2				
	SURF	B1/4	Routing service to support ATCO surface operations management	2				
	SURF	B1/5	Enhanced vision systems for taxi operations	2				
	TBO	B1/1	Initial Integration of time-based decision making processes	2				
	DATS	B1/1	Remotely Operated Aerodrome Air Traffic Services	2				
	CSEP	B1/1	Basic airborne situational awareness during flight operations (AIRB)	2				
	CSEP	B1/2	Visual Separation on Approach (VSA)	2				
	CSEP	B1/3	Performance Based Longitudinal Separation Minima	2				
	CSEP	B1/4	Performance Based Lateral Separation Minima	2				
	OPFL	B1/1	Climb and Descend Procedure (CDP)	2				
	Technical	ASUR	B1/1	Reception of aircraft ADS-B signals from space (SB ADS-B)	2			
		COMI	B1/2	VHF Data Link (VDL) Mode 2 Multi-	2			Qatar
COMI		B1/3	SATCOM Class B Voice and Data	2				
COMI		B1/4	Aeronautical Mobile Airport Communication System (AeroMACS) Ground-Ground	2				
COMS		B1/1	PBCS approved CPDLC (FANS 1/A+) for domestic and procedural airspace	2				
COMS		B1/2	PBCS approved ADS-C (FANS 1/A+) for procedural airspace	2				
COMS		B1/3	SATVOICE (incl. routine communications) for procedural airspace	2				
NAVS		B1/1	Extended GBAS	2				

Threads Category	Threads	Elements	ASBU Element name	Implemented by
Information	DAIM	B2/1	Dissemination of aeronautical information in a SWIM environment	Bahrain & Qatar
	DAIM	B2/2	Daily Airspace Management information to support flight and flow	
	DAIM	B2/3	Aeronautical information to support higher airspace operations	
	DAIM	B2/4	Aeronautical information requirements tailored to UTM	
	DAIM	B2/5	NOTAM replacement	
	AMET	B2/1	Meteorological observations information	
	AMET	B2/2	Meteorological forecast and warning information	
	AMET	B2/3	Climatological and historical meteorological information	
	AMET	B2/4	Meteorological information service in SWIM	
	FICE	B2/1	Planning Service	
	FICE	B2/2	Filing Service	
	FICE	B2/3	Trial Service	
	FICE	B2/4	Flight Data Request Service	
	FICE	B2/5	Notification Service	
	FICE	B2/6	Publication Service	
	FICE	B2/7	Flight information management service for higher airspace operations	
	FICE	B2/8	Flight information management service for low-altitude operations	
	FICE	B2/9	Flight information management support for inflight re-planning	
	SWIM	B2/1	Information service provision	Qatar
	SWIM	B2/2	Information service consumption	Qatar
SWIM	B2/3	SWIM registry	Qatar	
SWIM	B2/4	Air/Ground SWIM for non-safety critical information		
SWIM	B2/5	Global SWIM processes		

Operational	APTA	B2/1	GBAS CAT II/III precision approach procedures	Qatar
	APTA	B2/2	Simultaneous operations to parallel runways	Qatar
	APTA	B2/3	PBN Helicopter Steep Approach	
	APTA	B2/4	Performance based aerodrome operating minima – Advanced aircraft with SVGS	
	FRT0	B2/1	Local components of integrated ATFM and ATC Planning function (INAP)	
	FRT0	B2/2	Local components of Dynamic Airspace Configurations (DAC)	
	FRT0	B2/3	Large Scale Cross Border Free Route Airspace (FRA)	
	FRT0	B2/4	Enhanced Conflict Resolution Tools	
	NOPS	B2/1	Optimised ATM Network Services in the initial TBO context	
	NOPS	B2/2	Enhanced dynamic airspace configuration	
	NOPS	B2/3	Collaborative Network Operation Planning	
	NOPS	B2/4	Multi ATFM slot swapping and Airspace Users priorities	
	NOPS	B2/5	Further airport integration within Network Operation Planning	
	NOPS	B2/6	ATFM adapted for cross-border Free Route Airspace (FRA)	
	NOPS	B2/7	UTM Network operations	
	NOPS	B2/8	High upper airspace network operations	
	ACAS	B2/1	New collision avoidance system	
	ACAS	B2/2	New collision avoidance capability as part of an overall detect and avoid system for RPAS	
	GADS	B2/1	Location of an aircraft in Distress	
	GADS	B2/2	Distress tracking information management	
	GADS	B2/3	Post Flight Localization	
	GADS	B2/4	Flight Data Recovery	
	RSEQ	B2/1	Integration of arrival and departure management	
	SURF	B2/1	Enhanced surface guidance for pilots and vehicle drivers	
	SURF	B2/2	Comprehensive vehicle driver situational awareness on the airport surface	
	SURF	B2/3	Conflict alerting for pilots for runway operations	
	ACDM	B2/1	Airport Operations Plan (AOP)	
	ACDM	B2/2	Airport Operations Centre (APOC)	Bahrain
	ACDM	B2/3	Total Airport Management (TAM)	
	TBO	B2/1	Pre-departure trajectory synchronization within a flight centric and network performance approach	
	TBO	B2/2	Extended time-based management across multiple FIRs for active flight synchronization	
	CSEP	B2/1	Interval Management (IM) Procedure	
	CSEP	B2/2	Cooperative separation at low altitudes	
CSEP	B2/3	Cooperative separation at higher		

	OPFL	B2/1	Separation minima using ATS surveillance systems where VHF voice communications are not available	
Technical	ASUR	B2/1	Evolution of ADS-B and Mode S	
	ASUR	B2/2	New community based surveillance system for airborne aircraft (low and higher airspace)	
	COMI	B2/1	Air-Ground ATN/IPS	Qatar
	COMI	B2/2	Aeronautical Mobile Airport Communication System (AeroMACS) aircraft mobile connection	
	COMI	B2/3	Links meeting requirements for non-safety critical communication	
	COMS	B2/1	PBCS approved CPDLC (B2) for domestic and procedural airspace	
	COMS	B2/2	PBCS Approved ADS-C (B2) for domestic and procedural airspace	
	COMS	B2/3	PBCS approved SATVOICE (incl. routine communications) for procedural airspace	
	NAVS	B2/1	Dual Frequency Multi Constellation (DFMC) GBAS	Qatar
	NAVS	B2/2	Dual Frequency Multi Constellation (DFMC) SBAS	
	NAVS	B2/3	Dual Frequency Multi Constellation (DFMC) ABAS	

State basic requirements checklist related to ATM																			
States	ATM																		States percentage
	ATS															ASM			
	ATCU, FIC, AFIS		TWR				APP				ACC			ATCU, FIC, AFIS					
	Alerting service	Control service					Control service					Control service			Flight Information Service				
Ground control		Departure clearance	Landing clearance	Separation	Coordination	Arrival clearance	Approach clearance	Separation	Coordination	En-route clearance	Separation	Coordination	Traffic information	MET information	Operation information	Coordination	Procedure design	Route structure	Airspace segment
Annex 11, chapters 2,6,7	Annex 11, chapters 2,6,7	Annex 11, chapters 2,6,7	Annex 11, chapters 2,6,7	Annex 11, chapters 2,6,7	Annex 11, chapter 7	Annex 11, chapters 2,6,7	Annex 11, chapters 2,6,7	Annex 11, chapters 2,6,7	Annex 11, chapter 7	Annex 11, chapters 2,6,7	Annex 11, chapters 2,6,7	Annex 11, chapters 2,6,7	Annex 11, chapters 2,4,6,7	Annex 11, chapters 2,7	Annex 11, chapters 2,7	Annex 11, chapters 2,7	Annex 11, chapters 2,6	Annex 11, chapters 2,6	Annex 11, chapters 2,6
Doc 4444, chapters 4,7,9,10	Doc 4444, chapters 4,5,6,10,11	Doc 4444, chapters 4,5,6,10,11	Doc 4444, chapters 4,5,6,10,11	Doc 4444, chapters 4,5,6,10,11	Doc 4444, chapters 4,5,6,10,11	Doc 4444, chapters 4,5,6	Doc 4444, chapters 4,5,6	Doc 4444, chapters 4,5,6	Doc 4444, chapters 6,10,11,16	Doc 4444, chapters 4,5	Doc 4444, chapters 4,5	Doc 4444, chapters 6,10,11,16	Doc 4444, chapters 4,7,9,11	Doc 4444, chapters 6,10	Doc 4444, chapters 6,10	Doc 4444, chapters 6,10	Doc 8168, Part 1, chapters 2,4	Doc 8168, Part 1, chapters 2,4	Doc 8168, Part 1, chapters 2,4
Bahrain																			
Egypt																			
Iran																			
Iraq																			
Jordan																			
Kuwait																			
Lebanon																			
Libya																			
Oman																			
Qatar																			
Saudi Arabia																			
Sudan																			
Syria																			
UAE																			
Yemen																			
Regional Percentage																			

State basic requirements checklist related to SAR												
States	Search and Rescue										States percentage	
	Process Emergency Notification											Receive Emergency
	INCERFA		ALERFA		DETRESFA							
	Coordination	Evaluation	Alert to be prepared	Design SAR Plan	Design SAR Plan	Develop SAR Plan for Incident	Impelement SAR Plan for Incident			Alerting service		
		Emergency report					Task	Request Assistance	Notify			
Annex 12, chapter 5	Annex 12, chapter 5	Annex 12, chapters 3,5	Annex 12, chapters 3,5	Annex 12, chapters 3,5	Annex 12, chapters 3,5	Annex 12, chapters 3,5	Annex 12, chapters 3,5	Annex 12, chapters 3,5	Annex 12, chapters 3,5	Annex 11, chapters 2,5		
PANS-ATM: Ch. 9.2 and Ch. 10.2												
Bahrain												
Egypt												
Iran												
Iraq												
Jordan												
Kuwait												
Lebanon												
Libya												
Oman												
Qatar												
Saudi Arabia												
Sudan												
Syria												
UAE												
Yemen												
Regional Percentage												

Deficiencies in the ATM field									
IRAN									
Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date first reported	Remarks/ Rationale for non-elimination	Facilities/ Services	Executing body	Date of completion	Priority for action
1	MID ANP TABLE ATM II-MID-1 MID REGION ATS ROUTE NETWORK	-	ATS routes A418/UP574 not implemented	Dec 2006	KUMUN-PAPAR segment not implemented.	S O	Iran-UAE	Dec 2021	B

Deficiencies in the ATM field										
IRAQ										
Item No	Identification		Deficiencies			Corrective Action				
	Requirement	Facilities/ Services	Description	Date first reported	Remarks/ Rationale for non-elimination	Facilities/ Services	Executing body	Date of completion	Priority for action	
1	MID ANP Table ATM II-MID-1 MID REGION ATS ROUTE NETWORK	-	ATS route G667 not implemented	Sep 2006	Segment ALSAN-ABD not implemented	S	Corrective Action Plan has not been formally provided by the State	Iraq- Iran- Kuwait	Dec 2021	B
2	Annex 11 Para. 2.31	-	Development of contingency plan for implementation in the event of disruption or potential disruption of ATS and related supporting services. The Plan should also address natural disasters and public health emergencies. Contingency agreements should be signed with all adjacent ACCs.	Nov 2006	Contingency Agreement to be signed with Syria	S	Corrective Action Plan has not been formally provided by the State	Iraq	Dec 2021	A
3	MID ANP Table ATM II-MID-1 MID REGION	-	ATS route G795 not implemented	May 2008	RAF-BSR segment not implemented	S	Corrective Action Plan has not been formally	Iraq- Saudi Arabia	Dec 2021	B

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	ATS ROUTE NETWORK						provided by the State			
4	MID ANP Table ATM II-MID-1 MID REGION ATS ROUTE NETWORK	-	ATS route A424 not implemented	May 2008	LOTAN- LOVEK segment not implemented	O	Corrective Action Plan has not been formally provided by the State	Iraq	Dec 2021	B

Deficiencies in the ATM field										
JORDAN										
Item No	Identification		Deficiencies			Corrective Action				
	Requirement	Facilities/ Services	Description	Date first reported	Remarks/ Rationale for non-elimination	Facilities/ Services	Executing body	Date of completion	Priority for action	
1	Annex 11 Para. 2.31	-	Development of contingency plan for implementation in the event of disruption or potential disruption of ATS and related supporting services. The Plan should also address natural disasters and public health emergencies. Contingency agreements should be signed with all adjacent ACCs.	Nov 2006	Contingency agreements not signed with Syria.	H	Corrective Action Plan has not been formally provided by the State. State comment: due to political impact in the region Jordan is not able to complete the signature of contingency agreements with all adjacent States	Jordan	Dec 2021	A

Deficiencies in the ATM field										
LEBANON										
Item No	Identification		Deficiencies			Corrective Action				
	Requirement	Facilities/ Services	Description	Date first reported	Remarks/ Rationale for non-elimination	Facilities/ Services	Executing body	Date of completion	Priority for action	
1	Annex 11 Para. 2.31	-	Development of contingency plan for implementation in the event of disruption or potential disruption of ATS and related supporting services. The Plan should also address natural disasters and public health emergencies. Contingency agreements should be signed with all adjacent ACCs.	Nov 2006	Contingency agreements not signed with Syria	S	Corrective Action Plan has not been formally provided by the State	Lebanon	Dec 2021	A

Deficiencies in the ATM field										
LIBYA										
Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date first reported	Remarks/ Rationale for non-elimination		Facilities/ Services	Executing body	Date of completion	Priority for action
1	Annex 11 Para. 2.31	-	Development of contingency plan for implementation in the event of disruption or potential disruption of ATS and related supporting services. The Plan should also address natural disasters and public health emergencies. Contingency agreements should be signed with all adjacent ACCs	Dec 2014	Agreement signed only with Egypt	S O	Corrective Action Plan has not been formally provided by the State	Libya	Dec 2021	A

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Deficiencies in the ATM field										
SAUDI ARABIA										
Item No	Identification		Deficiencies			Corrective Action				
	Requirement	Facilities/ Services	Description	Date first reported	Remarks/ Rationale for non-elimination	Facilities/ Services	Executing body	Date of completion	Priority for action	
1	Annex 11 Para. 2.31	-	Development of contingency plan for implementation in the event of disruption or potential disruption of ATS and related supporting services. The Plan should also address natural disasters and public health emergencies. Contingency agreements should be signed with all adjacent ACCs.	Nov 2006	Contingency Agreements not signed with Iraq, Qatar and Sudan.	S	Corrective Action Plan has not been formally provided by the State	Saudi Arabia	Dec 2021	A

Deficiencies in the ATM field									
SUDAN									
Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date first reported	Remarks/ Rationale for non-elimination	Facilities/ Services	Executing body	Date of completion	Priority for action
1	Annex 11 Para. 2.31	-	Development of contingency plan for implementation in the event of disruption or potential disruption of ATS and related supporting services. The Plan should also address natural disasters and public health emergencies. Contingency agreements should be signed with all adjacent ACCs.	Dec 2014	Contingency Agreement signed only with Egypt	H S O	Sudan	Dec 2021	A

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Deficiencies in the ATM field										
SYRIA										
Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date first reported	Remarks/ Rationale for non-elimination	Facilities/ Services	Executing body	Date of completion	Priority for action	
1	MID ANP Table ATM II-MID-1 MID REGION ATS ROUTE NETWORK	-	ATS route G202 not implemented	Dec 1997	Segment DAKWE - Damascus not implemented	S	Corrective Action Plan has not been formally provided by the State	Syria	Dec 2021	B
2	MID ANP Table ATM II-MID-1 MID REGION ATS ROUTE NETWORK	-	ATS route UL602 not implemented	Dec 2003	Segments ELEXI-DRZ-GAZ not implemented.	S	Corrective Action Plan has not been formally provided by the State	Syria	Dec 2021	B
3	Annex 11 Para. 2.31	-	Development of contingency plan for implementation in the event of disruption or potential disruption of ATS and related supporting services. The Plan should also address natural disasters and public health emergencies. Contingency agreements should be signed with all adjacent ACCs.	Nov 2006	No signed agreement yet	H O	Corrective Action Plan has not been formally provided by the State	Syria	Dec 2021	A

Deficiencies in the ATM field									
UAE									
Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date first reported	Remarks/ Rationale for non-elimination	Facilities/ Services	Executing body	Date of completion	Priority for action
1	MID ANP Table ATM II-MID-1 MID REGION ATS ROUTE NETWORK	-	ATS routes A418/UP574 not implemented	Dec 2006	KUMUN-PAPAR segment not implemented.	S	Iran- UAE	Dec 2021	B

Deficiencies in the SAR field									
IRAQ									
Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date first reported	Remarks/ Rationale for non-elimination	Facilities/ Services	Executing body	Date of completion	Priority for action
1	Annex 12 Para. 2.1	-	Lack of provision of required SAR services	Apr 2012	- 0	Corrective Action Plan has not been formally provided by the State	Iraq	Dec 2021	A

Deficiencies in the SAR field										
KUWAIT										
Item No	Identification		Deficiencies			Corrective Action				
	Requirement	Facilities/ Services	Description	Date first reported	Remarks/ Rationale for non-elimination		Facilities/ Services	Executing body	Date of completion	Priority for action
1	Annex 6 Part I chap. 6 and Part II chap. 2 Annex 10, Vol III, Chap. 5 Annex 12 para. 2.6.4	ELT	Non-compliance with carriage of Emergency Locator Transmitter (ELT) requirements	Apr 2012	-	0	Corrective Action Plan has not been formally provided by the State	Kuwait	Dec 2021	A

Deficiencies in the SAR field									
LEBANON									
Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date first reported	Remarks/ Rationale for non-elimination	Facilities/ Services	Executing body	Date of completion	Priority for action
1	Annex 12 Para. 2.1	-	Lack of provision of required SAR services	Apr 2012	- O	Corrective Action Plan has not been formally provided by the State	Lebanon	Dec 2021	A

Deficiencies in the SAR field									
LIBYA									
Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date first reported	Remarks/ Rationale for non-elimination	Facilities/ Services	Executing body	Date of completion	Priority for action
1	Annex 12 Para. 2.1	-	Lack of provision of required SAR services	Dec 2014	- H S O	Corrective Action Plan has not been formally provided by the State	Libya	Dec 2021	A

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Deficiencies in the SAR field										
SYRIA										
Item No	Identification		Deficiencies			Corrective Action				
	Requirement	Facilities/ Services	Description	Date first reported	Remarks/ Rationale for non-elimination		Facilities/ Services	Executing body	Date of completion	Priority for action
1	Annex 12 Para. 2.1	-	Lack of provision of required SAR services	Apr 2012	-	0	Corrective Action Plan has not been formally provided by the State	Syria	Dec 2021	A
2	Annex 6 Part I chap. 6 and Part II chap. 2 Annex 10, Vol III, Chap. 5 Annex 12 para. 2.6.4	-	Non-compliance with carriage of Emergency Locator Transmitter (ELT) requirements	Apr 2012	-	0	Corrective Action Plan has not been formally provided by the State	Syria	Dec 2021	A

Deficiencies in the SAR field										
YEMEN										
Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date first reported		Remarks/ Rationale for non-elimination	Facilities/ Services	Executing body	Date of completion	Priority for action
1	Annex 12 Para. 2.1	-	Lack of provision of required SAR services	Apr 2012	-	0	Corrective Action Plan has not been formally provided by the State	Yemen	Dec 2021	A
2	Annex 6 Part I chap. 6 and Part II chap. 2 Annex 10, Vol III, Chap. 5 Annex 12 para. 2.6.4	-	Non-compliance with carriage of Emergency Locator Transmitter (ELT) requirements	Apr 2012	-	0	Corrective Action Plan has not been formally provided by the State	Yemen	Dec 2021	A

Terms of Reference (ToR)
AIR TRAFFIC MANAGEMENT SUB-GROUP (ATM SG)

(Ref. MIDANPIRG Handbook, Feb 2022)

1. TERMS OF REFERENCE

1.1 The Terms of Reference of the ATM Sub-Group are:

- a) ensure that the planning and implementation of ATM related matters within the MID Region is coherent and compatible with global developments and traffic demand ~~in adjacent regions~~, and is in-line with the Global Air Navigation Plan (GANP), the Aviation System Block Upgrades (ASBU) framework and the MID Region Air Navigation Strategy (Doc 002);
- b) develop the MID Region ATM performance objectives/priorities, including action plans to achieve the agreed performance targets;
- ~~b)c)~~ monitor the status of implementation of the MID Region ATM-related ASBU threads/elements included in the MID Region Air Navigation Strategy (Doc 002) as well as other required ATM facilities and services within the MID Region; identify the associated difficulties and deficiencies and provide progress reports to MIDANPIRG, as required; support the development and monitoring of Key Performance Indicators related to ATM;
- ~~e)~~ ~~keep under review the MID Region ATM performance objectives/priorities, develop action plans to achieve the agreed performance targets and propose changes to the MID Region ATM plans/priorities;~~
- d) seek to achieve common understanding and support from all stakeholders involved in or affected by the ATM developments/activities in the MID Region; and provide a platform for harmonization of developments and deployments in the ATM domain;
- e) review the current MID ATS Routes Network in order to assess support its capacity and constraints vs traffic demand; based on the airspace user needs and in coordination with Stakeholders (States, International Organizations, user representative organizations and other ICAO Regions) to identify the requirements for improvements aiming to maintaining an efficient route network in the MID Region;
- ~~d)f)~~ review the Regional ATS route Proposals for Amendment (PfA) of the ANP Vol II, Table ATS I-1;
- g) in coordination with MIDRMA, review the technical results of the Safety Monitoring Reports within the MID RVSM Airspace and support the development of assessment of the proposed changes to the ATS Routes Network;
- h) coordinate, assign and follow up on the tasks related to the ASM Working Group;
- i) support the development of proposals for the updating of relevant ICAO MID documents, including the amendment of relevant parts of the MID ANP, as deemed necessary;

- ~~j) review and maintain the MID Region SSR Code Allocation Plan (Doc 005) and monitor the implementation of the SSR codes allocation procedures in the Region;~~
- ~~e) based on the airspace user needs and in coordination with stakeholders (States, International Organizations, user representative organizations and other ICAO Regions), identify requirements and improvements for achieving and maintaining an efficient route network in the MID Region;~~
- ~~f)k) foster and initiate actions aimed at improving civil/military cooperation, and Flexible Use of Airspace (FUA) and Free Route Airspace (FRA) implementation;~~
- ~~g)l) keep under review the adequacy of requirements in Search and Rescue field, taking into account, *inter alia*, changes to aircraft operations and new operational requirements or technological developments (Doc 010);~~
- ~~h) ensure the effectiveness of the SSR code allocation system in the MID Region;~~
- ~~i)m) identify, State by State, those specific deficiencies that constitute major obstacles to the provision of efficient air traffic management and recommend specific measures to eliminate them, reflected in the MID Air Navigation Deficiencies Database (MANDD);~~
- ~~j)n) develop, and amend when required, the MID Region ATM Contingency Plan (Doc 003) and ensure that its maintained up to date;~~
- ~~k) monitor the implementation of the MID Region ASBU Modules included in the MID Region Air Navigation Strategy related to the ATM, provide expert inputs for ATM related issues; and propose solutions for meeting ATM operational requirements;~~
- ~~o) monitor and review the latest technological developments in the area of ATM;~~
- ~~h)p) coordinate with relevant MIDANPIRG and RASG-MID Subsidiary bodies issues with common interests;~~
- ~~m)q) provide regular progress reports to the MIDANPIRG concerning its-the work programme; and~~
- ~~r) Review, maintain and keep up to date within the ATM Monitoring Dashboard, including the agreed monitoring priorities;~~
- ~~n)s) review periodically its- ATM SG Terms of Reference and propose amendments as necessary.~~

~~1.2 In order to meet the Terms of Reference, the ATM Sub Group shall:~~

- ~~a) provide necessary assistance and guidance to States to ensure harmonization and interoperability in line with the GANP, the MID ANP and ASBU framework;~~

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- ~~b) review the MID ATS Routes Network in order to assess its capacity and constraints;~~
- ~~c) identify requirements and improvements for achieving and maintaining an efficient ATS route network in the MID Region;~~
- ~~d) propose a strategy and prioritized plan for development of improvements to the route network, highlighting:
 - areas that require immediate attention
 - interface issues with adjacent ICAO Regions~~
- ~~e) develop a working depository for route proposals that will be used as a dynamic reference document for ongoing discussions on routes under development/modification. In this respect, the Task Force should explore the utility that can be realized from the route catalogue concept/ATS routes database;~~
- ~~f) engage the necessary parties regarding routes under consideration, especially the Military Authorities;~~
- ~~g) promote civil/military cooperation and the implementation of the concepts of Flexible Use of Airspace (FUA), free flight, flexible tracks;~~
- ~~h) facilitate effective civil/military cooperation and joint use of airspace in the MID Region;~~
- ~~— submit completed route proposals for amendment of the Basic ANP Table ATS 1, to the ICAO MID Regional Office for processing;~~
- ~~i) in coordination with the MIDRMA, carry out safety assessment of the proposed changes to the ATS Routes Network;~~
- ~~j) submit completed route proposals for amendment of the Basic ANP Table ATS 1, to the ICAO MID Regional Office for processing;~~
- ~~k) monitor the RVSM operations and support the continued safe use of RVSM in the MID Region;~~
- ~~l) review and maintain the MID Region SSR Code Allocation Plan and monitor the implementation of the SSR codes allocation procedures in the Region;~~
- ~~m) assist States in the development and co-ordination of contingency plans and ensure that the Regional contingency plan is maintained up to date;~~
- ~~n) assess the effectiveness of the agreed Contingency measures/procedures and propose mitigation measures, as appropriate;~~
- ~~o) address ATM and SAR interface issues with other regions and make specific recommendations to achieve seamlessness and harmonization;~~
- ~~p) review the requirements and monitor the status of implementation of ATM and SAR~~

~~services;~~

~~e) analyse, review and monitor deficiencies in the ATM and SAR fields;~~

~~r) a) develop proposals for the updating of relevant ICAO documentation, including the amendment of relevant parts of the MID ANP, as deemed necessary;~~

~~s) establish and monitor ATM performance objectives for the MID Region; and~~

~~t) taking into account human factors studies and available guidance material, make operational recommendations related to ATM personnel in the changing technological environment.~~

2. COMPOSITION

2.1 The Sub-Group is composed of:

- a) MIDANPIRG Member States;
- b) experts nominated by ~~Middle East Provider~~ MID States from both Civil Aviation Authority and Military Authority;
- c) concerned International and Regional Organizations as observers; and
- d) other representatives from ~~provider~~ States and Industry may be invited on ad hoc basis, as observers, when required.

3. WORKING ARRANGEMENTS

3.1 The Chairperson, in close co-operation with the Secretariat, shall make all necessary arrangements for the most efficient working of the Sub-Group. The Sub-Group shall at all times conduct its activities in the most efficient manner possible with a minimum of formality and paperwork (paperless meetings). Permanent contact shall be maintained between the Chairperson, Secretariat and Members of the Sub-Group to advance the work. Best advantage should be taken of modern communications facilities, particularly video-conferencing (Virtual Meetings) and e-mails.

3.2 Face-to-face meetings will be conducted when it is necessary to do so.

ATTACHMENT A

List of Participants

State & Administration:	Name Pr Full Name:	Job Title / Official Position:
Egypt / Egyptian Civil Aviation Authority	Mr. Abdelaziz Mahmoud Abo El-Mal	General Manager of Airspace Affairs and Aeronautical Information Services
Egypt / Egyptian Civil Aviation Authority	Mr. Mohamed Ali Mohamed Ali	General Manager of Air Traffic Services
Egypt / NANS	Mr. Mohamed Farghaly Mohamed	General Manager of Research and Development
Egypt / Egyptian Civil Aviation Authority	Capt. Rana Mohammad Abd El Raheem Mohammad Nasr	ATS Inspector
Egypt / Egyptian Civil Aviation Authority	Ms. Reem Hammad Mohamed Medany Gad	ATS Inspector
Egypt / NANS	Mr. Waled Hassn Morgan	General Manager of Airports
Iran / Airports and Air Navigation Company	Mr. Behzad Soheil	Deputy G.D. of Iran ATM
Iran / Airports and Air Navigation Company	Mr. Mohammad Shahravi	Chief of ANS development
Iran / Airports and Air Navigation Company	Mr. Mohammad Soleymani	Deputy G.D. of Iran ATM
Iran / Civil Aviation Authority	Ms. Seyed Mohammad Hossein Mousavi Sajad	Radar Controller/AIG Senior Investigator/OPS Auditor/AVSEC Expert
Jordan / CARC	Mr. Ali Taleb Nemer Emrazeeq	Director of ANS OPS
Jordan / CARC / JANS	Mr. Ahmad Mahmoud Odeh	Director of Jordan Air Navigation Services
Libya / LYCAA/ANS Department	Mr. Salah Aldeen Mohammed Ammar Khaleefah	Chief of Work Team at ANS Department
Libya / LYCAA/ANS Department	Mr. Mohamed Khalifa Ramadan Greiba	Chief of Systems and Standards at ANS Department
Oman / Civil Aviation Authority	Mr. Abdullah Abdulrahman Abdullah Alfarsi	Act. CNS Director
Oman / Civil Aviation Authority	Mr. Abdullah Said Al Hasani	Airspace Standard Officer
Oman / Civil Aviation Authority	Dr. Ahmed Juma Al Sharyani	CHEIF OF SAR
Oman / Civil Aviation Authority	Mr. Ahmed Mohammed Al Hinai	Acting chief of Airspace Planning and Management
Oman / Civil Aviation Authority	Mr. Husam Ahmed Al Muhandis Al Yafai	Air Navigation Director
Oman / Civil Aviation Authority	Mr. Hamed Salim Al Mayhi	ATC Manager
Oman / Civil Aviation Authority	Mrs. Hanaa Sultan Al-Maskari	Change& Stakeholder Engagement Manager
Oman / Civil Aviation Authority	Mr. Hilal Ali Al Maqbali	ATM Director
Oman / Civil Aviation Authority	Mr. Moosa Abdul Aziz Al-Bulushi	Director of Air Navigation Safety Department
Oman / Civil Aviation Authority	Mr. Mustafa Salam Al Mahruqi	Airspace Design
Oman / Civil Aviation Authority	Mr. Sulaiman Al Salmi	Airspace Standard Officer
Qatar / Civil Aviation Authority	Mr. Abdulla Mubarak Abdulla AL-Asam	Air Traffic Control Expert
Qatar Civil Aviation Authority	Mr. Ahmed Abdulla Aljehani	Air Traffic Controller Specialist
Qatar / Civil Aviation Authority	Ms. Maryam Al-Naimi	Deputy Head of IMS
Saudi Arabia / General Authority of Civil Aviation (GACA)	Mr. Ahmed Saeed Alkhader	Senior Air Navigation Safety Inspector
Saudi Arabia / General Authority of Civil Aviation (GACA)	Mr. Khalid H. Alharbi	Director of Airspace
Saudi Arabia / Saudi Air Navigation Services (SANS)	Dr. Ahmad A. Alnatour	Operations Standards and Documentation Supervisor
Saudi Arabia / General Authority of Civil Aviation (GACA)	Mr. Ahmad Saad Al Amri	Head of Airspace Policy
Saudi Arabia / Saudi Air Navigation Services (SANS)	Mr. Faisal Mohammed Fatta	Riyadh Area & Approach Control Center Manager
Saudi Arabia / Saudi Air Navigation Services (SANS)	Mr. Mutaz Khalid Kabli	Operation Supervisor
Saudi Arabia / Saudi Air Navigation Services (SANS)	Mr. Nasser Akdemees Alotaibi	Airspace Planning Manager
Syria / General Authority of Civil Aviation (GACA)	Mr. Ahmad Motawea	ATM Manager
UAE / General Civil Aviation Authority (GCAA) - ATM	Ms. Aaesha Alnuaimi	Analyst- Flight Data Quality & Reporting
UAE / Dubai DNAS	Mr. Abdulla Ahmed Al Araimi	Head of Dubai Approach
UAE / General Civil Aviation Authority (GCAA)	Mr. Ahmed Ali Al Malki Al Mansoori	Senior Specialist - Airspace Management
UAE / General Civil Aviation Authority (GCAA)	Mr. Aleksandz Estrov	Specialist - Airspace Management
UAE / Dubai DNAS	Mr. Daryl Nixon	Operations Manager - Air Traffic Control (Dubai Approach)
UAE / General Civil Aviation Authority (GCAA) - ATM	Mrs. Habeeba Ali Al Towaiti	Analyst Flight Data Quality and Reporting
UAE / General Civil Aviation Authority (GCAA)	Mr. Hamad Rashid Al Belushi	Senior Expert Air Traffic Management
UAE / General Civil Aviation Authority (GCAA)	Mrs. Hanan Hassan Al Hmoudi	Senior Officer – Airspace Management
UAE / Dubai Air Navigation Services (DANS)	Mrs. Janine Hendriette Pretorius	Team Leader Safety & Governance
UAE / GCAA (SZC)	Mr. Mohamed Abdulla Al Ameri	Senior Specialist - Airspace Management
UAE / GCAA / Air Navigation & Aerodromes	Mr. Mohamed Dahi Alshamsi	ATS Inspector
UAE / Department of Civil Aviation Sharjah	Capt. Mohamed Majid Al Mazroua	Deputy Director Air Navigation Services
UAE / General Civil Aviation Authority (GCAA)	Mr. Nasser AL Kharusi	Senior Airspace Specialist - Airspace Management
UAE / General Civil Aviation Authority (GCAA)	Mr. Odd Erik Kjersem	Senior Specialist Air Traffic Operations
UAE / General Civil Aviation Authority (GCAA)	Mr. Saqr Al Marashda	Senior Manager Airspace Management
UAE / General Civil Aviation Authority (GCAA)	Mr. Stewart Murphy	Inspector - Air Traffic Services
UAE / GCAA / Air Navigation & Aerodromes	Mr. Sulaiman Ali Sulaiman Al Dhanhani	ATS Inspector
UAE / General Civil Aviation Authority (GCAA)	Mr. Walid Said Ahmed Rawash	Specialist- ATC Operation
UAE / Dubai Airports	Mr. Kan Ni	Vice President - AOCC
Organizations:		
EUROCONTROL	Mr. Tihomir Todorov	Head of Section Airspace Design, NMD/ACD/OPL/DES
IATA	Ms. Zainab Khudhair	Manager ATM, Flight Operations and Infrastructure - AME
IFATCA	Mr. Ahmed Aljneibi	Senior officer - Air Traffic Operations
MIDRMA	Mr. Fareed AlAlawi	MIDRMA Manager
MIDRMA	Mr. Fathi Althawadi	MIDRMA IT Manager
ICAO MID	Mr. Ahmad Amireh	ICAO MID, RO ATM/SAR
ICAO MID	Mr. Ahmad Kaveh	ICAO MID, RO ATM
ICAO MID	Ms. Dina El Karimy	ICAO MID Technical Assistant, ATM/SAR & ASF
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